

**Submission from the
Second African Expert Meeting on the 10 Year Framework Programmes on
Sustainable Consumption and Production
To the Technical Segment of the AMCEN Partnership Conference on NEPAD
Environmental Action Plan
Nairobi, Kenya, 19-20 February 2005**

The Second African Expert Meeting on the 10 Year Framework of Programmes on Sustainable Consumption and Production was held from 17-18 February 2005 in Nairobi, Kenya. The meeting was co-organized by UN-DESA and UNEP in consultation with the Secretariats of the African Ministerial Conference on Environment (AMCEN) and the African Roundtable on Sustainable Consumption and Production (ARSCP). It was attended by 36 participants consisting of 18 Government-nominated experts and 18 sustainable consumption and production experts and development partners and was opened by the Deputy Executive Director of UNEP, Mr. Shafqat Kakakhel. The meeting was structured having an opening plenary session followed by three sets of parallel working group sessions consisting of four groups each. The outcomes from the working groups were discussed during a closing plenary session.

The opening plenary session focussed on reviewing the outcome of the First Experts Meeting on Sustainable Consumption and Production that was held in Casablanca 19-20 May 2004, which identified the key priorities that could be undertaken under the thematic areas of: energy, water, urban development, and industrial development. Each thematic area was considered in the context of NEPAD Environmental Action Plan and regional poverty reduction priorities. This was followed by two sets of working group sessions which further deliberated on the development of specific actions under the respective thematic areas. The following are the priority areas under which specific actions were proposed [Detailed descriptions of the specific action proposals in each area are contained in the attached reports of the working groups. Additionally attached are project proposals developed through sub-regional consultation processes under the ARSCP and which are referred to in the reports of the working groups.]

Priority areas on energy

- Assessment and identification of best practices on renewable energy used along the life cycle of agriculture including policy analysis and recommendations.
- Implementation of projects on renewable energy technologies in rural agriculture, by providing direct assistance to local communities.
- Promotion and development of mini-hydropower for small rural enterprises.
- Promote and support increased utilization of improved woodfuel stoves by households with appropriate financing mechanisms.
- Promote the use of energy efficient light bulbs and electric appliances through affordable prices and information to consumers.
- Develop campaigns on environmental education and information for sustainable use of energy through schools and other institutions in cooperation with NGOs and local communities.

Priority areas on water and sanitation

- Knowledge Management of Best Practice in Africa
- Technology Transfer in Water and Sanitation
- Regional awareness raising and education on SCP in water and sanitation
- Replication of successful experiences in safe reuse of wastewater
- Promoting the Implementation of Integrated Water Resource Management, ensuring the inclusion of LCA and SCP.

Priority areas habitat and sustainable urban development

- Integrated Solid Waste Management (ISWM)
- Sustainable Urban Mobility
- Reduction of Vehicular Emissions
- Sustainable Urban Development

Priority areas on industrial development

- Strengthening the capacity of the African Roundtable on Sustainable Consumption and Production and its members.
- Explore the expansion of value chains for agricultural products and by-products by expanding their industrial uses.
- Improve markets for sustainable goods and services to ensure competitiveness irrespective of destination market.

In addition to the above areas of activities, three concept notes for concrete projects that have been developed through other sub-regional and regional technical consultation forums were submitted to the meeting and was agreed to include them as an attachment to this report for further considerations. The concept notes are on:

- Mainstreaming sustainable consumption and production in Lake Victoria Region as a pilot project on mainstreaming sustainable consumption and production in regional development programmes.
- Sustainable consumption and production of plastics in Africa as a demonstration of integrated solid waste management in Africa.
- Regional training and awareness programme on Life Cycle Analysis as a planning and decision-making tool¹.

Subsequent to AMCEN consultation the set of proposed actions considered favourably by AMCEN will be presented for funding through the Marrakech Process on SCP. Implementation of these activities is subject to resource mobilization and funding availability.

In the final plenary session the participants recommended that the ARSCP be recognized by AMCEN as a Center of Excellence on Sustainable Consumption and Production in the context of the NEPAD Environmental Action Plan.

¹ The Government of South Africa cautioned that the promotion of LCA should be done in such a way that it would not be detrimental to the natural resource-based industries of the region.

The participants in the Expert Meeting would like to thank UNEP ROA for organizing and hosting this meeting and UNDESA, UNEP DTIE, AMCEN Secretariat and the ARSCP as co-organizers of the meeting. The Group will also like to thank the Government of Germany for the valuable financial support provided for this meeting.

Annex one: Detailed activities under the four thematic areas

Theme one: Energy

Based on the outcomes of the First African Meeting on SCP, the group revised and complemented the needs and key priorities for the energy sector in Africa. The group agreed that Energy use is key for human development, economic growth, health and education. There is an urgent need to ensure energy access to rural communities, to promote renewable energy and increase energy efficiency in Africa. This requires development of legal and economic frameworks that set up appropriate market conditions for co-generation and to provide economic and financial incentives to promote renewable energy. Technology transfer and capacity building are also needed.

The group calls for actions to promote sustainable energy use in the following sectors: agriculture, industry and households.

1. Energy use for Agriculture:

There is a need to look at energy use for agriculture, if poverty is to be dealt with.

- a. Promote energy efficiency and renewable energy technologies (solar, wind, bio-fuels) along the life cycle of agriculture: ploughing, irrigation, planting, chemical application, harvesting and transport. E.g. use of treadle pump used for irrigation in Kenya and Nepal. Solar panels for irrigation and food processing in Mali.
- b. Governments should increase access to micro-credits for farmers to help them adopt sustainable energy and efficient technologies.
- c. Create innovative partnerships between farmers communities and business and donor countries for technology transfer and capacity building.

Concrete actions:

- i. Assessment and identification of best practices on renewable energy used in agriculture, in all the phases of the life cycle (ploughing, planting, irrigation, storing, processing and transportation), integrating in each phase sustainable energy technologies. The assessment should also include the policy analysis and policies recommendations to enable the use of sustainable agriculture practices. Request the ARSCP to identify the appropriate group/institute to develop it.
- ii. Promote and provide financial mechanisms, technical assistance and capacity building to local communities to adopt renewable energy technologies and energy efficiency in agriculture activities. For example the solar dryers for fruits and vegetables that enable communities to process and commercialize their products. E.g. Burkina Faso and Mali have best practices in this area.
- iii. Dissemination of the results (success and obstacles) and exchange experiences to improve the projects and enable other countries to replicate these practices.

2. Industrial Energy use and generation:

Energy is a driving force for economic development for Africa. However, the prices are high and there are high inefficiencies along the energy sector (generation, distribution and use). It is necessary to:

- a. Encourage energy efficiency along the whole life cycle of energy sector: generation, transmission, distribution and use. (E.g. during the distribution there are already 30% of energy losses). Major efficiency could lead to lower energy prices.
- b. Promote policies aim at scaling up co-generation, such as.
 - encourage small enterprises in commercial energy co-generation
 - remove market barriers specially pricing, infrastructure for distribution
 - implement financial mechanisms.
- c. Promote more energy efficiency and the use of renewable energy (solar and wind power) for industry; through the design and implementation of economic instruments and financial mechanisms to facilitate the adoption of energy efficiency and use of renewable energy.
- d. Support development of hydropower in African countries. E.g. Kenya produces 80% of its energy by hydropower and Uganda 100%.
 - Promote more research and assessment of the potential of hydropower at the national and sub-regional level.
 - Development financing mechanisms for development of hydropower projects.
- e. Encourage biomass, which is a good alternative for fuel-oil production.
- f. Promote research and assessment of bio-fuels, and disseminate good practices taking place in Africa and other regions (Brazil, Germany) and can be replicated in other African countries. There is a need for more research and development in this area with the view to scaling up the benefits. E.g. the jatropha tree in Kenya.
- g. Support and capacity building to develop studies to use the bio-fuels as implementation of CDMs.

Concrete action:

1. Promotion of Mini-hydros in Power Generation for Rural Enterprise Development

Objectives:

- Contribute to stop the high rural-urban migration.
- development of rural enterprises.
- Promote environmentally sound and economically feasible alternatives for energy.

Activities:

- a. identify appropriate locations for development mini hydropower plants in selected countries in Africa.
- b. establish financial mechanisms to support the investments to support the investment
- c. Build capacity and technical knowledge to design, implement and maintain the hydropower plants
- d. review legal framework to support the promotion of mini-hydropower, where applicable, in the region.

3. Household energy use:

- a. Improved energy efficiency stoves, encouraging the use of renewable energy and bio-fuels.
- b. Promote efficiency in the life cycle of charcoal. This should include:
 - legalize charcoal production with sustainable forest management.
 - Regulation should spell licensing, right pricing.
 - Improve efficiency in charcoal production (efficient kilns) and
 - Improve efficiency in the consumption phase (information and education to women).
- c. The charcoal production is also an option to create local employment.
- d. Promote development of national energy efficiency standards for all imported and domestic electrical appliances, including radios, TV, refrigerators, fans, air conditioning, light bulbs, etc.
- e. Encourage environmental education and information to promote energy saving and informed choices for energy efficiency appliances.

Concrete Actions:

- a. Support higher adoption of improved woodfuel stoves by households with appropriate financing mechanism given by business. Example in Rwanda that companies give credit for woodstoves and the government issues license (based on quality standard).
- b. Promote the use of energy efficient light bulbs, by providing better prices and information to consumers (eco-labels).
- c. Develop campaigns on environmental education and information for sustainable use of energy for households; this will involve schools, local communities and NGOS. UNEP can support with the education tool “YouthXchange”.

Theme two: Water and sanitation

The Working Group studied the list of priority areas suggested in the Discussion Paper, which was developed based on the outcome of the First African Expert Meeting on the 10 Year Framework of Programmes on Sustainable Consumption and Production, and identified some of the following key issues that have to be considered in the area of water and sanitation.

- Cost recovery being practised in some African cities – 30% being recovered. But capital investment very difficult to recover.
- Some countries have laid down strategies on Integrated Water Resource Management (IWRM) to implement this. IWRM still not well understood – therefore need for education and training Regional cooperation is very important
- The UN system can help on further development and implementation of IWSM.
- Water harvesting is very important and quality of water is as important and needs to be considered also.
- Rural water supply has substantially increased by exploiting new supplies (springs etc) at a small cost. It is working well – reducing waste. Management by water committees should be encouraged – it is working in some areas.
- SCP should be mainstreamed into water management strategies being adopted by different African countries

- There is need for a regional project on information exchange and research on IWM e.g. more application of LCA by policy makers. Need is there for capacity building in this area – to simplify LCA for ease of understanding
- There is need for technology and technical assistance to reduce water wastage in addition to use of economic tools.

The Working Group further suggested some areas of activities to be carried out in order to promote the implementation the MDG on water and sanitation by mainstreaming sustainable consumption and production issues.

1. Knowledge Management of best practices in Africa

- documentation & evaluation of sustainable innovative water supply and sanitation systems & meeting.
 - Will help to identify opportunities to leapfrog to more sustainable solutions and consolidate good practices
 - Will help to direct expected investment to reach MDGs.
- **Activities**
 - documentation,
 - evaluation and assessment replicability
 - technical meeting to peer review the report
 - pilot projects
 - technology transfer
 - **Timing:**
 - **Start** 2005
 - **Duration** 2 year

2. Technology Transfer

- Support for efficient use of water – (not overpriced and cost of financing water & sanitation projects)
 - **Domains**
 - Leakage
 - unsustainable consumption
 - desalination (including solar powered)
 - sanitation treatment
 - **Activities**
 - Document the problem domains
 - Domains of interest e.g. Leakage, etc
 - Identify potential technological requirements
 - Develop sustainability evaluation criteria
 - Develop mechanisms of transfer of the technology (linkages with UNEP IGSP - Intergovernmental strategic plan for technology support and capacity building),
 - Provision of necessary equipment with preferential conditions,

3. A regional project on awareness raising and education on SCP of water resources

- a. Develop a manual of SCP ‘best practices’ in water management & conservation.
 - b. Awareness and training should address stakeholders at all levels.
- a. **Activities**
- Survey of social behaviour and habits towards SCP,
 - Information gathering with all stakeholders,
 - National forum to present results of the survey,
 - The use of information dissemination media including : magazines, TV campaigns, education at all levels, curricula and guidelines, etc, on best practices on SCP,
 - Mainstreaming SCP in social behaviour,
 - Regional, sub-regional and national projects for awareness raising and education
- b. **Timing**
- start 2005
 - duration : ongoing
4. Replicating successful experiences in safe reuse of wastewater
- a. Pilot projects on the safe reuse of wastewater
- b. **Activities**
- treatment appropriate for different reuse categories,
 - sludge disposal,
 - establish necessary infrastructure,
 - training
 - implementing different types of reuse depending on region (trees, food crops, vegetable, potable)
 - training
- **Timing**
- **start** : 2005
 - **Duration**: variable according to project.
5. Integrating SCP and LCA in Integrated Water Resources Management
- a. **Activities**
- surveys of existing IWRM in Africa,
 - awareness rising and training of SCP and LCA techniques,
 - undertaking targeted SCP and LCA studies,
 - dissemination of results,
- **Timing**
- **Start** : 2005
 - **Duration** :

Theme three: Habitat and Urban Development

The Working Group studied the list of priority areas suggested in the Discussion Paper, which was developed based on the outcome of the First African Expert Meeting on the 10 Year Framework of Programmes on Sustainable Consumption and Production, and identified four key priority areas within the theme of habitat and urban development. For each of these key priority areas, the Working Group considered its impacts on cross-cutting issues and recommended a list of activities to promote its implementation. The Working Group further suggested some projects to be carried out in order to promote the implementation towards the objectives under each priority area. The four key priority areas identified by the Working Group are: Integrated Solid Waste Management (ISWM); sustainable urban mobility; emission reduction; and urban development.

1. Integrated Solid Waste Management (ISWM)

Promotion of ISWM will improve the health of people and environment around the areas concerned. It will have positive impacts on poverty alleviation by creating job opportunities for the poor and promote consumer protection and education. It will have the dimension of regional cooperation in establishing baseline information and development of infrastructure, including mobile infrastructure.

The basic objective of this priority area is to develop and implement ISWM in order to improve the waste management, for both municipal and industrial waste, in the region and to promote waste prevention, minimization, reuse and recycling. Activities recommended for this priority area are as follows.

- a) Establishing baselines
 - Collection of information
 - Characterization of waste
 - Institutional and legal frameworks
 - Existing infrastructure and technologies
 - Players in waste management
- b) Capacity development on ISWM
 - Cost accounting
 - Waste management infrastructure
 - Training / demonstration
- c) Policy development
 - ISWM policies
 - ISWM strategies
 - Extended Producer Responsibility
 - Compliance with relevant international conventions
- d) Hazardous Waste Management Programmes

2. Sustainable Urban Mobility

Promotion of sustainable urban mobility will improve the health of people and environment by reducing the congestion and emission of air pollutants. It will also have a positive impact on poverty alleviation by increasing the mobility of the poor, thereby increasing job opportunities and access to a range of facilities and services. It will further promote regional cooperation by sharing information and connecting between major cities. In addition, it will improve the consumer protection by offering greater choices of transportation means.

The objective of this priority area is to improve and better manage the infrastructure for transportation. It will also provide a wider range of transportation means with an aim of reducing environmental and health impact as well as addressing the cross-cutting issues mentioned above. Activities recommended for this priority area are as follows.

- a. Infrastructure planning, development and management
- b. Mass transit

3. Reduction of vehicular emissions

Reduction of emission will improve the human and environmental health of the areas concerned, as well as contribute to the reduction of global warming. By improving the standard and legislation regarding the use and imports of unqualified vehicles, it will also contribute towards the consumer protection. The major objective of this priority area is to reduce emission from the use of vehicles and reduce the use of unqualified, polluting cars. Activities recommended for this priority area are as follows.

- a. Improve / establish inspection infrastructure
 - Standard setting
 - Monitoring
- b. Restrictive legislation against the importation of used cars
 - Incentives for:
 - Catalytic converters
 - Completely knocked-down kits
 - Assembly of new cars
- c. Encourage the use of cleaner fuels
 - Use of fuels which are unleaded and low sulphur content
 - Use of bio-fuels

4. Sustainable urban Development

By upgrading unplanned settlements, urban development can improve the health of people and the environment of surrounding areas and reduce poverty. By conducting stakeholder consultation in city development strategies and offering opportunity for sustainable building design and construction, urban development also promotes consumer protection. The major objective of the priority area is to promote sustainable urban development by employing city development strategies and upgrading unplanned settlements. It will also offer the wider choices in designing structures and facilities, such as building, housing and greenery. Activities recommended for this priority area are as follows.

- a. City development strategies
 - Awareness raising through SCP clubs
 - Stakeholder consultations
 - Review of urban development plans
 - Sustainable procurement
 - Urban – peri-urban – rural linkages
- b. Upgrading unplanned settlements
 - Affordable housing, electricity and water
 - Improvement of productive capacity
- c. Sustainable building design and construction
 - Training on design and construction
 - Development of standards and procedures
 - Production of environmentally sound materials, building on locally available materials

The Working Group further suggested the following activities as elements of regional projects under the respective areas.

Integrated Solid Waste Management (ISWM)

- a. Knowledge management
 - Establishment of baseline for solid waste
 - Best available practices on waste management policies and strategies
- b. Capacity building and technology transfer
 - Cost accounting
 - Waste management infrastructure
 - Identification, negotiation, adoption and adaptation of technology
 - Policy development for ISWM
- c. Education and support for implementation
 - Manuals, handbooks, guidelines on ISWM for the target group

Sustainable Urban Mobility

- a. Knowledge management
 - Best available practices in infrastructure planning and mass transit
- b. Capacity building and technology transfer
 - Infrastructure planning
 - Technology transfer for mass transit

Reduction of vehicular emissions

- a. Capacity building and technology transfer
 - Technology transfer for cleaner fuels
- b. Education and support for implementation
 - Guidelines on restrictive legislation against the importation of used cars

Sustainable Urban Development

- a. Knowledge management

- Best practices on sustainable procurement
- b. Capacity building and technology transfer
 - Capacity building for sustainable urban development planning
 - Capacity building for sustainable building design and construction
 - Training on sustainable procurement
- c. Education and support for implementation
 - Guidelines for sustainable procurement

Theme Four: Renewable resource based industries

The working Group reviewed each of the priority areas for the issue listed in the discussion paper, which was developed based on the outcomes of the First African Expert Meeting on the 10 Year Framework of Programmes on Sustainable Consumption and Production. The working group analyzed each of these items based on their relationship and impact on cross over issues such as poverty alleviation, regional cooperation, health, gender perspective, economic potential and consumer protection and education. The following are suggested as key areas of concrete actions to strengthen Africa's capability to benefit from the development of renewable resource based industries.

1. Strengthening the capacity of the African Roundtable on Sustainable Consumption and Production and its members.

- a. Expand the focus of the network and its members to be one based on "sustainable consumption and production aimed at promoting industrialization in Africa". To do this they must:
 - Adjust the charters of the centres and institutions members of the African Roundtable on Sustainable Consumption and Production (ARSCP) to reflect this focus.
- b. To promote the expansion of the ARSCP network by adding the number of countries with institutions or centres within the network.
 - Put in place a campaign \to expand the number of centres
 - Enhance the image of the centres as technical assets to national governments
 - Expand the international networks to which the ARSCP members are affiliated
- c. Support for information and knowledge management
 - Create a database on sector specific CTSA assessments (Clean Technology substitute Assessments) as well as on African Best Practice on SCP
 - ARSCP to request the European Environment Agency to share its existing information system.

Goals:

- To make required changes in the charters of all current and future ARSCP members
- To expand the network to include a centre or similar institution in the majority of countries in the region.
- Deploy the knowledge management system including databases

Responsible party: ARSCP

2. *Promote the creation of loan guaranteed funds* for business transaction, which include aspects of pollution prevention and efficiencies in use of resources. To do this the ARSCP will:

- Organize a meeting with regional actors and the international cooperation agencies and other funding sources active in Africa to promote the creation of such rotating funds in order to achieve for African companies conditions similar to those available to competitors in developed countries.
- Work actively to make such funds happen including promoting changes in national financial schemes and regulations when necessary
- Promote the role of the NCPCs and other members as loan brokers and technical support system for applying companies.

Goal: organize the meeting specified in the proposal and successfully establish a number of rotating funds

3. *Explore the expansion of values chains for agricultural products and by-products by expanding their industrial uses.*

This work item aims to take advantage of the integration of positive impacts that such an activity will have on poverty alleviation, food security, health and the reduction of environmental impacts. To implement this work area the ARSCP will constitute a special commission of its members as well as members from academia, research institutions and other relevant organizations to ensure that lessons learned in these projects and other similar projects are shared within the region.

- a. The group proposed studies to explore potential markets for the following
 - Production of biodegradable plastics from agricultural by-products under the Regional project on SCP on plastics in Africa which is attached as an annex to this report
 - Expand the industrial uses of Cassava
 - Explore the possible sources of bio-diesel and ethanol as well as regional market potential.
 - The development of construction materials from agricultural by-products
 - The use of coconuts for industrial purposes
 - The development of organic fertilizers in Africa
 - Explore the potential of plants for medical purposes such as the malaria plants
- b. Expand and improve policy frameworks to promote industrial research and development for cleaner technologies in the region as well as knowledge management systems to promote the transfer of technologies
 - Commission a study on the status in Africa and other regions of patent laws and practices as well as marketing of results of industrial research
 - Develop recommendations to governments of the region regarding ways to improve incentives for research and legal protection of research results.
 - Explore ways to reward researchers and their institutions for successful projects

- Explore the policies that promote research cooperation between academia, research institution and the industrial sector both national and international
- Explore the potential of technology and research parks for Africa
- Request UNIDO to revive the training programme on technology negotiation and guides

Goals:

- Create the special commission and complete the necessary studies to propose appropriate recommendations.
- Carry out training programme on technology negotiations across the region
- Responsible party: ARSCP, UNIDO

4. Improve markets for sustainable goods and services

This work area aims to make African products competitive irrespective of destination market as well as improving the environmental and social quality of domestic and imported products.

- a. Ensure that African products meet basic standards required for access to markets.
 - Ensure that African producers are aware and meet ISO product standards and other relevant product, environmental and social requirements
 - Improve the capacity of national and regional standardization bodies to participate in ISO and other standard setting processes
 - Promote the capacity of national standard setting bodies to promote the adherence to these standards by local producers.

In order to do this the ARSCP must partner with national and regional standardization bodies and relevant industrial/producer associations to develop a cohesive approach for the region.

Goal:

- develop an awareness campaign for use by industrial and producer associations,
- commission a report identifying needs by regional and national standardization organizations as well as other institutional needs to promote adherence to product standards

5. Develop an early warning system to determine impacts on African products of planned regulatory changes in other regions, changes in international standards as well as to avoid the import of products which may have been recently banned and/or determined to be of environmental concern in the source country
 - a. ARSCP to create a special commission to monitor changes in policy, plans, programs and regulatory regimes within the multilateral negotiating systems (e.g. WTO) and carry out integrated assessment (IA) and advise AMCEN. The outcomes will be used to support on the implementation of ITEM I in this project proposal
 - b. Promote the use of sustainable public procurement policies in the region by making effective use of government purchasing power.

- Develop product guidelines to support sustainable public procurement in the region
 - These guidelines should include economic, quality, environmental and social considerations including job creation and value adding criteria
 - Promote the adoption of these guidelines by public procurement and tender authorities
 - Promote the voluntary adoption of such guidelines by the private sector
 - Request UNEP to do training on the Module on Public Procurement
- c. Explore the possibility of marketing campaigns to exploit the environmental and social qualities, and to develop branding value of African products (i.e.; unpolluted land campaign)
- Create African Green Products label under the Global Environmental Labelling Networks
 - Organise a meeting with advertising companies to create the African Green Product Label.

Responsible party: ARSCP, UNEP DTIE

Annex two: Concept notes on concrete project proposals

Project Concept Note One
Regional Project on
Sustainable Consumption and Production of Plastics in Africa

Background

Plastic is one of the most versatile products that have contributed significantly to the improvement of wellbeing throughout the world through its diverse application and utilization both as a product and in service delivery. Plastics owe their wide acceptance to outstanding properties, such as durability, low density, low cost and versatility for a wide range of applications from packaging to use in construction industry. Plastics seem “to last for ever” and this property, however, is proving to be the very reason why these products are a major environmental problem. Over the years, plastics have replaced leaves, glass and metal as a cheaper and more efficient means of packaging. The plastic industry is one of the fastest growing industry sectors in Africa. Most of the plastic industries are engaged in the production of basic plastic products such as packaging films, shopping bags, containers and household items.

In parallel to the growth of the plastic industries, African Urban Centres are faced with significant environmental problems associated with the problem of plastic waste. Almost all plastic industries in Africa and the plastic products that are coming into Africa are made from non-biodegradable materials. Besides the littering problem which is apparent in most African urban centres, plastic waste, particularly polybag waste, is causing a number of environmental and health hazards which include: the choking of the soil, infrastructural damage due to blockage of drains, death of cattle due to ingestion, and food hazard.

Almost all African countries recognize the growing scope of the problem and are trying to find the best possible way of addressing it. Some have started taking some policy measures to deal with the problem of plastic waste. The following are some of the measures taken by individual countries.

Kenya: The National Environmental Management Authority (NEMA) in collaboration with the plastic sector of the Kenyan Manufacturers Association (KMA) has developed a 10-Point Action Plan aimed at reducing the environmental impact of plastic waste in Kenyan urban Centres.

South Africa: The Government introduced legislation to replace 30-micron sacks with thicker 80-micron plastic bags. Within 6 months manufacturers were to increase the thickness to 90 microns. The aim is to encourage shoppers to both reuse and recycle the higher quality bags and lessen littering.

Rwanda: The Government of Rwanda has imposed a total ban on the production, importation, sale and use of low density polyethylene carrier bags. The limited numbers of plastic industries that are operating in the country are required to produce plastic bags of higher microns that could be reused and recycled.

Ghana: Different studies estimated that plastic water sachets account for about 85 percent of that refuse. The Government of Ghana has formed a Task Force and launched a US\$1.5 million project on the 270 tones of plastic waste generated each day by the capital's three million inhabitants.

Needs and Justification

The problem of plastic waste management has been a major problem for all countries that have undergone through a shift in consumption patterns. As a result, there is an accumulated body of knowledge on plastic waste management that is built upon experiences of both developed and developing countries. There is a strong need for African countries to learn from these experiences in order to develop effective plastic waste management strategies. Furthermore, as was noted in the Johannesburg Plan of Implementation, there is a strong need for a fundamental shift in society's consumption pattern in order to achieve global sustainability. African countries are well positioned in order to realize such fundamental shift by adopting sustainable alternatives which include the production of Environmentally Degradable Plastics (EDPs) using locally available renewable resources.

The production of alternative packaging materials including EDPs would provide multiple macro-economic benefits that go beyond the protection of the environment. This includes the broader contribution to national poverty reduction strategies through the production of local resource based products, the creation of employment and enhancement of productive capacities. Over the last few months, UNEP's Regional Office for Africa has been requested by a number of African countries on how to deal with the growing problem of plastic waste. While there is a very strong willingness on the part of African Countries to meet the challenge of plastic waste, lack of capacities has been recognized as the major impediments towards the solution.

The issue of plastic waste has also been one of the priority issues identified by the First African Expert Meeting on the 10 Year Framework Programme on Sustainable Consumption and Production that was organized by UNEP in consultation with UN-DESA. With the purpose of developing a comprehensive response to the problem, UNEP has subsequently facilitated the establishment of a Regional Task Force on Plastics under the auspices of the African Roundtable on Sustainable Consumption and Production (ARSCP).

The Initiative

The 'UNEP-ARSCP Project on Sustainable Consumption and Production of Plastics in Africa' is developed based on the above background with a purpose of addressing the problem of plastic waste management in Africa in the context of the 10 Year Framework Programme on Sustainable Consumption and Production as outlined in the Johannesburg Plan of Implementation. The project is proposed to be implemented by UNEP in collaboration with the African Roundtable on Sustainable Consumption and Production (ARSCP), the Secretariat of the African Ministerial Conference on the Environment (AMCEN), UN-DESA and other relevant partners.

Based on the series of consultation that have been carried out with regional experts and international partners, it has been proposed to adopt the following triple track strategy in order to promote the sustainable production and consumption of plastics in Africa.

- **Track one:** Provide technical assistance to African countries on how to develop and implement a sound strategy on sustainable consumption and production of plastics and thus a comprehensive plastic waste management programme for selected urban centers.

- **Track two:** Develop a partnership that would enhance the required technical and marketing capacities for the establishment of industries that produce affordable alternatives including environmentally degradable plastics (EDPs) based on locally available raw-materials within the region.
- **Track three:** develop a communication strategy to provide information to citizens/consumers on the environmental impacts of plastics with a purpose of influencing consumer behavior towards sustainable consumption practices.

While recognizing the importance of putting the required effort on the above tracks, this project attaches particular attention to the promotion of a fundamental shift through the production of EDPs based on renewable resources. The project shall be initially implemented in five selected African countries and will later be expanded to other African countries based on the experience to be gained from the first phase.

Objectives

The main objective of this initiative is to promote the sustainable consumption and production of plastics in Africa that would contribute to the improved well-being of the people in the region on a sustainable basis. The specific objectives are:

- To provide technical support that would enable African countries to develop and implement a comprehensive plastic waste management strategy based on the relevant experience from within and outside the region.
- To foster partnership with transnational companies, financing institutions and industry associations in the context of the UN-Global Compact Initiative and having the purpose of facilitating the transfer of technologies for the production of ‘Environmentally degradable plastics’ (EDPs) within the region.
- To promote the establishment of industrial units that produce ‘Environmentally degradable plastics’ (EDPs) within the region with the multiple purpose of contributing to poverty reduction, environmental protection and socio-economic developments within.
- To promote environmentally responsible behavior amongst consumers through public awareness programs and dissemination of information.

Results

- Five national strategies on sustainable consumption and production of plastics shall be developed based on the relevant experiences from within and outside the region for subsequent adoption by African countries.
- Five African urban centres in countries where national strategies have been developed will adopt comprehensive plastic waste management programme that is developed through broad-based consultation.
- A financing mechanism that includes a revolving fund that would provide seed financing for the establishment of community-based EDP producing plants in Africa shall be created.
- The state of the urban environment in African urban centres shall be improved due to the reduction of the impacts from plastic waste.
- The broad objectives of poverty reduction strategies and the triple objectives of sustainable development shall be promoted through the establishment of industries that produce EDPs that are based on locally available resources.

- New employment opportunities shall be created through the engagement of vulnerable groups in the collection and supply of plastic waste to industries.
- Improved awareness shall be created amongst selected consumer groups and the general public regarding the sustainable consumption and production of plastic products.
- An active partnership shall be developed between government agencies, multinational companies, industries, support service providers and community-based organizations.
- Useful experience would be gained and compiled for the subsequent replication of the experience in other regions.

Activities

- Compile useful and relevant experience on plastic waste management and the production of EDPs both from within the region and outside the region.
- Identify the key target groups that could be active partners in the management of plastic waste and the production of EDPs through broad-stakeholder consultations.
- Organize economically vulnerable groups such as women and unemployed youth so that they could take an active part in the recycling of plastics and the production of EDPs.
- Develop a partnership framework with multinational companies and industry associations in the industrialized world for the effective transfer of technologies on plastic waste management and the production of EDPs.
- Conduct consultation with financing institutions and environmental funds with a view of creating a revolving fund for the financing of the production of EDPs in Africa.
- Develop a communication strategy aimed at creating awareness on sustainable consumption and production of plastic products.
- Organize sub-regional workshops on the development of a comprehensive plastic waste management programme for African Urban centres.
- Organize promotional forums at the sub-regional and national levels on the available technologies for the production of environmentally degradable plastics from locally available resources.
- Provide the required technical and institutional assistance on the technology transfer and financing mechanisms for the establishment of EDP producing plants in the region.

Project Concept Note two

Developing Capacities for Sustainable Consumption and Production in Lake Victoria Region

1. General Background

Lake Victoria bestrides the three East African Community countries as a symbol of their natural and lasting unity. The Lake's catchments area covers 193,000 sq. km in Uganda, Kenya and Tanzania as well as parts of Rwanda and Burundi. This area, invariably described as the Lake Victoria Basin and the East African Lake Region, is the size of an average African country with a population of over 30 million and a gross economic product in the order of US\$ 5 billion. The **East African Community** has designated Lake Victoria and its Basin as an "area of common economic interest" and a "regional economic growth zone" to be developed jointly by the Partner States. Lake Victoria is the focus of new attention following the declaration by the East African Community Heads of State that a joint Programme be developed for the overall management and rational utilization of the shared resources of the Lake.

The East African Community established the Lake Victoria Development Programme in 2001, as a mechanism for coordinating the various interventions on the Lake and its Basin; and serving as a centre for promotion of investments and information sharing among the various stakeholders. The Programme is the driving force for turning the Lake Victoria Basin into a real economic growth zone. The Programme envisages a broad partnership of the local communities around the Lake, the East African Community and its Partner States as well as the development partners. The Programme is focusing on the...

- Harmonization of policies and laws on the management of the environment in the Lake and its catchment area;
- Continuation of the environmental management of the Lake, including control and eradication of the water hyacinth;
- Management and conservation of aquatic resources, including fisheries;
- Economic activities in the development of fishing, industry, agriculture and tourism; and
- Development of infrastructure, including revamping the transport system on and around the Lake.

The Programme further places emphasis on poverty eradication and the participation of the local communities. It is expected to make a significant contribution towards reduction of poverty by uplifting the living standards of the people of the Lake region. This is to be achieved through economic growth, investments and sustainable development practices that are cognizant of the environment.

2. The Project background

UNEP in collaboration with the African Roundtable on Sustainable Consumption and Production (ARSCP) and the Kenyan National Cleaner Production Centre (KNPCPC) organized a sub-regional roundtable on sustainable consumption and production in Eastern Africa Region. The Roundtable was held from 6-7 December 2004, in Kisumu, Kenya. Reviewing the existing situation within the Region, the Roundtable identified the following three strategic areas of intervention and possible areas of focus leading to the mainstreaming of Sustainable Consumption and Production (SCP) in the region were identified. These were:

1. Enhancing SCP Application in existing industry Sectors

- a. Sustainable Agriculture
- b. Fishing – sustainable harvesting
- c. Service sector (transportation, tourism, financial institutions)
- d. Compliance assistance to SME's (eco-efficiency self assessment tools e.g. design for the environment, supply chain management, eco-indicators, environmental reporting, life-cycle management & EMS)

2. Integrating SCP In City Development Strategies

- a. Integrated solid waste management with emphasis on the “5 R's”
- b. Sustainable building and infrastructure development
- c. Sustainable procurement
- d. SCP clubs within Municipalities/Schools

3. Promotion of a Circular Economy (Closing The Loop)

- a. Development of eco-industrial zone/parks
- b. Promoting industrial symbiosis
- c. Development of return scheme for recyclable/re-usable materials
- d. Develop City/Regional environmental profile (baselines)

The Roundtable further identified the specific follow-up activities that need to be undertaken at the national and regional level. The Roundtable called upon UNEP to develop a regional project that is aimed at developing the required institutional capacities for the implementation of the activities identified at the national and regional level. This project on 'Developing Capacities for Sustainable Consumption and Production in Lake Victoria Region' is developed in response to the need identified and the request made by the Roundtable.

The Objectives

The overall objective of this project is to develop the institutional capacity for the development and implementation of sustainable consumption and production

programmes within the Lake Victoria Region in the context of the 10 Year Framework Programme on sustainable consumption and production. The specific objectives are:

- To provide training on selected tools and techniques related to sustainable consumption and production so that there will be a core capacity for the development and implementation of programmes at national and sub-regional level.
- To enhance the institutional capacities of the three National Cleaner Production Centres and other relevant institutions in the area of developing and implementing sustainable consumption and production programmes.
- To provide technical back-up support to sustainable consumption and production activities within the region.

Results

- The principles and concepts of sustainable consumption and production shall be integrated in the Lake Victoria Development Strategy and action plans.
- A comprehensive regional strategy shall be developed for the promotion of sustainable consumption and production within the Lake Victoria Development Region.
- Selected cities with significant impacts on the ecological balance of Lake Victoria will have an action plan on sustainable consumption and production.
- The required capacities in the core areas of sustainable consumption and production such as sustainable procurement, eco-industrial zones, cleaner production and sustainable construction shall be developed.
- Sustainable use of the Lake Victoria resource shall be made possible within the context of the national poverty reduction and sustainable development strategies of the riparian countries.
- Sustainable consumption and production clubs shall be established within secondary schools and serve as an instrument for awareness creation and attitudinal change.
- The adverse effect of socio-economic activities within the region shall be reduced thereby leading to the improvement of the environmental condition of Lake Victoria.
- Regional cooperation shall be further strengthened through the collaboration that is going to be promoted amongst the National Cleaner Production Centres and other partner institutions.
- The foundation for the establishment of National Cleaner Production Centres in Rwanda and Burundi shall be created.

Outputs

- One regional and three to five national strategies on the 10 Year Framework Programme on sustainable consumption and production shall be developed.

- Actions plans on integrating sustainable consumption and production in city development strategies of three key cities that have a direct impact on Lake Victoria shall be developed.
- A total of 80 Trainers will be trained in the area of cleaner production, sustainable procurement, eco-industrial zone development and sustainable construction.
- Sustainable consumption and production clubs shall be created in a minimum of 100 schools and thousands of youth shall be trained as cadres of sustainable consumption and production.
- Concrete project linking consumption and production under the context of the 10 Year Framework Plan shall be developed.

Activities

- Organize national seminars and forums aimed at creating the basic awareness about sustainable consumption and production practices and creation of change agents at the general public level.
- Undertake comprehensive consultation both at the national and cities level in order to identify the key development priorities and existing and projected environmental constraints.
- Review existing national and city development in the regions and develop a comprehensive sustainable consumption and production strategies that could be implemented at Regional, national and international level.
- Review existing manuals and resource tool-kits in the area of sustainable procurement, eco-industrial parks, and sustainable construction with the purpose of adapting them to the African context.
- Organize regional workshops for training of trainers on the selected core areas related to sustainable consumption and production.
- Enhance the technical capacity of the National Cleaner Production Centres as the principal institutional focal points for sustainable consumption and production activities.
- Provide continuous technical back-up support to the activities to be undertaken at the regional, national and city level.

Project implementation

The project is proposed to be implemented by UNEP in collaboration with the Secretariat of the ARSCP and the East African Community (EAC). The National Cleaner Production Centres will be the focal point for the implementation at the national level. Detailed work plan and budget shall be prepared as per the above components.

Project Concept Note Three

Life Cycle Analysis Awareness and Inventory Training Workshop

1.0 Background

The First Global Ministerial Environment Forum in Malmo, Sweden in 2000 called for a life cycle economy. This followed recognition that fundamental changes in the way societies produced and consumed were indispensable for sustainable development. Subsequently in 2002, the World Summit for Sustainable Development (WSSD) in 2002 called for a 10-year framework of programmes to promote sustainable consumption and production, and also called for the use of science-based approaches, such as life cycle analysis (LCA) in developing production and consumption policies aimed at improving products and services. More recently, the Eastern Africa Roundtable on Sustainable Consumption and Production held in Kisumu, Kenya, December 2004 identified compliance assistance to SMEs in the sub-region through, *inter alia*, life cycle approaches as a way of enhancing SCP applications in existing industrial sectors. Clearly, there is demand for systems approaches to development in Africa and, if well adopted, life cycle approaches have the potential to deliver socially acceptable and environmentally sound development in many sectors key to poverty reduction in Africa.

However, LCA is a new tool to most African country institutions and its immediate application is bound to encourage barriers including low awareness of the tool, lack of human (training), institutional (programmatic) and technical (software, data) capacities to recognize points of application and manipulate the tool. For African LCA-based programmes to meaningfully contribute towards SCP in the 10 year framework of programmes, these challenges must be surmounted. A critical mass of personnel will have to be developed and access to the tool increased for key institutions. Furthermore efforts will need to be put in place for developing locally relevant inventories/databases for use in estimating environmental impacts considering locally and regionally relevant impact categories. There is also the need to raise awareness among policymakers and decisionmakers in key potential-user institutions on the potential role LCA can play in local development. Working with them could strengthen sectoral legislation and policies that are currently weak on systems approaches to development.

As a contribution to programmes aimed at preparing African institutions to implement activities in the 10 year framework, the ARSCP is proposing a pioneering project aimed at raising awareness on LCA as a potentially useful tool for sustainable development in important sectors in Africa. The project will also train African researchers and practitioners on LCA use and inventory development.

2.0 Objectives

The overall objective of the project will be to raise awareness on LCA and build human capacity for country-level life cycle inventory database construction from generic data sets. Specifically, the project will:

- a.) provide a forum for experience sharing among African experts and others interested in LCA;
- b.) strengthen capacities for inventory/database development and identification of important country specific impact categories; and
- c.) enable participants to use LCA software and databases in environmental impact assessment.

3.0 Strategy

To achieve the above objectives, the forum will be organized around a 1-day symposium followed back-to-back by a 4-day training workshop as follows.

a.) African Life Cycle Assessment Symposium, 29 August 2005, UNEP Headquarters, Nairobi.

The theme of the symposium "Towards life-cycle based risk and benefit assessments to inform and critique environmentally sustainable and socially beneficial economic growth in Africa" is proposed in relation to two main political initiatives dominating the African agenda in the first decade of the new millennium: NEPAD's vision of economic growth of 6% p.a., and the Johannesburg Plan of Implementation, which calls for the application of science-based approaches, and in particular to life-cycle assessment, to inform sustainable development. The fundamental purpose of the conference is to encourage the exchange of experiences on the application of the LCA tool in Africa and to strengthen the recently founded African LCA network.

b.) Life Cycle Inventory Training Workshop, 30 August – 2 September 2005, UNEP Headquarters, Nairobi.

The intention of the training workshop is to introduce researchers and practitioners active in the fields of environmental and social impact assessments and economic cost-benefit analysis to methods of (environmental) life cycle assessment. Part of the training will involve constructing country level life cycle inventory databases from a generic data set. These databases, needed to do country-specific analyses, will be a take-home product of the workshop.

4.0 Results

- Awareness of LCA as a tool for development planning shall be raised among ;
- Demand for the tool's application will be created among researchers and development experts
- The academic community will have a scale-up action plan towards integrating LCA in their teaching and research programmes;
- Inventory databases relevant to key sectors influencing basic development in individual participating countries shall be developed
- Important local and regional environmental impact categories shall be established;
- Follow-up strategies for integrating LCA into key national development programmes and plans will be worked out

5.0 Outputs

- Scale-up action plans for integrating LCA into academic and national development programmes shall be developed;
- 35 researchers and practitioners active in the fields of environmental and social impact assessment as well as cost-benefit analysis will gain from LCA training and be relied upon to catalyse dissemination of the tool in their countries;
- Country-level life cycle inventory databases needed to do country-specific analyses (for about 23 countries represented) will be a take-home product of the training workshop; and
- A new institutional partnership building on ALCANET will be created to oversee implementation of proposed scale-up activities.

6.0 Project Implementation

To implement the two activities, the African LCA Network (ALCANET)—a loose knowledge network of experts in LCA in the region and who are individual members of the ARSCP—will be organising the events in collaboration with other institutions and partners such as the NCPCs, the Association of African Universities and UNEP ROA. A detailed workplan and budget are being worked out.