

# TRANSFORMING E-WASTE INTO JOBS AND BUSINESS OPPORTUNITIES IN CAMBODIA

NEWSLETTER  
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## Mainstreaming sound environmental management while creating jobs

Employment generation and promotion of effective e-waste management in Phnom Penh and four other provinces in Cambodia is the primary objective of the joined UNIDO - Korea International Cooperation Agency (KOICA) - Samsung Electronics project “Creating employment opportunities and ensuring effective e-waste management in Cambodia”. Youth is in the focus of the efforts of the three partners to strengthen capacities for increased business opportunities in the electronics industry and create e-waste management skills and knowledge.

### At a glance

Duration 3 years (2012-2015)  
Location 5 Pilot areas:  
Battambang, Banteay Meanchey, Siem Reap, Kampong Cham Province and Phnom Penh, Cambodia  
Budget \$ 1,350,000  
Donors: KOICA (\$ 1,000,000)  
Samsung Electronics (\$ 300,000)  
UNIDO (\$ 50,000)  
  
Counterparts: Ministry of Labor and Vocational Training; and Ministry of Environment

## Developing entrepreneurial skills for job creation and youth employment

Worldwide the private sector is the primary driver for economic growth. However, in many countries, including in Cambodia, young people face obstacles in engaging in profitable business activities due to lack of basic entrepreneurial knowledge and management skills.

In order to encourage the business ventures of the project end-beneficiaries and strengthen institutional and local capacities in providing appropriate entrepreneurship education for long-term and sustainable results, the Entrepreneurship Development Programme component of the project was launched.

As an initial step, a Training of Trainers was organized on 24-29 November 2014 to create a pool of trainers on entrepreneurship development and enterprise management skills. 20 trainees, including 4 women, from 11 regional and provincial training centers in the 5 target provinces were further capacitated to offer and promote entrepreneurship training among the end-beneficiaries and encourage trainees engage in profitable self-employment.

The participants, all of which had previous knowledge on enterprise and entrepreneurship development, received a six-day training and enhanced their entrepreneurial competencies through focused presentations, case-studies, role plays, group discussions, and others. The training curriculum included behavioral input also known as achievement and motivation training, business opportunities guidance, managerial inputs, marketing skills and soft skills development.



The National Technical Training Institute (NTTI) delivered the training and benefited from the advice and guidance of Mr. Arupjyoti Rai Baruah, UNIDO International Expert on Entrepreneurship Development, who reviewed the content of the training and discussed the complete methodology of the EDP. His expertise was further utilized during the four-day Training of Counsellors (TOC). 15 of the previously trained trainers, including 3 women, participated in the training on Enterprise Diagnostic and Business Counseling organized on 11-14 February 2015.

The curriculum included business counseling, enterprise diagnostic, goal setting, basic marketing and bookkeeping, costing and pricing of services, as well as preparation of income and expenditure statement. The Educational Development Institute, a private company with several years of experience in conducting professional trainings, was responsible for the development of the training module based on the tailored-made contents designed by UNIDO International Expert on Entrepreneurship Development, and also provided the trainers to conduct the training under the supervision of UNIDO and NTTI.

The innovative and tailored-made training methodology included technical presentation, brainstorming, hand-on exercises, small group discussions as well as plenary session. Pre-test and post-test were performed to evaluate the progress of the trainees which indicated significant improvement of their entrepreneurial capacities. The best performers of the TOT and TOC were carefully identified and selected by UNIDO in collaboration with NTTI to become trainers of the Training of the Entrepreneurs as well as business counsellors for the following business counselling program with input from trainers of both trainings.

The two-day Training of the Entrepreneurs was organized on 25-26 February 2015 for program 1 which encompassed subjects such as entrepreneurial competence and taught participants how to prepare stock register and lead financial records, as well as inventory control.

The participants were 16 youth, including 2 women, who operate or own repair shops, some of which were former roll-out trainees of the Samsung module on installation and repair services.

Soft skills such as effective communication and interpersonal skills, calculation of basic profitability, and marketing were the focus of program 2 which took place on 5-6 March 2015.

The trained youth will be offered the opportunity to receive continuous business counseling for 3 months from the trained counselors as part of project's commitments and interventions



### Capacity building through technical exposure visit to Samsung facilities in Thailand

To further enhance the curriculum of the Training of the Trainers on “installation and repair services”, additional modules were included, one of which was a four-day field exposure visit to Samsung facilities in Thailand so trainers can obtain better understanding of Samsung service facility’s operations.

In December 2014, 11 participants among which 8 former trainees from various vocational training institute and provincial training centers, of the Samsung-led Training of Trainers, visited the Samsung facilities in Thailand and were equipped with the necessary experience and knowledge on the production chain of Samsung for the development of fitted curriculum, taking into consideration the management of e-waste generated by the repair services.

The exposure visit broadened their understanding on the link of production, installation and repair services provided by Samsung and thus, could help in conceptualizing the appropriate curriculum on installation and repair of electronic products and teaching to be developed in 2015.



### The Fifth Project Steering Committee meeting reviews progress from the second half of 2014 and charts the future

The Fifth Project Steering Committee convened on 15 December 2014 at Sunway Hotel in Phnom Penh to take stock of the project implementation between July and December 2014 and plan the activities until the project end in August 2015. The meeting was attended by high-level representatives from the Ministry of Environment, the Ministry of Labor and Vocational Training, the National Technical Training Institute, KOICA, Samsung Electronics and UNIDO.

In his opening address, Mr. Edward Clarence-Smith, UNIDO Representative and Director of Regional Office in Thailand, underlined the achievements of the project and its contribution to the development of Cambodia through job creation for youth as well as improvement of the management skills and practices for e-waste.

“We can report a project delivery of 99% for 2014 against the 2014 workplan” informed Ms. Gloria Adapon, UNIDO Project Manager. She presented a detailed summary of the project progress versus the output targets and spoke about upcoming activities until August 2014 when the project will be completed. One of the core activities is the Entrepreneurship Development Program which encompasses a series of trainings in the beginning of 2015 to capacitate youth with entrepreneurial skills and help MSMEs incorporate enterprise management best practices for better business results.

In view of the upcoming completion of the project, the possibility for its second phase was discussed and supported by the Project Steering Committee. Mr. Mathias Schluep of the World Resources Forum and Ms. Gloria Adapon presented the initial concept for the second phase and its three components, namely improving the e-waste management system in Cambodia, integrated enterprise development and management, as well as curriculum development of Samsung’s module on installation and repair services.

The upcoming project terminal evaluation will provide important inputs for the possible extension or replication of the project.



### **Awareness raising and capacity building on sound e-waste management for reduced environmental, human health and other socioeconomic impacts**

A one-day awareness raising workshop gathered 61 officials from various Cambodian ministries and institutions, private sector representatives as well as KOICA and UNIDO on 23 January 2015 in Cambodiana Hotel in Phnom Penh to build and strengthen knowledge and local capacities in environmentally sound management of e-waste. The event is part of the capacity building program agreed between the Ministry of Environment and UNIDO in addressing the need to overcome the lack of information and knowledge on the impacts of e-waste and its proper management among practitioners and the general public in Cambodia.

Through focused presentations delivered by senior staff of the Ministry, the participants enhanced their understanding on e-waste management and its associated environmental, health-related and other socio-economic risks as well as learnt how sound e-waste practices can significantly minimize and eliminate adverse impacts.

The Government of Cambodia is undertaking concrete steps in regulating the issue of e-waste and is finalizing a sub-decree on e-waste management. This comes as a response to the expected increase in the use of electronic equipment in the country and the subsequent boost of e-waste, which is expected to expand at a constant rate until 2036.

### Curriculum development for increased work chances for youth

The proposal for the development of curriculum on installation and repair services of Samsung electronics products was prepared by the National Technical Training Institution (NTTI) with the aim of increasing the chances of Cambodian youth pass the accreditation procedures and receive employment in customer care or repair service centers through the provision of a proper teaching plan and material to vocational instructors based on competency based training model.

The developed curriculum will be the backbone of the short courses conducted at NTTI as well as at other partner's vocational training centers. The curriculum will be included as a subject course in the existing programs of electrical and electronic engineering at all level currently offered by NTTI. The process for curriculum development is expected to kick start in the second quarter of 2015 with a completion target before the end of the project in August 2015.

### Comprehensive assessment of e-waste in Cambodia- phase II is completed



The comprehensive assessment of e-waste phase II was carried out by the Ministry of Environment. It builds on the findings of phase I by reviewing existing information and collecting new and missing data as well as conducting impact analysis of e-waste on society, economy and the environment and determining the support required for the development of sustainable e-waste management in Cambodia.

The assessment covers all five pilot areas but data extrapolates to the whole country and includes all processes in the recycling chain, including such related to electronic and electrical e-waste, repair, refurbishment, import-export processes of large household appliances (refrigerators, air conditioners, washing machines), IT and telecommunications equipment (mobile phones and computers), and consumer equipment (TV sets). The team has of the Ministry of Environment has completed the field survey together with the data entry and data analysis.

There were a total of 550 additional respondents to the survey including electronic equipment repairers, dismantlers, informal trash collectors, informal e-waste buyers (traders) and most importantly the local communities who might have been affected by the e-waste. The field survey also included the visit to dumps sites. The completed report will serve as a good reference document for future e-waste management interventions.

### Work initiated for business plan for the manual dismantling facility

The preparatory work for the establishment of a manual dismantling facility was initiated with the mission of UNIDO's International E-waste Expert, Mr. Mathias Schlupe of the World Resources Forum, on 14-17 December 2014. Project stakeholders were briefed, a detailed workplan was prepared, and data identification for the business plan to be gathered in the first quarter of 2015 was performed.

A national consultant is expected to complete the data gathering that will serve as inputs for the formulation of the business plan of the manual dismantling facility. Informal and formal recyclers, transportation companies and other stakeholders in the area of e-waste will be interviewed to gather data on waste materials, labor costs, investment costs, operational costs, taxes, insurances and credit costs for e-waste from small household appliances, PCs, notebooks, printers, different IT accessories, mobile phones, audio and video appliances, and various TV screens and their associated waste materials. UNIDO's counterpart, the Ministry of Environment is supporting the initiative and is expected to contribute in the overall design and implementation.



### Training of Trainers on environmentally sound management of e-waste

25 mid-ranking officials from the Departments of Environment of the Provincial Offices of the Ministry of Environment in the 5 target areas, including Deputy Directors and Chief of Offices-, were capacitated on environmentally sound management of e-waste through a Training of Trainers organized on 25-27 February 2015 in Kampong Cham Province. The participants were introduced with the status of e-waste management in Cambodia, regulations and legal instruments on e-waste management, negative impacts of e-waste on occupational health and safety, socio-economic implications, the 3Rs (Reduce, Reuse, and Recycle) policy, environmentally sound management of e-waste, and e-waste management planning.

The training included sharing of experiences session on e-waste management from selected provincial departments. The interactive training was delivered by senior officials from the Ministry of Environment and through focus presentations, team discussions, and video clips. The training helped create pool of knowledgeable trainers who will be available to become trainers or speakers for the upcoming sub-national workshop on awareness raising as well as provided participants with a good overview of the development of e-waste management in the 5 different respective provinces. The three-day training proved very useful for all participants as dealing with e-waste is relatively new issue while there is a steady increase in the e-waste flows in their respective provinces.



### Key Upcoming Events/Activities

- Sub-national workshops on awareness raising on environmentally sound management of e-waste
- Business counselling program for trained entrepreneurs - Entrepreneurship Development Program
- 3rd Samsung roll-out training on “installation and repair services”
- Curriculum development following installation and repair module of Samsung Electronics
- Developing a business plan for a manual dismantling facility, manual and capacity building activities
- Terminal Project Evaluation
- Project Culminating Event

For more information

Ms. Gloria ADAPON, UNIDO Project Manager

G.Adapon@unido.org

Mr. Sok Chea HAK, National Project Coordinator

S.Hak@unido.org