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National Guidelines on Education for Sustainable Consumption for Tanzania

UNEP
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This publication is part of the UNEP pilot project on the institutional strengthening of Education for Sustainable Consumption (ESC) – Advancing ESC Policy and Implementation Strategies in Tanzania (2011-2014).

This publication is an adaptation of the United Nations Environment Programme publication entitled Here and Now! Education for Sustainable Consumption - Recommendations and Guidelines

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National Guidelines on Education for Sustainable Consumption for Tanzania

This publication, *National Guidelines on Education for Sustainable Consumption for Tanzania*, is a contribution to:

The Tanzania National Action Plan on Sustainable Consumption and Production
As an important step towards sustainable development, Tanzania developed its National Action Plan on SCP (2008-2017), which is based on the National Strategy for Growth and Poverty Reduction popularly known as MKUKUTA. Tanzania's National Action Plan focuses on five priorities: energy efficiency, water and sanitation, habitat and urban sustainable development, industrial development, together with Education for Sustainable Consumption and Production as a crosscutting area.

The 10-Year Framework of Programmes on Sustainable Consumption and Production (10YFP) is a concrete and operational outcome of Rio+20. The 10YFP is a global framework that enhances international cooperation to accelerate the shift towards SCP in both developed and developing countries. It provides capacity building, technical and financial assistance to developing countries, and encourages innovation and cooperation among all countries and stakeholders. Six programmes are being developed and implemented under the 10YFP, including one programme on Sustainable Lifestyles and Education launched in 2014. UNEP serves as the Secretariat of the 10YFP.

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This publication is part of the UNEP pilot project on institutional strengthening of Education for Sustainable Consumption (ESC) – Advancing ESC policy and implementation strategies; a pilot project implemented in Chile, Indonesia and Tanzania (2011-14). This project is implemented by the United Nations Environment Programme (UNEP) Division of Technology, Industry and Economics (DTIE), in collaboration with the UNEP Regional Office for Africa, with the financial support of the Italian Ministry for the Environment, Land and Sea. This project was developed in the framework of the Marrakech Task Force on Education for Sustainable Consumption (led by Italy) and as a contribution to the United Nations Decade of Education for Sustainable Development (UNDESD, 2005-2014). It was implemented in close cooperation with key partners such as the Partnership for Education and Research about Responsible Living (PERL) and the United Nations Educational, Scientific and Cultural Organization (UNESCO).

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I also acknowledge UNEP DTIE as well as UNEP's Regional Office for Africa in collaboration with the UN Delivering as One framework in Tanzania, through the UN Development Assistance Plan (UNDAP), for providing technical guidance and financial support in the preparation, finalization and testing of the guidelines.

It is our sincere hope that these guidelines on ESC will stimulate debates and influence changes in behaviour, creating awareness in the society while enhancing friendly sustainable practices.

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PREFACE

As individuals, being unaware of our environmental obligations does not relieve us from the liability and conservation roles. In this regard, education and training is crucial for the current and future generation to actively participate in the shift towards sustainable consumption. The time has come to adopt more sustainable ways of living that are in harmony with our communities and nature. Sustainable consumption offers countless opportunities for our country, including the ability to "leapfrog" straight onto a resource-efficient sustainable development path.

The world is facing numerous environmental problems and challenges, ranging from environmental degradation, climate change and trans-boundary pollution many of which are driven by increasing population and consumption patterns, and poverty, particularly in developing countries. These problems and challenges are some of the main factors that contribute to the need for urgent application of sustainable consumption patterns. The National Environment Management Council (NEMC) and the United Nations Environment Programme (UNEP), in close collaboration with the Ministry of Education and Vocational Training (MoEVT), have developed national guidelines on education for sustainable consumption (ESC) as part of a pilot project on the Institutional Strengthening of ESC — Advancing ESC Policy and Implementation Strategies. This UNEP pilot project on ESC has been implemented globally as a pilot in Chile, Indonesia and Tanzania between 2011 and 2014.

The objectives of these guidelines are to:

- Enable Tanzania to better understand the principles of ESC;
- Assist in strengthening ESC techniques and teaching methods that incorporate sustainable consumption and lifestyle choices; and
- Promote and encourage ESC based on existing pedagogical techniques.

These guidelines highlight the philosophy of ESC based on pedagogical techniques, which are participatory, inclusive, contextualized and flexible. The technique deviates from traditional teaching techniques and suggests engaging learners where experience, reflection, critical analysis, tolerance, cooperation, compassion and respect are highly encouraged. These guidelines aim to contribute to shaping Tanzania's basic education system into one that promotes attitudes and behaviour that are geared towards a culture of sustainability.

These ESC guidelines have been developed based on the importance, critical contexts and necessity of enhancing education system as a backbone of consumer education, civic training and responsibilities and environmental education for better resource use, management and conservation. The guidelines highlight modalities of achieving ESC in Tanzania by focusing on research areas and optimizing the opportunities that benefit the country. Also, it identifies the current ESC topics and gaps in basic education systems for changing consumption and lifestyles and recommends approaches for overcoming the gaps and maximizing the opportunities.

The guidelines incorporate approaches in enhancing ESC among policy-makers, teachers, teacher educators, civil society organizations and the general public. The emphasis is on identifying the approaches of incorporating ESC in education systems and communities lifestyles. The guidelines also highlight the approaches and practical methodologies of integrating ESC in teaching learning and community activities relevant to sustainable consumption in the country. Particular emphasis is on values, knowledge, skills, relations and friendly practices that enhance changing lifestyles towards sustainable consumption.

The guidelines point out the roles of all key players in informal, non-formal education and formal education institutions in enhancing collective decision-making focusing on the past, present and future in resources management, consumption and conservations. The informal and non-formal institutions in this regard

include non-governmental organizations, community based organizations, the media, private sector, faith-based organizations and community conservation and production groups.

These guidelines ensure Tanzania's commitment towards sustainability as it assists in establishing lifestyles necessary for a sustainable society, which demand an understanding of sustainable consumption. It is our sincere hope that these guidelines will auger well in Tanzania's education systems by helping to provide quality education and foster our capabilities in learning to know, learning to be, learning to live together, learning to do and learning to transform oneself and society towards sustainable human development.

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FOREWORD

Tanzania is one of Africa's most youthful countries; 63 per cent of Tanzanians are under the age of 25. These young people have the potential to be a great impetus for development, provided they are equipped with the necessary skills and knowledge. Education and training are transformative tools, which can empower individuals to live responsibly. Young people, among other learners, must comprehend the relationship between consumption and its impacts on the environment and society; it is this knowledge that will allow them to become socially and environmentally responsible individuals who can pave the way for Tanzania's resource- efficient sustainable development path.

Tanzania's population of almost 45 million in 2012, already about twice that of 1988, is projected to double within the next 26 years, coupled with increasing urbanization. In some places, up to 80 per cent of urban residents live in overcrowded settlements that lack clean water and adequate sanitation. Sustainable consumption can help address such challenges, including urban poverty and rising inequality, as it calls for doing more with less, being more efficient and better informed, while creating opportunities to meet the basic needs for all. Education for sustainable consumption (ESC) is essential as it allows learners to understand the environmental and social impacts of their choices, while empowering them to choose responsible lifestyles and participate in and stimulate the public debate about values, quality of life, responsibility and accountability. ESC — a core component of education for sustainable development – provides knowledge, values and skills and competencies that enable individuals to become actors of change towards more sustainable consumption behaviours.

The publication *National Guidelines on Education for Sustainable Consumption (ESC) for Tanzania* aims to guide Tanzanian policymakers and educators in implementing, advancing and mainstreaming ESC nationally and locally in education sectors. The guidelines equip educators, teacher educators and education practitioners in formal and informal education, with the necessary information and teaching techniques that can bring about widespread behavioural change needed to shift towards more sustainable consumption habits and lifestyles. The guidelines call for a reorientation of the education system in a way that will empower learners to develop and fulfill alternative visions of a sustainable future.

This publication, which is part of a pilot project implemented by the United Nations Environment Programme (UNEP), is a valuable contribution to the United Nations Decade on Education for Sustainable Development (2005-2014). These guidelines were developed by the National Environment Management Council, in close collaboration the key national partners, including Tanzania's Ministry of Education and Vocational Training. Tanzania is the first African country to develop such guidelines on ESC, taking a lead role in showcasing what can be done to address sustainable consumption and production and environmental issues through education.

It is hoped that this publication will contribute to a greater understanding of ESC and its role in developing a sustainable, equitable and thriving Tanzania that can tackle development challenges.

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ABBREVIATIONS AND ACRONYMS

COBET	Complimentary Basic Education in Tanzania
CBO	Community-based organization
CPCT	Cleaner Production Centre of Tanzania
CSO	Civil society organization
DTIE	Division of Technology, Industry and Economics
EE	Environmental Education
ESD	Education for Sustainable Development
ESC	Education for Sustainable Consumption
EWURA	Energy Water Utilities Regulatory Authority
HEAC	Higher Education Accreditation Council
HIV/AIDS	Human Immunodefiency Virus/Acquired Immunodeficiency Syndrome
ICT	Information and Communication Technology
IEEP	International Environmental Education Programme
ISO	International Organization for Standardization
JPOI	Johannesburg Plan of Implementation
KWL	Know — Want to Know — Learned
MoEVT	Ministry of Education and Vocational Training
MTs	Master Trainers
NACTE	National Council for Technical Education
NECTA	National Examination Council of Tanzania
NEMC	National Environment Management Council
NGO	Non-governmental organization
NTs	National Trainers
PERL	Partnership for Education and Research about Responsible Living
SC	Sustainable Consumption
SD	Sustainable Development
SCP	Sustainable Consumption and Production
TBS	Tanzania Bureau of Standards
TC	Teachers' College
TCAS	Tanzania Consumer Advocacy Society
TEP	Teachers Educators Programme
TFDA	Tanzania Food and Drug Authority
TIE	Tanzania Institute of Education
ToTs	Training of Trainers
TPS	Think Pair Share
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNDAP	United Nations Development Assistance Plan
UNDP	United Nations Development Programme
UNDESD	United Nations Decade of Education for Sustainable Development
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
VETA	Vocational Education and Training Authority
WCST	Wildlife Conservation Society of Tanzania
WSSD	World Summit on Sustainable Development
10YFP	10-Year Framework of Programmes on Sustainable Consumption and Production

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INTRODUCTION

1.1 Setting the context

The United Nations (UN) declared 2005-2014 as the UN Decade of Education for Sustainable Development (UNDESD). The Decade represents an international recognition of education as an indispensable element for achieving sustainable development.

The National Guidelines on Education for Sustainable Consumption (ESC) for Tanzania is one of the outputs of the pilot project on institutional strengthening of ESC and lifestyles, developed in the framework of the International Marrakech Task Force on ESC (led by Italy) and a contribution to the UN Decade of Education for Sustainable Development (UNDESD). The Marrakech Process was a global, informal multi- stakeholder process to promote sustainable consumption and production (SCP). It was a response to the 2002 World Summit on Sustainable Development (WSSD), where governments recognized that SCP is an overarching objective of, and an essential requirement for sustainable development. One of the aims of the Marrakech Process was to provide inputs for the elaboration of the global 10-Year Framework of Programmes (10YFP) on SCP, which was adopted by Member States in 2012 at the United Nations Conference on Sustainable Development in Rio de Janeiro, Brazil.

The pilot project is supported by UNEP in close cooperation with the Italian Ministry for the Environment, Land and Sea, UNESCO and other key partners such as the Partnership for Education and Research about Responsible Living (PERL) and Consumers International. The pilot project was implemented in Chile, Indonesia and Tanzania between 2011 and 2014. The objective of this pilot project was to support the mainstreaming of ESC and lifestyles in basic education systems as well as in informal education at national and local levels.

With the UN DESD ending in 2014, the challenge lies in exploring ways of further developing teaching

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resources on sustainable development issues, accompanied by appropriate implementation means, including training. These guidelines seek to contribute to the implementation the UN DESD and the concerted efforts in changing lifestyles into ones that are more attuned to sustainable development. These guidelines support the internationally recognized notion that we need to foster – through education – the values, behaviour and lifestyles required for a sustainable future.

These national guidelines attempt to address the fact that fundamental changes are needed in our teaching and learning processes as a means of addressing some of the environmental challenges facing Tanzania and beyond. The guidelines address questions such as:

- What skills and perspectives are important for building a sustainable society?
- What shared values and principles should be at the heart of education and living?
- How can educators incorporate values for sustainable living into the teaching learning processes?

ESC consists of the acquisition of knowledge, attitudes and skills necessary for functioning in today's society. It is responsibility learning, which aims to contribute to the individual's ability to manage his or her own life while participating in the stewardship of the global society's collective life (UNEP, 2010c). ESC is essential to train responsible citizens and consumers: individuals need to be aware of their fundamental rights and freedoms, appropriately informed to participate actively in the public debate and oriented towards a rational participation in the markets. ESC has become a core component of education for sustainable development (ESD) and global citizenship.

1.2 The objectives of the national guidelines on ESC

The National Guidelines on Education for Sustainable Consumption (ESC) for Tanzania aim at guiding and facilitating educators, civil society organizations, relevant government ministries departments and agencies and other relevant stakeholders in the acquisition and dissemination of knowledge and skills following the principles of moderation and sufficiency as means of promoting responsible citizenship and curbing social, economic and environmental imbalances. It is the first of its kind in Tanzania and it is aimed at bringing education for sustainable consumption (ESC) into classrooms and the lives of Tanzanians as a means of building a sustainable country and world.

The objectives of the national guidelines on ESC are to:

- Develop an increased understanding of sustainable consumption and how it can be integrated into basic education systems in Tanzania;
- Raise awareness on education in shaping values, attitudes and behaviours, affirm the critical role teachers have in this process, and recognize that new educational initiatives geared towards ESC can be successful if teachers are at the core of the implementation;
- Inspire and influence concrete behavioural changes needed to help address unsustainable consumption challenges while maximizing opportunities to help overcome them; and
- Promote sustainable consumption among individuals by enhancing their role as consumers and the importance of making informed decisions.

These guidelines advocate a pedagogical approach that is fundamentally different from the traditional teaching techniques that most Tanzanians were exposed to during their training years. The guidelines propose that teachers engage learners in a process where experience, reflection, critical analysis, tolerance, cooperation, compassion and respect are encouraged and developed. The proposed pedagogy is participatory and inclusive in nature, inter-disciplinary, learner-centred, contextualized and flexible, collaborative, transformative and view students as both learners and teachers.

1.3 The development of the national guidelines on ESC

Most recently, teachers in Tanzania have been seeking guidance, examples and materials to help them integrate environmental education (EE) into their teaching. As part of this pilot project and a first step in developing these guidelines on ESC, the National Environment Management Council (NEMC), with the support of the United Nations Environment Programme (UNEP), conducted the following activities:

- Review and analysis of existing national policy frameworks and initiatives relevant to ESC, sustainable development, sustainable consumption and production (SCP) and education strategies and/or plans, in order to identify and understand what forces and interactions would be most suitable to advance ESC in Tanzania. The objective was to define the best way to support integration of ESC into national policy frameworks.
- Multi-stakeholder national roundtable discussion, held in February 2012 in Dar-es-Salaam, with policy-makers education experts, as well as other stakeholders, to develop best approaches and tools for ESC, including the adaptation of UNEP's *Here and Now! ESC Recommendations and Guidelines* adapted to national contexts, priorities and needs. This dialogue has provided inputs on how best to coordinate policy and implementation strategies.

This was preceded by the formation of a small ESC task force under the coordination of NEMC, consisting of key government focal points, civil society representatives and educators to develop an outline for the development of these ESC guidelines. This exercise brought together key government focal points such as experienced teachers, teacher

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educators and environmental practitioners from civil society who provided valuable inputs in developing the guidelines.

Between August and December 2013, these guidelines were tested in two educational zones (Central and Southern Highlands of Tanzania), where educators, school inspectors and civil society practitioners were oriented on ESC and how to integrate ESC into their teaching learning process and general activities of their institutions and organizations. This training was made possible through the support of the United Nations Development Assistance Plan (UNDAP) in Tanzania. The Ministry of Education and Vocational Training (MoEVT), in close collaboration with NEMC, facilitated this testing phase. Information related to this training and the feed back received from educators is incorporated in the final chapter of this document .

The approach in developing these guidelines mainly focuses on the Earth Charter Preamble, which states ***"We must realize that when basic needs have been met, human development is primarily about being more, not having more"*** (Earth Charter Initiative, International Secretariat, August 2005). Educators must conceptualize how to bring the above message to learners who are growing up in a consumer-oriented, materialistic world, in which one's very identity is defined not by who you are but by what you wear, what you eat, the house you live in, the car you drive, the holidays you take and so forth.

1.4 Understanding sustainable consumption and production and ESC

Sustainable consumption and production (SCP) has been discussed globally for a number of decades now. In 1987, the World Commission on Environment and Development stated that: "sustainable development requires changes in values and attitudes towards environment and development – indeed, towards society and work at home, on farms and in factories…" (UN,1987).

Furthermore, the 1992 United Nations Conference on Environment and Development (UNCED) called upon governments to adopt national strategies for sustainable development. In 2002, the Johannesburg Plan of Implementation (JPOI), which was signed at the UN World Summit on Sustainable Development (WSSD), called upon governments to take action to "change unsustainable patterns of consumption and production" (UNEP, 2010c).

The JPOI called for the development of a 10YFP "to accelerate the shift towards sustainable consumption and production, promoting social and economic development within the carrying capacity of ecosystems, by de-linking economic growth from environmental degradation" (UNEP, 2011a). In this regard, the Marrakech Process, which is a response to the WSSD, had two main objectives:

- To promote the development and implementation of policies, programmes and projects on SCP, providing support for governments, the private sector and other actors in implementing SCP policies and activities at the national or regional levels; and
- To provide inputs for the elaboration of the 10YFP on SCP, a global framework of action to enhance international cooperation to accelerate the shift towards SCP in both developed and developing countries.

The 10YFP on SCP, which was adopted by world leaders in 2012, supports capacity building, and facilitates access to technical and financial assistance for developing countries for this shift. The 10YFP aims at developing, replicating and scaling up SCP and resource efficiency initiatives, at national and regional levels, decoupling environmental degradation and resource use from economic growth, and thus increasing the net contribution of economic activities to poverty eradication and social development. The 10YFP offers a new approach of implementing SCP activities through national focal points around the world.

What is sustainable consumption and production?
SCP, along with ESC, is based on sufficiency, which can be summarized into just four words, ***"Enough for everyone, forever."*** These words capture the ideas of limited resources, responsible consumption, equality and equity, and a long-term perspective, all of which are important concepts for sustainable development. One can gain a deeper understanding of sustainable development through examining four main pillars: Respect and Care for the Community of Life, Ecological Integrity, Social and Economic Justice and Democracy, Non-violence and Peace.

Essentially, sustainable consumption (SC) forms the basis for changing human consumption behaviour. The 1994 Oslo Symposium on Sustainable Consumption defined sustainable consumption as "the use of goods and services that respond to basic needs and

bring a better quality of life, while minimising the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardise the needs of future generations" (Norwegian Ministry of Environment, Oslo Symposium, 1994).

SCP, in this context, is a holistic perspective on how society and economy can be better aligned with the goals of sustainability. SCP is a cross-cutting issue and requires the active involvement of all stakeholders. SCP is not about consuming or producing more or less but rather consuming and producing differently and efficiently, as well as meeting basic needs (e.g. adequate food, clothing and shelter) and important needs (health, education) in a sustainable manner. SCP is about decoupling economic growth from environmental degradation. SCP, which is about increasing resource efficiency and promoting sustainable lifestyles, also offers important contributions for poverty alleviation and the transition towards low-carbon and green economies.

ESC therefore goes hand in hand with promoting and encouraging SCP as it helps individuals develop knowledge and skills that enable them to become actors of change striving towards more SCP patterns and sustainable lifestyles. ESC is about providing citizens with the appropriate information and knowledge on the environmental and social impacts of their daily choices and actions, as well as workable solutions and alternatives.

ESC provides different aspects of education that respond to the needs of alleviating extreme poverty, hunger and diseases and improving life expectancy of its people.

In most cases, ESC is instrumental in integrating basic rights and freedoms in its implementation. These rights include consumers' rights, consumer education and the right to live in a safe and secure environment and aims at empowering communities to participate actively in the public debate and economy in an informed and ethical way (UNEP, 2010c). ESC examines humanity's relationship with the natural world and the environment and assists in recognizing that humans, like all species, depend largely on a healthy environment for both survival and prosperity.

For sustainable consumption and lifestyles to become part of our cultures and societies, it is crucial for businesses and governments, among other key stakeholders, to develop and implement necessary policies, products, services and infrastructures that enable behaviour and lifestyle changes. Creating sustainable lifestyles will not be possible without the participation of individuals, policymakers, business leaders and entrepreneurs in different localities, among others.

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1.5 The challenges of introducing ESC in Tanzania

ESC is interdisciplinary and aims at enhancing knowledge, skills and behavioural changes that encourage responsible consumption. This means, if you are to be a responsible consumer, you need to be an active, critical thinker, one with consumption morals and independent in your decisions. Currently, there are educational and moral challenges manifesting themselves in attitudes and actions in consumption, resource uses and management of waste.

Therefore, developing and introducing ESC that enhances attitudes and acquire knowledge, which form the basis for responsible choices, is important and requires teachers and teacher educators to be equipped with teaching techniques that foster sustainable consumption principles. This presupposes that, learners are able to assess the effects of their actions on others and the environment judged from their ethical consciousness. This teaching style can be challenging since it requires acquiring insights into our lifestyles and knowledge that develops attitudes, which form the basis for responsible choices.

In order to convey the values and guiding principles underlying sustainable development and consumption, one may need to adopt pedagogical approaches that have not been experienced during school days. Experience-based learning activities can become a challenge when one is confined inside the classroom, where passive learning is often the norm. Educational systems in most countries including Tanzania compartmentalize different subject areas making 'interdisciplinary' learning more difficult.

Assessment systems are often based on a competitive model with individual grades becoming the most important motivation. This makes introducing new concepts and topics like ESC difficult to teach, given the varying context, exposure to new techniques

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and access to new teaching learning materials. To ensure quality delivery and changes in behaviour, introducing new concepts and initiatives need comprehensive training for teachers and educators as well as conducive learning environments including manageable number of learners. This can be a challenge in Tanzania, and the situation varies within urban and rural contexts, with rural areas being more disadvantaged.

While there are aspects of ESC topics and issues being taught in Tanzania, it is typically fragmented. When looking at the country's education policy and basic education curricula, aspects of ESC can be identified in social and natural sciences. The national guidelines on ESC intends to bring together various initiatives and concepts of ESC in teaching learning processes explicitly for application in different teaching learning contexts in the country.

Where does one start?
Bringing ESC into the classroom requires one to go through three initial cognitive processes:

a. Examine how current consumption patterns and behaviours are threatening the welfare and security of our planet;
b. Reflect on how existing development models most typically ignore the impacts of unsustainable consumption on the planet and social relationships processes; and
c. Ask yourself the question, "What knowledge and skills will help to make ethical decisions that advance environmental management and conservation?

Once this cognitive assessment is done, one can then understand how ESC can be integrated into teaching learning process in a less challenging manner.

1.6 Tanzania's National Action Plan/ Programme on Sustainable Consumption and Production

One of the key objectives of the Marrakech Task Force on Cooperation with Africa was to assist select African countries to develop their own programmes on SCP. The aim of this activity was to promote the further elaboration and implementation of the African 10-Year Framework of Programmes (10YFP) on SCP at the national levels. Africa was the first region to have developed and launched its own 10YFP in 2005.

Tanzania was selected as a pilot country for the development of a country-level national programme on SCP, which was facilitated by the Cleaner Production Centre of Tanzania (CPCT) and supported by UNEP (CPCT, 2007). In 2008, Tanzania developed its National Programme on SCP, or National Action Plan on SCP (2008-2017), based on the National Strategy for Growth and Poverty Reduction (UNEP, 2012). This National Action Plan focuses on the four thematic areas of the African 10YFP, namely energy efficiency, water and sanitation, habitat and urban sustainable development, industrial development, with education for SCP as a cross-cutting area or theme.

The planned pilot projects of the National Action Plan are:

- ***Energy efficiency:*** demand-side management on energy use.
- ***Water and sanitation:*** demand-side management on water use and water harvesting.
- ***Habitat and urban sustainable development:*** integrated solid waste management in urban areas; sustainable building and construction; cleaner city – vehicular emissions.
- ***Industrial development:*** sustainable manufacturing; sustainable tourism; sustainable agriculture.

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Some activities have already been implemented as part of this SCP programme, including:

- A national awareness-raising seminar for Members of Parliament showing the value of mainstreaming SCP in national development policies and strategies; a media roundtable discussion and campaign was held to promote awareness on key issues in the national action plan and training for journalists to become SCP ambassadors. The Journalists Environmental Association of Tanzania has identified SCP as one of its priority areas in their environmental publications.
- The establishment of SCP clubs in primary schools in partnership with the non-governmental organization Nature for Kids, which is discussed in further detail in the next chapter.

In 2012, some key lessons learned from the ongoing implementation of this national SCP programme were identified. These include:

- The need to involve and educate children on SCP helps to develop their mindsets on sustainable consumption issues.
- The need to implement projects that have the potential to produce quick results that can easily secure financial resources and that can effectively demonstrate the benefits of SCP are crucial.
- The importance of adequately communicating with and involving stakeholders in the implementation process, which is crucial in ensuring the success of this national programme.
- The need to develop and use of entertaining films and songs in Swahili, Tanzania's national language, on SCP, which have proven to be effective for educating children about SCP.

1.7 Education for SCP in Tanzania

The Government of Tanzania is increasingly aware of the urgency of and need to raise awareness among its citizens about SCP. This is one of the reasons that education for SCP has been identified as the cross-cutting area for Tanzania's National Action Plan/ Programme on SCP. The main objectives of the education for SCP project, as noted in Tanzania's National Programme on SCP, are to educate the general public and to develop a new culture that is sensitive to and able to practically apply the principles of SCP for the benefit of current and future generations (CPCT, 2007). The following activities, as noted in Project Concept Note 7 on education for SCP, were selected and included in the National Programme on SCP developed by CPCT:

- Development of locally adopted educational materials on SCP;
- Dissemination of educational materials amongst primary and secondary school students;
- Facilitate the establishment of SCP clubs in schools; and
- Promote general public awareness through media programmes and public events.

The main outcomes of these activities on education for SCP are increased public awareness on SCP issues, the creation of a new, young generation that can serve as agents of change within society and the development of a new SCP culture nationally. Education for SCP targets the general public, specifically primary and secondary schools, media professionals, NGOs as well as community-based organizations (CBOs).

In implementing these activities, CPCT, as the main coordinator, has continually worked with other stakeholders including NEMC, the Ministry of Education and Vocational Training, Local Government Authorities, environmental NGOs as well as CBOs. Measuring progress and success on education for SCP activities calls for identifying verifiable indicators, which in this case are: the number of students and members of the public reached by these activities, the number of SCP clubs established, as well as the number of SCP-related activities undertaken.

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2.0 CONTEXTUALIZING EDUCATION FOR SUSTAINABLE CONSUMPTION (ESC)

2.1 ESC topics, issues, learning outcomes and competencies

Education is a prerequisite for promoting behavioural changes and providing citizens with key competences needed in today's society. Moving towards the goal of sustainability requires fundamental changes in human attitudes and behaviour. This direction is critically dependent on education and public awareness in the spirit of exploration and experimentation with diverse partners. ESC, which is an integral component of education for sustainable development (ESD), is essential for learning how to make lifestyle choices by seeking creative solutions and engaging in policy debates, which can change our approach and behaviour towards sustainability.

ESC incorporates the approach for sustainability inherited in ESD, which is recognized as a process to engender a culture that is respectful to the core principles of sustainable development and an important social process. UNESCO defines ESD in three parts:

- Education that enables people to foresee, face up to and solve the problems that threaten life on our planet.
- Education that disseminates the values and principles that are the basis of sustainable development (intergenerational equity, gender parity, social tolerance, poverty reduction, environmental protection and restoration, natural resource conservation, and just and peaceful societies).
- Lastly, education that highlights the complexity and interdependence of three spheres, the environment, society – broadly defined to include culture – and the economy (UNESCO, 2005: 5).

These guidelines assist in reinforcing the urgent commitment made during the 1992 United Nations Conference on Environment and Development (UNCED) where Agenda 21 was initiated and other declarations, emphasizing the importance of education in achieving a sustainable future.

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Incorporating ESC in Tanzania's basic education systems marks the turning point for changing resource management and consumption patterns. ESC is also a significant dimension in implementing ESD and the Millennium Development Goals (MDGs) in Tanzania's basic education systems. ESD contributes to making citizens better prepared to face the challenges of the present and future and equipping decision-makers with the necessary information, which will allow them to act responsibly to create viable lifestyles and communities. ESD enhances five fundamental learning outcomes: learning to know, learning to do, learning to be, learning to live together, and learning to transform oneself and society.

Education is an important mechanism to solve present and continuing patterns of unsustainable consumption. Consumption involves lifestyles, which are usually regarded as personal behaviour, but from a sustainable development point of view, lifestyles are also seen as social behaviour. Sustainable consumption includes a transformation of lifestyles that can significantly affect social production practices and the relevant policy formulation. Some social behaviour and aspects of lifestyles may be sustainable in some societies, but there is a pressing need to examine and determine what traditional customs are valuable for a sustainable future.

The National Guidelines on ESC will help Tanzanians, including individuals and social groups, to develop the following:

a. Awareness and sensitivity to the consumption and production patterns and their related problems.
b. Basic knowledge and understanding of the total environment, its associated problems and humanity's critically responsible presence and its role.
c. Attitudes, social values, strong feelings of concern for the environment and the motivation for actively participating in protection and improvement of the environment.
d. Skills to solve environmental problems.
e. Abilities to evaluate environmental measures and education programmes in terms of ecological, political, economic, social, aesthetic and educational factors.
f. Action competencies to facilitate and take action under different contexts.
g. Active participation and a sense of responsibility and urgency regarding sustainable consumption to ensure appropriate action to solve problems arising from unsustainable consumption lifestyles.

ESC consists of many topics and issues. Table 1 presents the general themes, which learners should have knowledge of. It is adapted from the *Consumer Citizenship Network Guidelines vol.1 (2005).*

Incorporating ESC into the formal education curriculum requires curriculum developers and educational practitioners to identify opportunities (subjects, activities, lesson plans) where ESC learning outcomes and competencies can be integrated into teaching. In this learning process, the content is driven by an output measure (outcomes/competencies) rather than

Table 1: ESC topics and issues

Life quality	Lifestyles
Values, needs, desires	History of social and economic development
Human rights, ethical codes and spiritual principles	History of consumption
Sufficiency and moderation	Present social conditions
Sustainable development	Present consumption patterns
Sustainable consumption	The symbolic roles of consumption
	The role of the family
	Alternative lifestyles
Resources	Economics
Natural	Economic models and practice
Human	Production and trade
Financial	Multinational companies
Technological	Social responsibility
Organizational	Savings, loans, investments
Interrelatedness of systems and processes	Financial services and instruments
Balances and imbalances	E-commerce
Consumption and the environment	Consumer rights and responsibilities
Product life cycles and traceability	Laws and norms
Packaging	Agreements and contracts
Recycling, reusing, repairing products	Consumer protection policies
Energy	Transparency/accountability
Housing	Complaints, redress, replacement, reimbursement
Transportation	Conflict resolution
Communication	
Entertainment	
Tourism	
Climate, soil and water protection	
Biodiversity	

Waste management	
Ecological impact	
Information management	Health and safety
Digital literacy	Food safety
Media literacy	Gene-modified organisms
Advertising and persuasion	Diet and nutrition
Labelling	Ecological, organic food
Peer pressure	Additives
Data-based information systems	Lifestyle illnesses and epidemics
Consumer support agencies	HIV/AIDS
	Social services
	Product safety
	Labelling and quality control
Change management	Global awareness
Creativity and innovation	Global interdependence
Future perspectives	Energy, trade, commerce, agriculture, land use
Active citizenship	Poverty
Stakeholder involvement	Human rights
Community service	Labour rights
	Crime
	Precautionary principle
	Fair trade
	Millennium Goals
	World citizenship

an input measure (textbook/topics). The outcomes and competencies become the driver and the textbook becomes their vehicle. Therefore, training and orientation on ESC learning outcomes and competencies is crucial for educators to comprehend how ESC can be integrated into their work.

ESC encompasses the following generic competencies (UNEP, 2010c):

- Appreciation of nature and of human diversity and multiculturalism
- Concern for justice, peace and cooperation
- Self-awareness
- Concern for quality
- Appreciation of the interrelatedness of individuals and society
- Capacity for empathy/compassion
- Ability to make critical, reflected decisions
- Ability to apply knowledge in practice
- Ability to cope with one's emotions
- Information management skills
- Capacity for generating new ideas
- Capacity to adapt to new situations
- Willingness and ability to be of service to others
- Ability to recognize global perspectives.

ESC subject specific competencies include the development of the following:

1. Ability to define what one considers to be a good quality of life and to be able to identify the values upon which this is based.
2. Realization of the complexity and often controversial nature of sustainable consumption issues.
3. Insight into how individual lifestyle choices influence social, economic and environmental development.
4. Ability to acquire, assess and use information on the consequences of consumption especially on the environment.
5. Knowledge of consumer rights and central consumer protection laws.
6. Basic knowledge of the market system and the role of business.
7. Knowledge of how the production processes are linked to the consumption system
8. Basic knowledge of the interaction of pricing mechanisms with the consumer's attitudes and behaviour.
9. Insight into the practicalities of both the supply and demand sides of production and consumption and their outside-of-the-market relationships to community development.
10. Awareness of a commodity's intangible and symbolic characteristics.

11. Ability to recognize, decode and reflect critically upon messages from the media and the market.
12. Knowledge of social networks that shaping consumption patterns (e.g. peer pressure)
13. Consciousness of civil society's power to initiate alternative ways of thinking and acting.
14. Individual and collective understanding of consumer social responsibility in relation to the corporate social responsibility.
15. Ability to manage personal finances (budgeting, saving, investing, taxes and fees)
16. Ability to manage physical resources (effective control,maintenance, reuse and replacement).
17. Knowledge of conflict resolution in general and in particular in relation to consumer related situations such as product safety, liability, compensation, redress and restitution
18. Ability not only to envision alternative futures but also to create reasonable paths of action leading to these.

2.2 The backbone of ESC: environmental education and consumer education

ESC consists of core elements of resource efficiency and SCP, which call for "doing more and better with less," increasing net welfare gains from economic activities by reducing resource use, degradation and pollution along the whole production lifecycle, while improving the quality of life for all. This contributes to delivering more goods and services in a cleaner and safer way, using less materials and energy, and ensuring that basic needs are met using fewer resources while valuing the ecological carrying capacity.

ESC can help to develop a solid foundation for our lifestyle choices, which play a significant key role in social, economic and cultural development of our communities. ESC also helps us better understand how unsustainable consumption patterns affect the environment and contribute to climate change, biodiversity loss, pollution, land degradation and inequality among others. We are just beginning to see a growing demand of policy tools for sustainable development, but more needs to be done if we are to achieve the anticipated sustainable lifestyles. If we create a need for sustainable lifestyles, then policy will be shaped quickly to meet it.

Nowadays, our communities are exposed to images and messages that promote unbridled consumption, which promises happiness. These messages do not mention the impact of unsustainable consumption on the environment, causing challenges like water shortages, food insecurity and climate change. Consumer education empowers the community to better understand and change their behaviours and adopt sustainable lifestyles, all of which improves civic behaviour of our communities.

Environmental education (EE) and consumer education are at the core of ESC implementation. Both EE and consumer education are considered as key cross-curricular themes for student learning. The important role of education as one of the most powerful tools for making right and responsible choices in our daily lives has been internationally recognized since the 1970s. In 1972, the UN Conference on the Human Environment in Stockholm contributed to the development of the International Environmental Education Programme (IEEP). The IEEP called for educational policies that assist individuals to adjust their own priorities and assume a personal and individualized global ethic that would reflect in their daily behaviour.

In 1985, the UN adopted the declaration of consumer rights confirming the importance of consumer education. The 1992 Rio Action Plan focused on ESD through its Agenda 21 programme. Additionally, holistic and integrated educational approaches were promoted as part of the Millennium Development Goals in 2000. The launch of the UNDESD in 2005 marked a turning point as the Decade's socio-economic implications, and environmental and cultural connections made it an undertaking that potentially touches on all aspects of life (UNEP, 2010c). The DESD recognizes that achieving sustainable consumption patterns involves both businesses and governments to provide clear and reliable information to consumers to help them make environmentally and ethically sound decisions and education is critical in achieving this. ESC in particular, is geared towards enabling learners to make informed and responsible decisions and actions, now and in the future (UNEP, 2010c).

For Tanzania, EE is defined as a "life-long process whereby individuals and the whole Tanzanian society acquire knowledge, develop ethics and become environmentally aware/ conscious, responsive and acquire relevant skills in identifying, managing, monitoring, evaluating and solving environmental issues and problems" (NEMC, 2005).

Consumer education is known as the process of supporting individuals to become more skilled, literate and responsible as consumers. It helps people to improve their understanding of goods and services and develop the skills and confidence to become more aware of their rights in the consumer market, make better informed choices and know where to go for help (European Commission, 2006).

Consumers are the largest economic group affecting and affected by almost every public and private economic decision. Consumers are the only important group that is not effectively organized, whose views may not heard in most decisions. Consumers therefore need specific education, such as consumer education and ESC, to manage their lifestyles and expectations.

Educated and informed consumers have the power to demand environmentally-friendly products through their purchasing decisions and the capacity to

influence a range of factors including air pollution, waste generation and management and energy conservation through lifestyle decisions if they have right information.

Consumer education is critical as it develops and enhances skills and knowledge that help individuals make informed and well-reasoned decisions that take societal values into account. Consumer education can develop critical thinking and raise awareness, which enable consumers to become more pro-active. It is also an important vehicle for building the confidence that consumers need to operate in increasingly complex markets.

Today, in Tanzania, consumer education covers more diverse areas than in the past. It now covers consumer rights and obligations, personal finance, sustainable consumption, and digital media and technology. Such education should be viewed as a long-term and continuous process that develops better decision-making and skills throughout the lives of consumers.

A 2011-2012 study by EWURA Consumer Consultative Council, a Tanzanian public institution that protects and safeguards the interest of consumers of energy and water services, reveals the typical characteristics of a Tanzanian consumer including:

- Low reading culture;
- Passive;
- Price sensitive;
- Functionally illiterate;
- Weak bargaining power;
- Disorganized;
- Easy to be taken for a ride;
- Submissive;
- Has little knowledge about his/her rights and ways to demand the same.

Developing and implementing ESC in Tanzania calls for policymakers and educators to understand such characteristics about Tanzanian consumers and learners so that ESC reflects and addresses national contexts, priorities and needs, which has been well- articulated in various national documents and programmes on SCP.

People are diverse and complicated, even when it comes to their lifestyles. It takes time and effort to understand and build the required relationships, expertise and skills to make sustainable lifestyles happen. These ESC guidelines seek to enhance these interdependencies to achieve the desired outcomes for a more sustainable Tanzania. There are many projects throughout the country carried out by government, civil society organizations, the private sector and the media that are oriented towards raising environmental awareness, some of which include promoting sustainable consumption. Such projects are good avenues to disseminate ESC and can be used as an arena to learn from and replicate successful and suitable initiatives, thereby enhancing cooperation.

2.3 ESC origins and aims

The meaning and contexts of consumption

Globally, a substantial evidence base has been built to inform policy decisions to support a shift towards more sustainable consumption patterns. Firstly, there is a considerable gap – the so called 'value-action gap' – between people's attitudes, which are often pro-environmental, and their everyday behaviours.

Secondly, consumer goods and services can play more than a functional role in people's lives. Cars, houses, fashion, gifts, trophies, photographs and music also play vital roles. Advertising promotes lifestyles, celebrity and aspirations that can inform consumption. Thirdly, people often find themselves 'locked in' consumption patterns that are unsustainable. This is reflected by renewed political commitment on global programmes on education and lifestyles.

Modern consumption theory assumes that, rational consumers make choices that are well- informed, far-sighted, and prudent. But in reality, most Tanzanian consumers reveal their preferences by means of market choices, which correspond to their well-being ('welfare'). An 'invisible hand' then acts to aggregate individual choices in an effort to maximize society's economic welfare mainly through prices and advertisements.

There are four central areas of life where consumers have aspirations for an improved quality of life that can coincide with sustainable consumption choices where these choices are supported by appropriate infrastructure and incentives:

- ***Housekeeping:*** how we run our homes;
- ***Food:*** the food we eat;
- ***Mobility:*** how we get around (e.g. commuting); and
- ***Leisure and entertainment:*** e.g. holiday travel.

Choice editing or choice influencing

One of the features of shopping today is the immense range of options available in Tanzania, which is experiencing an influx of imported products, particularly from emerging economies like China, Indonesia and Thailand. Customers may not be able to assess the qualities of each product individually but rely on 'shortcuts' such as price, branding, promotions, shelf position and packaging and labelling to aid their choice.

Choice editing or choice influencing is a situation where governments or institutions with legal powers influence choices made by consumers. In Tanzania, the Tanzania Bureau of Standards (TBS) and Tanzania Food and Drug Authority (TFDA) are government institutions that monitor and remove materials or products with low standards or which are fake. These institutions can

also promote materials, which are environmentally friendly and efficient like energy-efficient light bulbs. Where environmental information and product labelling is unreliable or scarce such as in Tanzania, much of the responsibility of choosing rests consumers themselves and is much influenced by prices.

2.4 The importance of ESC in combatting poverty in developing countries

The world is facing numerous environmental problems and challenges, ranging from environmental degradation, climate change and trans-boundary pollution many of which are driven by increasing population and consumption patterns, to poverty, particularly in developing countries. These problems and challenges are some of the main factors that contribute to the need for urgent application of sustainable consumption patterns.

The 1998 Human Development Report entitled Consumption for Human Development, which examined consumption from the perspective of human development, identifies four main principles of sustainable consumption (UNDP, 1998):

- Shared – Ensuring basic needs for all;
- Strengthening – Building human capabilities;
- Socially responsible – So consumption by a few people does not compromise the wellbeing of others; and
- Sustainable – Without mortgaging the choices of future generations.

Despite diverse environmental education awareness and many initiatives on environmental conservation and currently SCP, there is still a lack of knowledge and experience on how can we educate individuals on sustainable consumption. Many current policies lack clear identification of mechanisms and strategies to promote responsible consumer behaviour.

The importance of ESC, through its foundation on SCP, in combatting poverty in Tanzania and other developing countries is undeniable. The way of production and consumption can add enormous pressure on the natural resources, deplete raw materials and increase pollution around the world. Since most poor people mainly depend on these raw materials for their livelihoods, adopting SCP patterns, de-coupling and leapfrogging are crucial in combatting poverty. Through ESC, students can learn about these issues and more, including the interconnectedness between our lifestyles and the environment and society,in addition to other important poverty related issues and they could be tackled through sustainable consumption. ESC has the ability to shape current and future generations, particularly youth, to develop alternative paths for development and more efficient and simpler ways of living in balance with our communities and nature.Through ESC, learners are equipped with the necessary skills and knowledge needed to function in today's changing society and in promoting sustainable lifestyles, which are instruments for development that will have positive impacts on the environment, societies and communities, among others.

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2.5 The importance of developing and implementing ESC in Tanzania

Tanzania is facing an unprecedented rise in the use of finite, non-renewable resources and the transformation of ecosystems into cultivated land or built environment. There is also an increase of using nature as a sink for residuals of expanding unsustainable consumption. Such patterns need robust national initiatives like ESC to enable communities to meet their basic needs and provide a better quality of life, while enhancing sustainable consumption behaviours among Tanzanians.

Most Tanzanian communities depend on natural resources and the environment to enhance economic development and in meeting their basic needs like adequate food, clothing and shelter and important needs such as health services and education. These communities are often vulnerable to poverty and environmental challenges such as pollution, natural disasters, environmental degradation and climate change, among others.

The growing demand for sustainable consumption and production provides an opportunity to increase income, alleviate poverty and improve health through improved consumption, particularly of basic needs. This can be nourished through improving resource efficiency by bypassing inefficient practices and behaviours, reducing unnecessary expenses, waste and unsustainable consumption. All these issues are integrated in ESC, which essentially educates learners about how to meet human needs in a sustainable manner.

ESC teaches learners about the need to develop and use more efficient goods and services and the

importance of making the most of our available natural resources. This is the most relevant issue to Tanzanians, many of whom cannot consume enough – due to their income levels – to meet their basic and important needs. Developing ESC for Tanzania must address the importance of equipping citizens with the ability to provide basic needs for all while caring for their environment.

ESC is crucial for a country like Tanzania to foster a greater understanding of the need for resource efficiency and SCP. ESC can help learners take steps to build a sustainable Tanzania, for example through understanding the need to enhance efficient resource use and promote the use of alternative sources of energy like solar, wind and biomass power especially in rural areas, which may lack electricity, among others. This may go hand in hand with improving irrigation and traditional water harvesting techniques and use of biogas as source of energy among others. Likewise, ESC provides a solid foundation for understanding the interconnectedness of consumption and the environment, resources, economics, consumer rights and responsibilities, health and safety and lifestyles.

For example, in today's society, learners must comprehend that every stage of a product's life has an environmental impact – from the extraction of raw materials to the manufacturing, transportation, eventual consumption and disposal. By developing and mainstreaming ESC in Tanzanian communities, learners will be able to understand how sustainable production can minimize environmental impacts at all times. This can be witnessed most by reducing water use in production to designing a product for responsible disposal at the end of its life, and how sustainable consumption involves consumers being responsible like applying the 5Rs: rethinking, reducing, reusing, recycling and recreating in choosing products and services.

Behaviour change is reflective of society patterns and is only effective if people are provided with the means through which they can make sustainable choices. This could be in the form of innovative products and services or infrastructure improvements, such as cycle lanes or educating people on sustainability. Transforming the values and lifestyles ingrained in materialism cannot be accomplished by merely appealing to individual and family ethics as long as social status, household independence and sense of security are upheld by unsustainable our lifestyles, will not be disseminated unless they get out through our social and basic education systems.

ESC can better prepare Tanzanians, particularly the youth who are the future leaders, to live sustainably and adopt SCP patterns locally and nationally. ESC can equip Tanzanians with the necessary knowledge, skills and competencies to "leapfrog" and bypass inefficient, polluting, and costly phases of development. Leapfrogging will not allow Tanzania to jump straight onto a resource efficient sustainable development path; it will also pave the way for Tanzania to embrace a green economy.

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Decoupling environmental impact from economic growth is an essential prerequisite for sustainable development. The environmental, social and economic costs derived from unsustainable consumption and production patterns are significant and mounting. There are interconnected problems including water scarcity, land degradation, deforestation, loss of biodiversity and pollution. However, it is climate change that is attracting the most attention. Without reorienting current consumption and production patterns, there can be no genuine mitigation of climate change.

Despite increased awareness of the human on the consequences of lifestyle choices, sustainable consumption is still not seen as a central topic in educational systems and it is not identified as a priority in national environmental management and education policies in numerous countries such as Tanzania.

2.6 The present situation of ESC in Tanzania's basic education systems

Today, education is being redesigned in terms of how to prepare people for life, jobs, security, demands of a rapidly changing society and technological changes (UNEP, 2010c). While numerous aspects of ESC are already being taught in Tanzania's basic education system, there are general lack of cohesiveness and innovation. Conceptually, the understanding of sustainable consumption is based on sustainable human development, which is often vague or lacking (UNEP, 2010c).

On the level of course content, there are some topics and ideas around general environmental management and conservation, resource management and national patriotisms in Tanzania's education system. But some of what can be considered as ESC is still fragmented and occasionally based on out-dated scientific data and models that have proven to function poorly in real life. There are numerous campaigns to alleviate poverty reflected most on self-reliance, Kilimo Kwanza,

gender, environmental health and cleanness and general resource conservation. Most are given as slogan with little effect in influencing behaviour and decisions. On the didactical level, most teachers struggle to combine theory, research and practice in actual teaching but some find it difficult to connect the course content to everyday lives. On students' motivation, teachers encounter cynicism, apathy, fatalism and a sense of powerlessness which ESC guideline anticipated counteracting. This makes them weak in deciding and contributes little in changing behaviour and consumption patterns.

2.7 The challenges facing ESC implementation in Tanzania

Though there are attempts by the Government of Tanzania, consumer societies and education practitioners in enhancing informed decision-making among Tanzanian communities in aspects of resource management, sustainable consumption, environmental management and conservation, there are challenges in implementing these in the basic educational systems. Some of these challenges would also be applicable to the implementation of ESC in Tanzania. Such challenges include:

- How to integrate ESC into teaching and learning processes. For example, many educators often have limited time for lesson planning that allows for integration of ESC in teaching process. Also, educators have no required resources to successfully teach learners about sustainable consumption. Thus they need time and resources to research examples and case studies relevant to ESC that can be used in their teaching. Likewise, educators need the required training and capacity-building on ESC before integrating ESC into their teaching.
- How to support initiatives that stimulates the individual's awareness of the central role they play in forming society and empowering them to choose responsible, sustainable lifestyles. The challenge involves providing opportunities for learning about the systems further development of analytical and reflective thinking skills in order to decode the extensive and aggressive commercial messages to which individuals around the world are constantly exposed.
- How to help individuals learn about how to function as citizens who not only make selective, reflected lifestyle choices in the market but who also effect changes by seeking creative new solutions and engaging stakeholders in the dialogues and debates that determine policy and lifestyle choices. They need to be enabled and encouraged by the social and technical systems and institutions that surround us. For example, people will only swap their car for public transport if there is an efficient and cost-effective public transport system. This in-turn will assist in changing behavioural patterns.

From a Tanzanian formal education perspective,the uptake of ESC follows the wider uptake of ESD in relation to the UNDESD, but aspects of ESC still receive limited prioritisation in the national curriculum because it is felt that it is covered in environmental education. There are good practices taking place in terms of environmental education and education for sustainable development, with numerous efforts to integrate them into educational programmes and particularly in the basic education systems. Their implementation is pursued through very different strategies and approaches, which are varied in context. Therefore, it is natural that the way in which ESC is incorporated into the national curriculum will differ in the implementation process.

The efforts on SCP and ESD have established broad institutional frameworks that could be used to further mainstream ESC into regular and effective implementation in Tanzania. Although the political mandate and will power exists to promote and incorporate ESC in basic education systems programmes, activities and processes in many cases remain unformulated because of the current lack of capacity and leadership for the advancement of responsible consumer behaviour and promoting sustainable lifestyles.

The proposed plan for incorporating ESC in Tanzania is to simply replicate the approach used to incorporate EE, ESD and gender issues in the formal education process. Despite diverse policy dialogues and numerous initiatives on SCP, there is still a lack of knowledge and experience on how to implement effective ESC, which these guidelines seek to enhance in Tanzania. In order to properly address this matter, it is necessary first to identify and bank on the current governmental approaches and strategies for promoting sustainable consumption.

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3.0 ACHIEVING ESC IN TANZANIA: THE BASICS

3.1 Researching sustainable lifestyles

Before ESC can be achieved in Tanzania, crucial questions need to be answered: What do sustainable lifestyles mean to Tanzanians? How can ESC encourage Tanzanians to live sustainable lifestyles? Sustainable lifestyles involve rethinking our ways of living, how we buy and organize our daily lives, how we socialize, exchange, share, educate and build identities. Sustainable lifestyles mean transforming our societies and living in harmony with our natural environment (Marrakech Task Force on Sustainable Lifestyles, 2010).

Lifestyles are very personal, intimately tied to culture, politics and economic circumstances. People's understanding of what a lifestyle is, let alone a sustainable one, changes from one person to another. Relevant research on Tanzanian lifestyles and consumer behaviour is required to strengthen our understanding of such varieties.

Many would argue that many Tanzanians live sustainable lifestyles; they rely on public transport, eat unprocessed foods, mainly fresh and organic food and fruits from their farms, markets and many are not engaged in unlimited shopping and luxurious consumption. At the same time, consumption is unevenly distributed, reflecting immense imbalances, whether it is between rural and urban or amongst urban communities. Millions of Tanzanians cannot consume enough to meet their basic and important needs like inadequate housing and lacking access to basic sanitation. And the reality is that, as Tanzania transitions from a developing country to an emerging economy in the years to come, this uneven distribution of consumption will change significantly.This is an important observation that needs to be considered.

Researchers worldwide argue that most development challenges are principally a result of human activities, consumption, business and agriculture, which is among the most resources used by the majority,

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especially in developing countries. These areas can be further researched to explore how these practices can be more sustainable.

Providing basic needs for all and alleviating poverty is a challenging task that involves close collaboration among all stakeholders. It is undeniable that education is the most powerful tool to support this task and help individuals make the right and more responsible choices while meeting basic needs and aspirations. For Tanzanians to adopt and continue living sustainably, we need to be more aware of our surroundings, our environment and be informed about our actions, choices and behaviours and the impact we have on the environment and society. It also means being aware of the consequences of the choices we make and those made by previous communities, making sure that they do the least harm to the environment. This awareness- raising and understanding is made possible through education, particularly ESC, which involves more than just showing concern for the environment; it involves thinking about people and societies and about health and well-being, and educational development.

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Achieving ESC in Tanzania involves incorporating ESC in formal basic educational systems, as well as informal and non-formal sectors. Tanzania must shape its ESC according to its priorities, needs and contexts. Necessary teaching and learning tools and resources must be developed, which will help guide and enhance the application of ESC by educators and learners. This can help create the widespread behavioural change needed to shift towards more sustainable lifestyles and consumption habits as individuals and communities.

3.2 Optimizing ESC opportunities: learning from experience

In the Tanzania curriculum, there is content specifically aimed at developing students' environmentally friendly lifestyles including the promotion of environmentally responsible consumption through education. There are also contents identifying the need for educational efforts in regards to environmentally responsible production, especially in line with extra curricula activities taking place in different training institutions.

There are several approaches, which have been used to incorporate environmental education and ESD in various subjects in Tanzania, commonly referred to as a multi-disciplinary approach. This approach integrates the specific content, e.g. EE or ESD in all existing subjects without changing the content delivered to target audiences. The only difference is the approach and methods of teaching, which places emphasis on changed behaviour. Learning from experience, ESC should be implemented through the following approaches, which are discussed in detail in the next chapter:

1. The same multi-disciplinary approach and experience used in EE and ESD implementation be used in implementing ESC in this context. Annex 1 provides a brief overview of how ESC issues and themes can be embedded within ESD in Tanzania's education system through the sustainable development pillars with examples of ESC competencies and learning outcomes.
2. The second approach is through extra-curricular activities, where ESC content is taught outside the classroom, commonly called hands—on or practical experiences within the school and the surrounding communities. For example, ESC can be part of greening schools activities. The multi-disciplinary approach method is at the national curriculum level and the extra-curricular activities are at the local and school level.

Moreover, there are various environmental clubs and school policies, which are essentially conservation-oriented and these can be used to optimize ESC implementation in Tanzania as part of implementing ESC through extra-curricular activities. There are also conservation clubs, many of which are run by the Wildlife Conservation Society of Tanzania (WCST), Roots and Shoots, Malihai Clubs, 4-H Clubs and various school policies especially mission and privately-owned schools across the country which can apply these extra-curricular activities to realize ESC in Tanzania. They generally cover issues like energy savings, soil management and tree planting in extra-curricular activities rather than through curriculum and subject teaching.

4.0 INCORPORATING ESC INTO TANZANIA'S EDUCATION SYSTEM

4.1 Identifying relevant gaps in existing basic education curricula

Currently, EE and ESD are a non-mandatory component of schools systems. Teachers and some training institutions still struggle to accept them in Tanzania's curriculum, making it challenging to reach the intended objectives. In pre-primary education, there are very few examples of EE and ESD and current approaches tend to focus on a hands-on approach to nature, rather than on learning sustainability practices.

There are some resource materials, which can be used to enhance ESC in Tanzania. Currently, there are materials that address some ESC topics in some schools presented in different forms like pamphlets, booklets, storybooks, and colouring books, whose quality varies in terms of content and appearance. The reflective nature of contexts is quite varied and these materials are mainly used by learners pursuing their studies in English. Most materials focus on imparting knowledge and skills rather than influencing attitudes or practices or developing competences, mainly reflective competence. Some of these resources found in schools include the environmental education series, Maji, Hewa, Udongo, Nishati, Bahari and other materials, which are used as guides for teachers who teach environmental education.

While there is a broad range of teaching and learning materials in Tanzania touching on most major environmental and social issues, there is little depth in terms of content and there are significant thematic gaps, such as:

- Wildlife and biodiversity;
- Sustainable lifestyles;
- Efficient resource use / Resource efficiency and SCP;
- Sustainable food and agriculture;
- Coastal and marine issues;
- Tourism and its impacts on the environment and societies;
- Fisheries and marine based industries; and
- Watershed protection.

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There is a general shortage of materials on sustainable resource use and green consumerism. There is also a need for more integration of environment and development challenges and how they are related to lifestyle choices. This integration will strengthen ESC implementation and application. Gaps also exist in terms of material for learners with different disabilities like low literacy skills, including audio-visual materials, materials for a range of adult learners, materials that cover a range of thematic areas and materials which seek to address skills and action, rather than just knowledge and values.

While some teacher training does include EE and ESD issues, these trainings generally do not adequately prepare teachers to effectively use learning for sustainability approaches in the classroom. This is due to the fact that, most teachers did not receive training related to environmental issues and sustainability in their professional training. This forces some teachers to simply rush through these issues when teaching, or omitting them and planning to teach these topics at later stages. Some teachers do seek more information on the subject matter while some leave it altogether.

A significant gap exists in respect to information and materials on the overarching theme of sustainable

consumption, which most teachers need more knowledge. Additionally, there are few links made between the environment, society and economy and their relationship with lifestyles.

There are several civil society organizations (CSOs) such as non-governmental organizations (NGOs) and community-based organizations (CBOs) which raise community awareness and conduct capacity-building trainings at the community level as part of education and awareness programmes to disseminate information and gather feedback through community consultations. There are few opportunities for authentic participation by institutions, be it in resource evaluation, managing and utilization, which actively and meaningfully engage people in consensus building and decision-making related to a planning cycle and follow-up action.

There has also been inadequate attention paid to effective traditional knowledge systems, community-based resource and educational processes oriented to adults, which focus on engaging people in an on-going lifelong learning process and developing their capacity to participate in decision-making processes. Even where there are some efforts in terms of delivering various conservation, sustainability and lifestyle messages, most of these messages are detached from real situations and from actions relevant at the local level, thereby reducing the chance of affecting real change.

Within the basic formal education systems, environmental issues are taught and practiced in a variety of ways but are largely limited to science, geography and social studies in primary education curricula. In secondary education curricula, the subjects involved are physics, chemistry, geography, general studies/ civics, cookery and domestic sciences. There is little consideration given to sustainability, including ESC, in the current curricula and when there is some attention:

- Environmental issues are disconnected from lifestyles and daily actions;
- Environmental learning outcomes are often narrowly defined;
- There is limited attention to skills, values and action outcomes; and
- EE messages, concepts and actions are not infused in a systematic or holistic way.

In respect to implementation of ESC at the local level, there is a need for instructional materials and training for educators who are responsible for localized curriculum planning. At the national level, curriculum developers and professional development staff need specific training in applying learning outcomes and teaching strategies in their own professional settings – including demonstrations of practical ways of implementing these outcomes and strategies across the disciplines.

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It is important to develop consensus around a framework for incorporating ESC learning outcomes in all subjects in basic education systems and beyond. The basic learning outcomes of ESC are defined as attitude, knowledge, skills and behavioural change leading to critical awareness, ecological and social responsibility, action and involvement and global solidarity. At present, the ESC content incorporated into curricula is uneven and lacks a holistic approach.

The conditions, quality and environmental setting of some schools also affect the quality of education provided and the progress and performance of learners. Examples include limited financial support, inadequacies of materials and human resources, as well as overcrowded classrooms. Also, there is often inadequate coordination within the education system, which will have an impact on ESC implementation in the classroom. Additional gaps include irregular pupil attendance and lack of instructional materials as well as teacher absence, teachers' knowledge level, teacher competence, disruption of classes due to special events preparation or teachers' attendance at seminars/workshops.

The situation is much worse in schools with few teaching staff and rural areas where generally, the teacher-pupil ration is very high. Also, shortfall of equipment and inadequate classrooms inhibit some progress thereby limiting success. This problem is varied; in rural areas, there is a lack of teachers, teaching and learning materials and class interruptions while in urban areas, transportation problems, overcrowding and encroaching schools ground minimize the reception and attention of learners.

All schools have school committees, which are supposed to deal with the welfare of the schools including resource management, school performance, attendance and school funds. The school committees are also supposed to enhance the relationship between schools and communities. The involvement of the communities through partnerships in improving the school and learning environment is weak; it is mainly witnessed in observing school boundaries,

sourcing reliance funds and school attendance and drop-out and becoming increasingly important in terms of competence development and school performances. As schools look outside their grounds, ESC themes can become influential in guiding schools and communities towards local change for sustainability like behavioural change shift towards more sustainable lifestyle and understanding how environmental and global challenges are connected to our lifestyles.

4.2 Incorporating ESC in the curriculum based on identified gaps

Stressing the links between ESC and socio-economic issues creates an opportunity to make ESC relevant to the concerns of the general public at all levels. Similarly, as Tanzania moves towards a green economy, the likely availability of new green jobs in the environment and sustainable development sectors can help to stimulate interest, particularly in youth. This resource efficient sustainable development path will also pave the way to new sustainable industries and the existence of new international ISO 14000 standards, particularly for exports and ISO 26000, which deal with social responsibility, which are relevant to the private sector. There is also increased awareness on environmental issues based on current environmental degradation, which directly affects individuals and their lifestyles through frequent water shortages, flooding, and health concerns. This level of awareness can be used as platform to launch awareness campaigns on sustainable consumption.

Implementing ESC in formal education system requires incorporation of ESC topics in the curricula, syllabus, schemes of work and lesson plan documents, and through the development of instructional materials and training programmes to support implementation of these curricula. More specifically, materials need to be developed to help teachers integrate ESC learning outcomes throughout the curricula, emphasizing the selection of reflective, participatory, learner-cantered teaching strategies and the use of local and traditional knowledge like those highlighted in the Environmental Education Guidelines for Teachers. These materials should focus on national needs, priorities and contexts, as related to sustainable consumption and lifestyles, as part of the ESC implementation process. The emerging school development planning policy, which requires schools to develop their own Mission Statements and goals (commonly called Motto), offers an opportunity to affect the way in which schools interpret and implement national curricula.

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Opportunities of implementing ESC also exist within research and the management of institutions like national library services, the National Environment Management Council and the Institute of Resource Assessment for the development of professional programmes appropriate to staff, school heads and teacher trainers. This is a vital link, which must be forged if ESC is to be effectively implemented within curricula in Tanzania. Many community and national groups have provided inputs for the development and implementation of curricula.

ESC implementation can also involve the use of public infrastructure such as libraries, which could provide space, and a document managing system for keeping holdings belonging to NGOs. The public library is often used by students' mainly at the secondary and tertiary levels and very few primary school learners. And the communal libraries in some teacher resource centres and villages also provide an opportunity to equalize the geographic availability of resources. However, the national library system is generally impoverished with few printed and online resources related to ESC. Mobile bookshops and libraries, which rarely go to rural areas, may also be mobilized to carry out displays and other education materials. This would reach remote schools and communities.

4.3 Engaging teachers and teacher trainers in Training of Trainers(ToTs)

Tanzania has developed a system of education zones that are spread in the whole country. These zones are mainly used to ease management of education and training. The efficient and effective delivery of ESC throughout the education system requires consistent attention to professional development. Fundamental elements of a systemic approach include the development of enabling policies, capacity development amongst teacher educators and the develop- ment of coordinated professional development activities.

Effective educators learn techniques and methodologies for enhancing knowledge, but also

skills, values and an action-orientation using learner-centred teaching methodologies, which are currently widespread in Tanzania. Professional development fosters educators' ability to reflect on social structures and relations within institutions and the wider community in adopting research as part of their practice and promoting related action.

Training programmes must enable on-going development of teachers' understanding and ability with continuous reinforcement and practice in a variety of situations. Flexible programmes must be made responding to the defined needs of teachers and paying attention to the progression from initial through continuing professional development. Teachers at all levels of the system and every discipline, principals, supervisors and other senior personnel must be active participants to bring about successful change.

Emerging focus on a school-based approach, which involves students, teachers, administrative and support staff in learner-centred education, which creates room to interpret curricula with local conditions in mind offers an opportunity not to be missed. The approach also offers the chance to enhance links between schools and the communities in which they are sited through inter-relations with parents, community members and groups, and the working world.

Successful implementation of ESC lies in ensuring that teachers receive the necessary knowledge on ESC and how they can integrate ESC into their teaching. This calls for an analysis of existing teacher training materials and identifying opportunities where ESC can be integrated. The same multi-disciplinary approach used in implementing EE and ESD in teacher training needs to be applied in the implementation of ESC at the teacher training level to ensure consistency and relevance.

Engaging teachers and teacher trainers involves adequate training and capacity-building on ESC, in both English and Kiswahili. These trainings and capacity-building sessions must engage the teachers to identify case studies of relevant ESC topics, which can be used to teach ESC to learners. These trainings have to be interactive, engaging the teachers in the same way that they can then engage their learners.

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4.4 Implementing ESC in Tanzania: the proposed approaches

Since ESC is closely linked to EE and ESD, integrating ESC into teaching and learning processes in Tanzania should follow the same multi-disciplinary approaches used in integrating EE and ESD nationally. The current school syllabus and teacher training programme incorporate EE and ESD in career subjects like Biology, Geography, Chemistry, Physics and Agriculture. During the implementation of EE and ESD and after evaluation was completed, multi-disciplinary approaches to integrate EE and ESD were adopted and currently, these four approaches are in use:

- Integrating EE and ESD as a topic to be taught in the existing subjects;
- Integrating EE and ESD as a cross-cutting theme to be covered in subjects and school activities;
- Integrating EE and ESD as a separate subject into the school curriculum; and
- Integrating EE and ESD aspects into the content of different topics in various subjects.

The last approach of integrating EE and ESD content in various subjects is the one working best in Tanzania. It is therefore the most suitable approach to be employed in incorporating ESC in the country's basic education system. This approach is a mix of two of the three approaches outlined in UNEP's Here and Now!, which call for ESC to be taught in existing subjects and ESC to be incorporated into projects and other activities such as school clubs and after-school activities.

Moreover, ESC implementation in Tanzania can involve two multi-disciplinary approaches:

- **Approach 1:** Integrating ESC topics and issues into the content of different topics in various subjects. Annex 2 provides specific guidance and examples of how ESC can be integrated into various subjects. Annex 3 provides some examples of specific topics in the existing primary education curriculum that can be used to integrate ESC issues.
- **Approach 2:** Integrating ESC into extra-curricular activities: after-school activities and school clubs.

When implementing ESC, Tanzania must address the following:

a. Clarify the meaning of quality of life in the context of Tanzania's environment, according and appreciation to other cultures, beyond one's own national boundaries. This meaning of quality of life must reflect Tanzania's contexts, priorities and needs, all of which are usually reflected in our lifestyle choices.

b. Define its priorities and actions that need to be taken with regards to adopting sustainable consumption behaviours and lifestyles.
c. Identify the actions, which will ensure the preservation and improvement of the environment and develop social and individual well-being in harmony with the natural environment.

4.5 Approach 1: Integrating ESC topics and issues into existing subjects: ESC teaching methodologies to be applied

In teaching and learning process, ESC can be integrated in various subjects in formal education as shown in Annexes 1 and 2. The grouping is mainly based on an approach, which will be used in developing content and methodology for specific approaches. The groups are as follows:

1. The social studies: Geography, History, Civics, Economics
2. The sciences: Science (Physics, Chemistry and Biology), Mathematics, information and communication technology (ICT)
3. The Arts: Fine arts, music, performing arts, sports, vocational skills
4. The languages: Kiswahili, English and French
5. Religious studies: Islamic and Christian Knowledge

Annex 2 identifies some examples on how ESC can be integrated into various subjects based on these five groups.

The steps below provide some guidance on how ESC can be integrated into existing subjects. Teachers should:

1. Examine the existing subject/syllabus/content to be trained or taught and identify areas where ESC can be integrated. Here, teachers must clarify the interrelatedness of ESC to the specific subject(s) they teach.
2. Identify the generic and subject-specific and ESC competencies to be developed by the learner.
3. Find the content of the specific ESC theme(s), which is to be integrated into the content of the selected topic or subject. The teacher or facilitator should identify the relevant ESC issue or challenge like sustainable consumption (history, roots and impacts) and unsustainable consumption behaviour (its root causes, its effects, the underlying values and principles, and finding alternative solutions).
4. Develop the core messages, which you want the learner to comprehend.
5. Choose the teaching and learning method, which will help the learners develop the intended knowledge, skills competencies and attitudes.
6. Plan the lesson while integrating the content of the subject matter with the content of the ESC issue without watering down or garbling or distorting the subject matter or the ESC content.
7. Teach or facilitate while blending ESC aspects into the teaching and learning at relevant points so that the learners are exposed to SC in an effort to raise their awareness and the need to adopt sustainable lifestyles.

Here are examples of how teachers can integrate ESC into their specific subjects:

- A science teacher can analyse the quality of water in the local environment and influence learners to explore how they can improve the water quality.
- A history teacher can look at how industrial production and human consumption rates have changed over the last two centuries or decades. The teacher can reflect on trends of resources use and projected trends in relation to population growth.
- A language teacher can explore the meanings of "sustainable consumption" terms and have students write an essay or do a presentation on the topic.
- A sports teacher could lead a class where students use recycled materials for games and activities.
- A mathematics teacher can design numerical problems based on sustainable financial services, investments, savings and loans.
- An arts teacher could use the principles of sustainable consumption to inspire artistic expression.

Apart from the traditional teaching methodologies currently employed such as lectures, classroom teaching and discussions, there are several interesting and effective approaches and methods that can be used in teaching ESC in formal education, as noted in the following sub-sections.

4.5.1 Case studies

Case studies, which are real life situations that are used for learning purposes, allow learners together with their teachers and local experts to focus their studies and activities on a particular situation. The idea is to focus on the traditional elements of teaching and learning on a particular issue and explore what additional knowledge, skills and attitudes may be involved in solving the challenges presented in the case studies. The content of the case study is the most important factor in determining the effectiveness of this method. It must be realistic and accurate, clearly stated, brief and to the point and the situation should be complicated but solvable. The situation and characters must be believable, representing real life situations and the issues should generate discussion.

Here are some tips on how case studies can be used in teaching ESC. Teachers should:

a. Look for case studies related to ESC (based on the ESC topics and issues) and identify some that can be used in teaching.
b. Prepare discussion questions related to the chosen case study.
c. Provide an overview of the case study in your own words and if possible, provide a written copy of the case study to the learners.
d. Ask the learners to identify the ESC issues in the case study.
e. Divide students in groups and discuss the issues raised in the case study.

f. Guide the group through the discussion process by asking students questions that should lead to responses to the following:
   i. What were the actions and features of each character?
   ii. What are the external factors influenced the situation?
   iii. What were the consequences of their actions?
   iv. What alternative strategies might they now use?
   v. How can the situation be prevented or how can the problem be solved?
   vi. Each group should present its points for general discussion.

Case studies are used to analyse problems, practice decision-making, problem identification and problem solving, teach students to be open to suggestions, viewpoints, feelings etc., and provide opportunity to practices dealing with a situation before encountering it. Small group discussions (4-5 people) enable members to actively participate and think, overcome shyness, share their views, respect others while seeking solutions. This can help develop analytical and problem-solving stalls and it brings realism in learning situations. Nonetheless, a significant amount of time is needed to identify case studies and integrate them into teaching. Teachers must be prepared to help groups to extract and focus on the relevant issues and topics and guide them towards resolution of the problems.

4.5.2 Problem-solving

This method of teaching has to be combined with the objectives of ESC. This strategy can be combined with the case studies approach. This process involves:

- Identifying and defining the problem.
- Collecting, organizing and analysing the data to relate it to the issues.
- Generating and evaluating alternative solutions.
- Evaluating the alternatives and selecting the best solutions.
- Developing, implementing and evaluating a plan of action.

4.5.3 Team teaching

ESC is interdisciplinary. Since it should be integrated into existing subjects, it would be convenient to maximize the subject expertise of different teachers. Teachers could form a team of experts to teach and supervise students' work on ESC, SCP and lifestyles issues.

4.5.4 Field trips

Field trips are undertaken for an extremely various purposes and may range from a walk to a local field, pond, market, shopping centre or other areas. Field trips can be extremely valuable for teaching ESC, for example, the objectives of such trips may include studying peoples' purchasing or consumption behaviours, agricultural activities, waste generation and management, quality and quantity of water, energy consumption, health and food and so forth. Fieldwork is a science of selecting, observing, recording, analysing, interpreting and reporting on a certain phenomenon in a specific area.

To conduct a successful field study, proper planning is needed. A field trip involves changes in school timetables and changes in duties and the planning involves preparation before the trip, work done during the field trip and work done after the field trip.

Teachers must prepare for the field trip by doing the following before the trip:

a Contacting the place of study by calling, written mail or personal contact with the responsible people. Teachers must indicate the objectives of the trip, time and students involved and prepare questions, which could be asked once there.
b. Ensuring that ESC topics and issues are integrated into the questions to trigger discussion on relevant ESC issues.
c. Informing the head of the school about the trip since the alteration of the school timetable should be known and accepted. Transport should be prepared if necessary.
d. Informing parents about the trip, especially if the place is far from the school.
e. Preparing a map of the route to guide the students. A First Aid Kit must be available for any emergency. Paper and pencil can be distributed in groups if available.
f. Dividing students in groups. Each group must be given a task to do during the field. Group members must select group leaders, who are vital in maintaining discipline and remind group tasks. This should be done prior to the field trip taking place.
g. Preparing guiding questions with the students about the subject of the study.
h. Providing key questions to each group to be asked during the field trip.

During the field trip, teachers should encourage students to apply important ESC skills, i.e.observation and recording.

- All students must observe one thing at a time. Each group must record what is observed.
- They should stand in a semi-circle to make sure all are listening and observing.

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- Drawings, sketches can be done in recording.
- Discipline must be maintained.
- On completion of the study, they should thank the responsible people.
- They should return to school or home immediately.

After the visit, the following should take place in the classroom:

- Students should be guided to do different tasks. Each group must analyze what was observed during the field trip. Time should be given to complete the task.
- Each group must report to the class what is observed, recorded and group interpretation of each lesson learnt.
- The teacher must summarize important points for the class.
- The class should write a report on what they have observed and their findings to be kept in a school library or department. This report should highlight issues and show the interdisciplinary nature with ESC.

4.5.5 Group work

This approach includes conventional classroom teaching methods together with question and answer and discussions in which the entire class participates. Large classes can be divided into smaller groups to enable better interaction among the participants and to help the teacher provide more attention to the group that needs more.

This method of teaching involves the following activities:

1. Laboratory work: e.g., undertaking experiments that illustrate food additives and their impacts.
2. Students demonstrations and presentations:e.g. tackling human rights issues.
3. Discussion groups: e.g. examining sustainable lifestyles and how they can be achieved in Tanzania.
4. Tutorial groups: e.g. discussing issues such as consumption patterns and sharing additional information where required.
5. Peer tutoring: e.g. peer-to-peer support where students help each other to understand various ESC issues such as ecological impact.

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4.5.6 Lectures

Lectures are direct instruction by the teacher, which can be limited since it is a one-way direction of delivering knowledge to a group. It has no group participation and little or no feedback. It is essential when imparting technical and scientific facts and the facts are not readily available. Lectures are essential particularly when teaching about histories and theories, such as the history of consumption and social and economic development.

4.5.7 Buzz sessions

This approach can be effective when a controversial issue or a problem of current concern arises where students get excited and want to participate. The class could break up into very small groups of three or four students, have a short five-minute discussion and then report back to the whole class. Teachers should encourage ESC topics that may be controversial such as should children be exposed to food additives? Why or why not?

4.5.8 Simulation games

This approach is a rather informal activity in the classroom in which the players take on roles simulating the real world, for example: What can the Tanzanian government (or private sector and businesses) do to encourage sustainable lifestyles? What kind of policies and infrastructure are needed to make sustainable lifestyles widespread?

Simulation games are problem-based and they involve multidisciplinary approaches and knowledge. A great deal of information would be required to help one understand the situation. This technique is dynamic and demands a great deal of flexibility in thinking and reacting to other suggestions. In situations where it is not possible to undertake learning in the actual condition, simulation brings real situations into the classroom. The teachers must try to make simulation as realistic as possible. Some examples of simulation games include:

• Imaginary visits

Here, students visit an area in imagination. Teachers must:

– Select the topic, master the important stalls on the topic, know the route, prepare materials e.g. maps, models, pictures and prepare questions.
– Name the area and activity to be observed, share the position of the area using latitude and longitude, neighbourhood (Compass Direction) and reference etc. Atlases can be used for position and finding a route through which they are travelling (road, air or water).

Explain their choice of the visit and discuss things to carry – based on type of transport and climate. The journey should begin from the class. The class should discuss geographical features to be seen on the way. After arrival, students should observe the activities of the people while studying the concerned topic/ subject matter before going back to school. Teachers

should encourage discussions related to the subject matter with other similar cases to make inferences and generalizations.

• Role-play

For a particular situation, hypothetical or real, role-playing allows the participant to assume a new identity and react to the details of the situation. Based on some basic information, the participant acts and reacts according to his/her role and in the process, gains better sights into the situation and human relations. This approach could help to humanize the whole learning and behaviour change process, which is an essential component of ESC. In a role-playing situation, the problem has to be suitable to the maturity and level of understanding of the participants.

4.5.9 Jigsaw

Teachers should prepare group tasks based on the planned ESC topic(s) and guide group formation by letting learners count numbers to form the following:

a) Home or Family groups: Number of tasks prepared will guide the number of FAMILY members. For example, if one has prepared 6 tasks, it means, learners will count *1, 2, 3, 4, 5 and 6* to form a family group. Give them time to know each other.
b) Task groups: These are students with same numbers join together to form new task groups for discussion, e.g. (111), (222), (333), (444), (555) etc.

Teachers should distribute prepared tasks to each task group for discussion. Every member should write down the summary of discussion. They are now experts of content discussed, and they will guide others after going back to the family.

- After discussion, task groups should break and members go back HOME as experts of what is discussed. By using the summary they have, every member should discuss in their families, meaning that each group will have a representative of all the content discussed in task groups.
- It is the duty of the teacher to organize and guide the learners-who will start discussion.

This also involves setting the time limit. Timekeepers will control time in each group.

4.5.10 Gallery walk

Teachers may want to use this teaching approach in delivering ESC. Teachers should:

- Follow all procedures discussed in the Jigsaw section, but after the discussion in task groups, instead of learners summarizing in a notebook, give them flip chart to summarize the discussion.
- Each task group should put the charts on walls as posters after discussion. After hanging posters, task groups should break and members go back HOME as experts of what is discussed.
- Each family should stand under one (any) poster, and experts who prepared it should teach others. After that discussion, each group should move to another/ next poster.
- It is a task of the teacher to control time for discussion in each poster and guide learners on direction for movement.

4.5.11 Participatory debate

Debate is one of the popular techniques used in schools. It is a good way of providing learners with problem-solving techniques to make them able to tackle and solve the present global problems like the impacts of unsustainable SCP patterns and related problems such as hunger, poverty and environmental degradation. Participatory debate aims at making learners think and practice by giving their ideas concerning the motion.

It goes further by encouraging them to think otherwise by *supporting what they don't believe OR try to go behind their thinking.* This is good because, students will experience how people think otherwise, and do unusual or unexpected things in real life situations. It can also be a good mechanism of encouraging them to assess risk situations and make quick and informed decisions for personal defence.

Teachers can do the following to prepare for participatory debates:

- Create relevant debate topic(s)/motion(s), such as sustainable lifestyles are necessary for Tanzania's sustainable future.
- Divide groups of four people (A, B, C, D.). Each group should be sub-divided into two, to have two supporters and two that oppose. (AA and BB)
- Give learners time (fix the time) to think and summarize their points to support or oppose the motion individually and in pairs. Roam in the room searching for points.
- Let learners go back to their groups of four people and face each other (sit in pairs) (AB,AB).
- Give learners guiding procedures, e.g., who will start in each pair. Control time in each discussion and encourage all to use convincing language. That means, in each group, all two supporters should talk and two that oppose should listen and the vice versa. This gives room for the second new debate session, where learners change their roles.
- Follow the above procedure by giving them time to organize and summarize ideas for debating. The learners should be given the chance to share their opinions and those ideas should be summarized on the board.
- Later, organize voting so that individuals show their stance. This is where prior knowledge is revealed based on individual understanding.
- Conclusively, the facilitator should contribute to the motion and give technical advice if necessary as in topics.

4.5.12 Group investigations

This is a process of organizing learning through inquiry and problem-solving. This is an individual and interpersonal learning process aimed at attributing

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meaning to information acquired from investigations, so as to give meaning. Group investigations allow for understanding and clear interpretation through active thinking capacity.

In conducting group investigations, it is important to remember the 4 I's:

- ***Investigation:*** the knowledge organized through inquiry and problem solving.
- ***Interaction:*** the communication among members of small groups, which is encouraged by talking and careful listening. This develops appropriate skills attitudes and classroom norms, which enhance accepted and expected cooperation in schools.
- ***Interpretation:*** a process of attributing meaning to the acquired information after investigation. Learners are set to active thinking capacity, clear interpretation to bring effective learning for understanding and meaning making. Skills include categorizing, summarizing, organizing, etc.
- ***Intrinsic motivation:*** a personal interest in seeking information and understanding it, often enhanced by giving learners appropriate choices of setting goals and tasks.

The phases of group investigations are: (i) choosing the topic and forming groups where learners can choose groups based on the topic of their interest; (ii) planning the investigation; (iii) planning the presentations; (iv) presenting the investigation; and (v) joint reflection; and evaluation.

4.5.13 Discussion

Discussion is a teaching technique, which seeks to draw out information from classroom participants through exchanging ideas. It implies that every participant is equipped with information and knowledge and can be exposed to a situation where he/she can contribute freely. It is a "thinking together process," which fosters cooperation in learning. It operates on the principle that "the knowledge and ideas of several people, pooled together, have greater merit than those of single person." The leader is not necessarily the teacher. Discussion is often used to help solve problems, explore issues or attitudes, take decisions, as well as change attitudes e.g. anti-social attitudes.There are various forms of discussions such as pair discussions (two people), small group discussions, panel discussions and debates. Discussions must be prepared and presented.

Discussion preparations consist of:

- Careful pre-planning i.e. objectives and ground rules must be established and should be relevant to the ESC topic. Students must know the topic at hand.
- Considering the group size and room layout.
- Preparing the teaching materials relevant to the topic.
- Knowing the level of the learners and time.

In presenting the discussions, it is important to:

- Identify the leader of the discussion and ensure that the issues are clearly defined.
- Discussions should stick to the topic. It is important to listen carefully while others are speaking, respect other peoples' viewpoints and being objective and not emotional.
- Learners should use facts to support their statements.
- The teacher should ask questions to clarify doubts.
- Allow all to take part and note all contributions.
- Specific individuals should not dominate the discussions.
- The teacher must move around and provide assistance as needed to the groups.
- The teacher should bring the groups together and let each group report their results quickly.

The teacher must summarize and conclude the session.

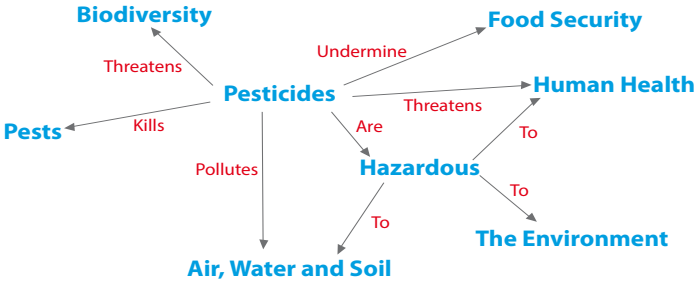
4.5.14 Concept mapping

A concept map is a diagrammatic way of representing concepts and how they are linked to each other. Concept maps can be very useful in helping learners develop concepts and in teaching given content holistically. It is a useful approach for helping learners learn about the process of knowledge production or construction.

Developing concept maps involve:

- Identifying the concept that you want the learners to develop, i.e. the core concept. An example can be the effects of pesticide use.
- Making a list of other concepts that you would like to relate to the core concept of sustainable consumption. Examples are: pesticides, environment, food security, biodiversity, pests, human health, water, air, soil etc. In groups or individually, make the learners link the listed words to show their interrelatedness.

It is important to note that the words and or concepts should be linked with arrows and connecting phrases.



The direction of the arrows shows the nature of the relationship. For example, using the words listed above, the learners can develop a concept map as shown in the following figure.

The use of concept maps in learning is useful because:

a. They ask the learners to map their ideas about how concepts are linked and provide an insight into the way they envisage how one thing relates to another.
b. They help the learners learn about the structure and process of knowledge and its construction.
c. They help in self-assessment and assessment by the teacher because they identify their misconceptions, weaknesses and strengths.
d. They encourage holistic and meaningful learning.
e. They promote cooperation among the learners, facilitates communication and interaction in the classroom. It therefore exposes the learners to different ways of looking at things.
f. They enhance deep understanding of the things they learn.

Educators are encouraged to integrate ESC topics and issues in existing subjects using this approach. Educators should reflect on different topics taught to learners and develop a concept map with the learners. Learners should also develop their own concept maps of a topic of their choice.

4.5.15 Value clarification

Value clarification, which is a prerequisite of identification and analysis of problems, is a teaching and learning method that helps the learner think through, identify, and clarify their own values in order to make rational and informed decisions. Our decisions are highly influenced by our values. Therefore,we should be clear about the values we hold. Consumption issues are value-laden, so, in most cases, people are faced with conflicting situations where they have to make choices.

Values are principles, rules, criteria, virtues, beliefs, and qualities etc. which guide decisions or behaviour or give direction in determining how individuals act upon available choices. "What we are, is a reflection of our values, and our values reflect what we really are" (UNESCO, 1985). In an effort to fight unsustainable consumption practices, we need to change peoples' behaviour, actions and attitudes. For this to be done effectively and successfully, it is important to understand peoples' values. People attach different values to consumption issues as a result of traditional beliefs, religious beliefs and even personal beliefs.

In using the value clarification method, the teacher can do the following:

- ***Rating:*** The teacher can give learners a list of consumer items and ask them to rate them according to priority (e.g. what do they need and want most). The learners then discuss the factors that have led them to rate the items the way they have rated them.
- ***Unfinished sentences:*** The teacher gives the learners an unfinished sentence related to sustainable consumption issues, which will require them to clarify their values in completing the sentence. Once completed, they can discuss them with their peers. An example of an unfinished sentence: ***Recycling household products is a challenge for me because***

This method is effective in teaching about sustainable consumption issues because:

- It gives the learners the opportunity to gain skills in the valuing process.
- It promotes learning and conflict resolution through discussions.
- It stimulates active search for relevance among the learners.
- It makes learners commit to their feelings, ideas and beliefs and through discussions enables them to understand how these influence their actions.
- Learners are exposed to different viewpoints, beliefs and opinions from their own and they learn how to respect and honour those of others, or use them to change their own.
- It trains them on how to reach rational decisions when faced with controversial issues.

Teachers are encouraged to introduce critical situations that can be used to initiate discussions among learners, which will help them clarify their values related to sustainable consumption.

4.5.16 Futures wheel

The futures wheel is a method, which helps learners explore the consequences of past and present behaviours and possible solutions. The teacher can use this method to enable learners to become aware of their actions and predict the most probable future consequences, which are caused by past and present actions. The method can be used in teaching about sustainable consumption and other problems by exploring causes and effects and also how behaviour is related to outcomes.

4.5.17 Know – Want to Know - Learned (KWL)

This is a popular technique for promoting active learning that can be used when learners are required to read a given text in search for information about a given aspect. Teachers should introduce an ESC topic such as consumption patterns and how they have

changed over the years. While introducing the topic, educators should link it with their own experiences in life and encourage the learners to talk about consumption patterns and habits. Learners should take part in:

- ***Brainstorming:*** It is important for each of them individually first to think what they know about it already. Ask them to jot down on a piece of paper everything they know or think they know about sustainable consumption.
- ***Paired brainstorming.*** The learners then share their lists in a pair to learn from each other.

While they are sharing in pairs, the teacher draws a chart and labels it as shown below:

Know (K)	Want to Know (W)	Learned (L)

The teacher then asks the learners "What do we **know** about sustainable consumption?" The pairs offer their ideas and the teacher categorizes them. The ideas they offer are written in the column labelled **"Know."** Next the teacher asks the learners, "What do you **want to know** about sustainable consumption?" or "what questions do you have about sustainable consumption?" As the questions or statements are offered, the teacher writes them on the column labelled **Want to know**. Some of the things they may want to know can arise from wanting to know more about something that they know. The next step is for the participants to read the text on sustainable consumption. As they read, they should find out if they were right about what they know and find answers to their questions.

After the learners read the text about sustainable consumption, they return to the chart and together reflect on what has been written in the "Know" and "Want to Know" columns. They then state the answers they got for their questions in the "Want to Know" column. Their responses are written in the column labelled "Learned". The learners also look into the "Know" column and find out the ideas confirmed by the text or contradicted by the text. At this point they should clarify or correct their thinking about what they know about sustainable consumption. The teacher asks the learners what else they have learnt apart from what they know and the questions they had about sustainable consumption. These are listed in the column labelled "Learned" as well. The learners surveying their questions and seeing which ones are still unanswered can conclude the exercise. They can come up with new questions after reading the text. These questions can be recorded and assigned to the learners to find answers for them at a later time.

4.5.18 The Think – Pair – Share (TPS) technique

Learning takes place effectively when each learner participates actively in the learning process. The use of the Think-pair-share method ensures that this need is met. By using this method, each and every learner – even the most reserved ones – will have participated in the learning process. This technique involves the following:

- The teacher introduces the topic to be learnt and gives the learners one or two minutes to think about the topic. Each individual learner can jot down what he or she knows about the topic.
- The teacher then asks them to share with their neighbour in a pair what they have. They combine their ideas to get common ideas for the pair.
- After the pairs have shared their ideas, they get into groups. They then discuss their ideas and develop common ideas for the group.
- Each group is then given a few minutes to present their ideas to the whole class. As the ideas are presented the teacher develops a summary of the main points on the board. This is read to/by the whole class after all the participants have presented their ideas.

4.5.19 Brainstorming

Brainstorming is one of the methods of teaching, which can be used to make the learners participate actively in the teaching/learning process. This method makes the learners think fast and find out as many answers as possible to a given question. Brainstorming can be used as a strategy of finding solutions to a particular problem from a group.

If this method is used effectively, it allows all the learners to participate in the lesson fully and enhances thinking and reflection among the learners. It makes the learners develop self- confidence and at the same time learn from others. It promotes attention among the learners because the teacher asks a question then immediately invites responses from the learners.

Brainstorming elicits the learner's prior knowledge of what they are learning. This knowledge is developed through the experiences they get from their environment and through interacting with other people in their day-to-day lives. In learning this knowledge is basic in learning new knowledge, developing new concepts and meaning making. Therefore, brainstorming is a very good method for introducing a new topic. Brainstorming can be used in analysing various concepts as and in summarizing a lesson, to see if the learners have captured the important points of the lesson and if they can link what they have learnt with their day-to-day lives.

Before using the brainstorming method, the teacher has to develop a wide understanding of the material and also the specific objectives of the lesson to make the lesson more focused. The questions asked should be open-ended and give the learners the freedom to share their views while at the same time thinking and reflecting on their own ideas and those of their peers. The teacher should make sure that all the students get equal opportunities to participate

in the lesson regardless of their differences in age, gender, experiences and ability. As the learners give their views, the teacher quickly puts the commonly accepted ones on the board while the class briefly discusses those that need to be clarified. This is because not all the ideas given are true or valid. Some need to be clarified and even corrected. To encourage the learners to give more ideas, the teacher can once in a while give his/her ideas or examples and even pose probing questions. After the ideas have been exhausted, the teacher with the learners consolidates the ideas given and then uses them for the next stage of the lesson. They should not be left hanging.

The difference between the Question and Answer method and this one is that brainstorming is done in a very short time and fast to elicit as many ideas as possible from one question. These ideas are sought before they do an in-depth study of a given topic. On the other hand, in questions and answers, the time is longer and the questions may be many.

4.5.20 Games, songs, poems and stories on ESC

Games, songs, poems, letter writing, 'Student Parliament' on ESC can be used to engage learners in various issues. Educators should encourage learners to research relevant ESC topics and engage them in using their knowledge on ESC in games, songs, poems and stories that can be shared with their peers or the wider community. This can involve traditional dances, which can be effective in enhancing ESC in learning contexts.

Using games, songs, poems and stories to sensitize the public about various issues, particularly HIV/AIDS, have been ongoing in Tanzania for decades. Recently, some organizations, such as CPCT, have been sharing SCP messages through storytelling as a form of education and awareness-raising. For example, SCP clubs were formed in primary schools as part of the "Education for SCP" pilot project in Tanzania. This project, which was done in partnership with the NGO Nature for Kids and supported by UNEP, ran as a pilot in Dar-es-salaam's three municipalities of Ilala, Kindondoni and Temeke in 2009 where 2,460 pupils were reached (CPCT, 2010). The SCP clubs, spread across 41 schools, specifically focused on the message of 'reduce, reuse and recycle (3Rs)' and the pupils were engaged in various community clean up and education of neighbouring communities on the 3Rs. As part of this project, pupils created stories on waste management and recycled waste material into household objects and artwork (UNEP, 2012). About 25% of the 41 schools composed plays and stories on waste management. In fact, a significant amount of compositions, including poems, were submitted by pupils. These could be further used to develop pupils' booklets on sustainable consumption issues. These kinds of initiatives need to be replicated at a large scale, as they can be powerful in sensitizing the public on SCP, which is considered a relatively new phenomenon.

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4.6 Approach 2: Integrating ESC into extra-curricular activities

Fostering sustainable lifestyles require a strong shift in behaviours and collaboration between various groups, such as individuals, communities and schools. Because sustainable lifestyles are shaped by key factors that are rooted in culture, politics, economics and social norms, they need to be developed at all levels. They need to be supported by the social and technical systems and institutions that surround us, if we want them to be part of our lives. For example, we need to develop efficient alternative infrastructures that support citizens to change, create concrete workable solutions that are respectful of socio-cultural realities and spread messages that support these changes.

Extra-curricular activities involving ESC need to incorporate some core values, such as:

- Understanding consumption (patterns, roles and history) and lifestyles both past and present and prediction of the future;
- Personal economy and consumption focusing on consumers right and obligations;
- The role of advertising and persuasion when it comes to consumption;
- Consumption and the environment emphasizing on waste management; and
- Product safety and security with a particular focus on health and nutrition.

Given the importance of developing specific knowledge, skills, values and attitudes among actors, integrating ESC into extra-curricular activities involves supporting schools and communities in the development of local action programmes that:

- Promote projects, which concentrate on building community-based resources and services for professional development in ESC that can help pave the way to sustainable consumption and development;

- Establish system-wide networking and constituency building in support of ESC, among community groups including the media, Citizens' Associations, Religious institutions, School Boards and NGOs, and consumer advocacy groups;
- Seek actions, particularly media, which raise the profile of teachers as change agents who are pivotal in developing citizens' skills and who are committed to nurturing, maintaining and sustaining the national resources through ESC and sustainability; and
- Promote projects, which make explicit curricular and extra-curricular linkages between schools and local communities, highlighting how they can mainstream ESC together.

ESC in extra-curricular activities: SCP clubs in primary schools

An example showing ESC integration into extra-curricular activities is the formation of SCp clubs in primary schools. The Cleaner Production Centre of Tanzania (CPCT), in consultation with the Vice President's Office (Environment) and the Ministry of Education and Vocational Training and in collaboration with the Dutch NGO Nature for Kids, engaged 41 schools in the creation of SCP clubs, which provided a platform for information sharing on the national programme on SCP as well as education on SCP and introducing waste management principles (3Rs) to students with real-life examples.

The establishment of the clubs involved a recital of the club member's promise, which was:
"The earth is my home, I promise to keep it healthy and beautiful; I will love the land, the air, the water and all living creatures; I will be a defender of my planet, united with friends I will save the earth!"

In Kiswahili, it reads as follows:
"Uso wa dunia ndiyo nyumbani kwangu, naahidi kutunza afya na uzuri wake; Nitaipenda ardhi, hewa, maji na vyote vyenye uhai; Nitakuwa mlinzi wa sayari yangu, kwa kuungana na rafiki zangu nitaunusuru uso wa dunia!"(CPCT, 2010)

The clubs' activities made an impact not only in the schools but within the communities as well. For example, about 73% of the schools discontinued the practice of burying or burning waste following an increased understanding of the impact of emissions on their health and environment. Fifteen of the 41 clubs participated in nearby market-place clean-ups and awareness raising involving community members, based on the 3Rs philosophy (CPCT, 2010).

The experience of the SCP clubs provides some important lessons for integrating ESC into extra-curricular activities. SCP club members noted the following key challenges in their work:

- Lack of support from the business community: SCP club members had contacted some business firms for their support and contributions to their projects by requesting bins for waste collection, storage and sorting, requesting them to act as patrons for their SCP clubs, instituting rewards to the best 10 SCP clubs and facilitating the layout and printing of a children's SCP club newsletter, among others. Members received minimal responses from the business sector. This experience highlights the need for increased sensitization among the business community so they are aware of their responsibility to the consumers.
- Bureaucratic government procedures: SCP club members contacted numerous councillors and street level leaders within their jurisdiction asking for support in encouraging community members to practice waste sorting and in working hand in hand with the management of the schools in guaranteeing the security of school property, including waste sorting bins, among others. However, it was noted that the bureaucratic chain of command within the Government was a challenge as the communication chain lengths are long.
- Lack of short education films in Kiswahili about common sustainable consumption issues like energy and water efficiency, which could be used for outreach in schools and in communities.
- Increased support is needed to form and maintain SCP clubs to keep the overall tempo of sustainable consumption and lifestyles in these clubs. This can be done through outreach visits and capacity-building activities.

Such challenges need to be addressed to ensure the successful implementation of extra- curricular activities that focus on SCP issues.

4.6.1 Integrating ESC into community-based projects

In implementing extra-curricular activities on ESC, there is no remarkable difference between school-based and community-based activities. Experience shows that activities done in schools activate community participation. Schools act as a source of knowledge and experiences while the communities act as receivers and resource owners. After school hours, all day- school members become part of the community, which means there is a mutual relationship between schools and communities at large. The community has an important role to play in improving the school environment since it is the community that produces the students. In some cases, the community is also actively involved in school construction or doing extension and renovation of the school. Experiences have shown that, schools, which have good relations with communities, develop faster and produce good quality education.

Schools and neighbouring communities can develop several activities and projects, which integrate issues that ensure and enhance environmental sustainability, reducing land degradation and unsustainable consumption behaviours. These activities can encourage schools and communities to adopt sustainability practices.

Communities can be actively involved in enhancing ESC through extra-curricular activities. For example, some of the roles of communities around schools include:

- Identifying people with indigenous knowledge within the community to be invited to schools as guests to share knowledge and skills with students, particularly about sustainable lifestyles. The committee has to identify environmental knowledge and skills within the community that can be transmitted to the younger generations.

- Participating in research done by their children through the provision of required information or directing them to where the information is available.
- Actively contributing to problem solving activities related to environmental challenges facing both the school and community in daily life (e.g. how does cutting trees for firewood affect the environment surrounding the school and the students' performance?).
- Helping schools plant trees, protect and conserve them (e.g. for medicine, fuel wood).
- Providing support to school projects e.g. greening the school ground, establishing a tree nursery or a school garden.
- Participating in public events like demonstrations about environmental conservation and construction of energy serving stoves, and organizing various competitions related to sustainability and the environment.

The following part provides examples of teaching techniques that can be used in extra-curricular and after-school activities where ESC content can be taught.

Project work in extra-curricular activities

Project work is a learning activity that relates to problems that are new to the learners. This involves investigational work and deep study to reach a solution. Projects generally occupy the learner for an extended period of time. Project work is viewed as an important work in learning process. This is because it can be used to measure how capable and responsible a student is on an individual basis with minimum supervision. Projects are required for assessments at each level of education. Educators should start with simple manageable projects to complex ones, depending on the age, time and ability of learners and available resources.

Project work is important in ESC since it demonstrates the competence level of an individual student in different learning settings. Students can link concept and principles learnt in a classroom or laboratory to the outside world through project work conducted in extra-curricular settings. Project work helps develop creativity in solving problems as:

- It stimulates the interests of students in the subject and exposes them to more skills.
- Learners are given specific responsibilities for their projects. They are trained to design practical investigations or problem solving with specific procedures.
- It promotes interdisciplinary activities as it involves using mathematical skills, technologies and economics while improving learners' communication skills.
- It enables social learning as long as each individual contributes his/her energy and skills to the work of the group to attain the final findings of the project.
- It gives opportunities to develop entrepreneurial skills and brings creativity.

There are different types of project work depending on the level of education and nature of activity. Two types can be categorised as shown below.

a) Investigatory project

These are aimed at developing higher order thinking skills in learning. Learners must pick one or more ESC topic or issue as directed by the educator where they research to uncover the truth about a specific problem. This allows them to strengthen their creative and critical thinking skills so that they become logical problem solvers and decision makers. These steps are necessary for undertaking an investigatory project:

i. Identifying the problem: e.g. how can the product lifecycle approach be applied in daily consumption choices? This problem should be well-defined, measurable and controllable.
ii. Identifying the variables (a situation/factor that can change in investigation).
iii. Forming the hypothesis, e.g. Consumers can be trained to apply the lifecycle approach in their consumption choices once they fully understand that the impacts of consumption stem from every stage in a product's lifecycle, from the sourcing of raw materials, the energy required during production and consumption to the waste produced and their disposal.

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iv. The hypothesis made should be based on knowledge and research about the problem to be studied.
v. Design and carry out the investigation, e.g. by showing how the lifecycle approach works using a variety of products, showcasing products with high and low ecological impacts.
vi. Once the hypothesis is made, an experiment should be designed to test its validity. The result should show whether the hypothesis is right or wrong.
vii. Recording and presenting the information.
viii. A well-designed investigation should provide enough data to test the hypothesis made and it is easier to organize them in tables.
ix. Analysing and interpreting the information.
x. Writing a report to present the information.

b) Problem-solving projects

Problem solving skills are developed through projects that focus on inquiry or design. Learners can identify an ESC topic(s) and provide solutions through problem-solving. These steps are necessary for undertaking a problem-solving project:

i. Problem clarification: identify and discuss the specific problem related to ESC with group mates.
ii. Brainstorm relevant scientific concepts, principles and methods that are useable.
iii. Develop a detailed plan of the solution by choosing the best idea/solution.
iv. Develop an implementation plan that can be used to solve the specific problem.
v. If the implementation plan was successful in solving the problem, then write down and share the solution.
vi. If the implementation plan was unsuccessful in solving the problem, revise the implementation plan or develop a new implementation plan.

In designing both investigatory and problem solving projects, the teacher should:

- Engage the students in developing interesting and creative project titles related to ESC, such as "Are alternative lifestyles achievable? The challenges in living sustainable lifestyles"
- Advise the students to state the problem clearly.
- The project work should be related to the students' schoolwork. It should be an outgrowth of current work being covered in the course of study.
- Guide the students not to rely on external assistance in acquiring materials for the project and to make use of locally available materials (e.g. local and traditional knowledge and interviews).
- Guide the students to relevant reading materials.

Teachers should explain the presentation of project work. It is recommended that project work is written and presented using the following headed sections:

a. A creative title, which tells readers what the project is about.
b. Acknowledgements, which provides room to appreciate those who assisted in the project process.
c. Table of contents with a list of the various sections of the work together with pagenumbers, tables, figures and references.
d. Summary or abstract, summarizing the content of the project.
e. An introduction or background of the project, which should contain a literature review (if necessary), purpose, terminologies used and location of the project work.
f. The method(s) used in gathering information (e.g. materials used, special equipment, labelled diagrams, experimental designs and conditions, data collection etc.).
g. The results, which are either quantitative (measured) or qualitative (observed) and arranged

Table 2: A sample of assessment layout for a project work

Part	Description	Score
Title	Brief, short and clear	01
Abstract / Summary	Brief and clear stipulated main idea and hypothesis	04
Introduction	Brief literature review, purpose, detailed theme, technical terms, equipment and material used	20
Methodology	Clear procedure, experimental condition and design, data recording, procedure, diagram	20
Results analysis	Accuracy of data, scales;clear data representation, ana- lytical methods, formulas and critical values	20
Discussion	Comparison of results with other findings; Implication of the data to individuals or a specific industry. Suggestion of what to do for future research as follow-up	10
Conclusion	Statement to show how the result relates to thestipulated main idea, objective or hypothesis.	10
Understanding of concepts	As used in the project work.	10
General organization	Format and organization of narrative, tables, graphs, and tidiness	05
Total		100

in tabular/graph form or narrative. Drawings should be large and labelled.

h. The discussion, which helps one to compare the results with other findings, suggesting areas for further research (for improvement) and the implication of the information to individuals.

i. The conclusion, describing what the results show and what can be derived from them.

j. References/Bibliography, with a list of references (books, journals, media and websites used).

Teachers should explain the evaluation of project work. Assessment is very essential for any learning activity as it gives feedback, which can be used for improvements. Some teachers lack adequate knowledge of assessing and evaluating student's projects. The table below provides a sample assessment of projects. Teachers may choose to eliminate parts that are not relevant for the level of education that they are teaching, e.g. for primary school students, students may not need to be evaluated on literature reviews. Table 2 provides an example of how project work can be evaluated with proposed scores.

4.6.2 Integrating ESC into school clubs

School clubs, particularly environmental clubs, can play a crucial role in implementing projects and activities that promote behavioural changes for sustainable lifestyles through ESC. Promoting widespread behavioural changes needed to shift towards more sustainable lifestyles and consumption habits that can be done through school environmental clubs, which can act as agents of change in schools from the primary to tertiary levels. These clubs can be used to implement Whole School Improvement Programmes through better environmental learning and management. If environmental or SCP clubs are active, they can facilitate the process of learning and achieving the quality of education in schools.

The following factors determine the effectiveness of environmental or SCP clubs:

a) ***A committed school administration*** that is aware of environmental issues in the school and surrounding community. The administration should provide support to the environmental club.

b) ***Active students*** who are willing to volunteer in the club's activities.

c) ***A clear constitution*** for the club.

Forming an environmental club involves the following steps:

1. ***Establishing a group that comprises of learners and teachers.***

- The role of teachers is to be patrons and mentors of the club and its members.
- Students should select their own leadership where committed students lead the club.

2. ***Developing a constitution***

- With the help of teachers, students should prepare a constitution, which provides guidance to club members.
- The constitution should cover leadership, membership, resource management and mobilization, meeting modalities and implementation of activities.

3. ***Planning club activities***

- Club members should participate in environmental activities at the school, such as performing a school environmental audit. Their participation in this exercise will increase their understanding of how to tackle environmental issues, among others.
- Clubs should develop their own school calendar, which indicates all environmental activities to be carried out in schools, taking note of global environmental days, such as Earth Day (celebrated annually on 22 April) and World Environment Day (celebrated annually on the 5 June).
- Clubs should engage in peer education whereby they design environmental learning activities and develop strategies for action. For example, if litter is a problem in the school compound, clubs should focus on this particular issue by involving all students, teachers and community and discussing ways on how to solve it within their context, e.g. by encouraging recycling and composting. Clubs can also provide education and undertake action within the surrounding community on environmental issues. When clubs are mature with enough knowledge, information and skills, they can go to the community or village to engage in public forums or meetings related to environmental issues including sustainable consumption.
- Through environmental clubs, students can learn leadership styles, democracy and responsibilities. For example, students led by environmental club members, can be given responsibilities for looking after school gardens, waste management, and promoting the 3Rs of the environment: reduce, reuse, recycle.

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- School environmental clubs should also partner with local and international NGOs or other groups with similar interests or expertise to increase their understanding and garner support.

Interested schools are invited to consult the CPCT for further guidance on the establishment of SCP clubs, following CPCT's role in establishing SCP clubs across 41 schools in Dar-es-salaam.

The following part provides an example that shows how environmental school cubs can participate in an environmental audit, as part of spreading ESC knowledge.

Conducting an environmental audit

Environmental clubs can develop and carry out an environmental audit, while integrating ESC topics and issues. Environmental audits are assessments that help reveal the most critical problems a place is faced with and a tool to identify ways to reduce or totally solve the harmful environmental risks. This kind of activity exposes students to environmental challenges and their impacts, some of which are triggered by unsustainable consumption practices. It also allows students to seek workable solutions that integrate resource efficiency (e.g. energy and water use) and sustainability principles. Schools should undertake audits in order to comprehend the nature of environmental issues in the school and to look for appropriate and collective approaches to solve them.

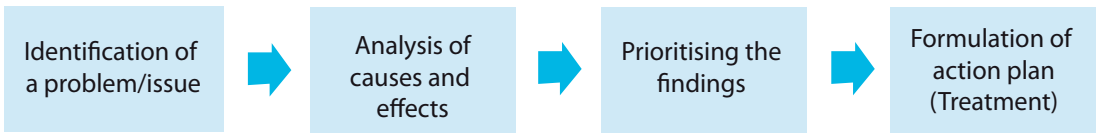
Environmental audits in schools should be carried out at least twice in year.

The process for conducting an environmental audit involves:

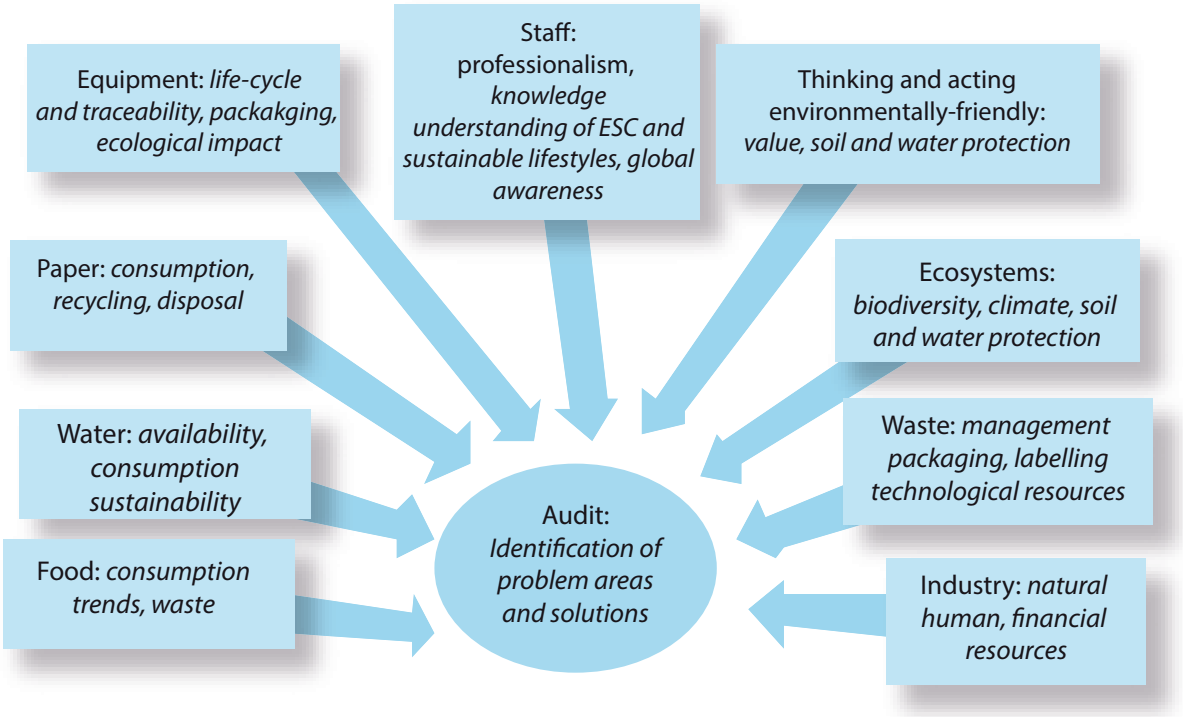
a) Forming a working group with the following members:
i. Head teacher or Deputy Head
ii. Committed teachers on environmental issues
iii. Selected representative from the community
iv. Selected students, specifically from the environmental clubs

b) Planning the environmental audit by:
i. Setting a purpose of the audit;
ii. Preparing the auditing tool that covers all environmental issues, resource mobilization and actions, unsustainable consumption;
iii. Collecting, organizing and analyzing relevant information;
iv. Preparing an audit report summarising the findings;
v. Disseminating the findings through public channels, e.g. community meetings where people will decide on the most critical environmental problems the school faces; and
vi. Forming a task force to draw up strategies to work on the priority areas and findings.

This process can be summarised as follows:



The examples below are issues that could be audited. Most of these issues are in fact ESC topics. Therefore, conducting this kind of audit is key in increasing the learners' understanding of sustainable consumption issues as they relate to lifestyles.



Once these issues are audited, outcomes or targets can be set as to how each issue can be managed more efficiently and sustainably (more environmentally and socially friendly and economically viable). To achieve these outcomes, some actions are developed. These are divided into short- medium-, and long-term actions and on-going behaviour changes.

Table 3: Developing actions to tackle issues raised in the environmental audit

Type of action	Duration of action
Short-term actions	Those which can be implemented within a couple of months.
Medium–term actions	Those that will take about a year.
Long–term actions	Those that take over a year.
On–going actions	Daily activities that require conscious effort to change, such as switching off a light when leaving a room.

For example, if the environmental audit reveals that the school is experiencing food waste, the environmental club may chose to tackle this by encouraging the school community to handle food more efficiently. They may choose to raise awareness on food consumption and encourage the school community to improve their eating habits.

Here is the rationale for addressing food consumption issues: Our food and drink choices impact the environment and are a major contributor to climate change. Some foods travel long distances from where it is grown to where it is consumed; this is called food miles – a popular way of measuring our food's footprint. We consume approximately three meals daily. Each meal uses resources that were ultimately provided by the soil and the plants. If we consider the impact that each meal has on the earth in terms of land use, habitat destruction, fossil fuel consumption and water usage, it is surprising to think how much impact each meal has on the earth. Based on the principles of food chains and energy transfer from one feeding level to the next, we can easily observe that eating lower on the food chain (plants and plant products) impacts the earth much less than choosing to eat high on the food chain (meat). By eating low on the food chain and generating less food waste, we can reduce the impact of our food consumption on the environment.

The table below presents issues related to food consumption, proposed outcomes and targets as well as actions. Once students and educators identify their targets, they can develop creative activities that encourage the target audience to take action by consuming food more sustainably.

Table 4: Tackling food consumption by setting targets and actions

	Description of issues, targets and actions
Issues surrounding food consumption	• Food packaging on items at supermarkets. • Use of plastic to pack and transport groceries. • Energy use required for processed foods. • Organically and/or locally grown food: availabilit y and costs. • Increased energy use for meat production. • Tackling food waste: the need to reduce food waste and loss.
Outcomes and targets	• Increased awareness on the need to reduce food waste to a minimum and taking the necessary steps to achieve zero food waste. • Reducing our food-print through meal planning, freezing foods, eating smaller portions and leftovers, composting and donating food. • Integrating environmental concerns into our food choices, e.g. understanding how food miles work and how they have an impact on the environment such as climate change through food transportation. • Buying more locally produced food, e.g. at the local market. • Reducing the use of pre-packaged items and eliminating the use of plastic grocery bags. • Reducing meat consumption, e.g. adopting Meat free Monday — an • Reducing the use of pre-packaged items and eliminating the use of • plastic grocery bags. • Reducing meat consumption, e.g. adopting Meat free Monday - an international campaign that encourages people to not eat meat on Mondays to improve their health and the health of the planet. • Reducing the use of processed foods in restaurants and at home.
Actions: short-term	• Initiate the establishment of a permaculture garden, which allows you to turn your food waste into valuable compost. • Establish a compost heap, which helps reduce the amount of material that ends up in landfills. • Reduce food waste at home by meal planning and smart shopping. • If hot meals are provided at school, set up a workshop with the cooking staff to discuss the need to meal plan and shop better.
Actions: medium-term	• Depending on the size of the permaculture garden, allow goats, pigs and chicken into the permaculture garden to eat food waste. • Reach out to local food vendors and restaurants to evaluate their menus, raise awareness about food waste and offer sustainable solutions. • Incorporate meal audits and permaculture into environmental education programmes.
Actions: long-term	• Integrate food issues including consumption, waste and safety into environmental education programmes highlighting the links between food and the environment.

On-going behavioural change	Encourage the school community to: • Buy organically grown and locally grown food whenever possible. • Feed your garden – because on average over 70% of household waste is landfilled each year. Composting reduces the amount of rubbish and creates a nutritious fertilizer that makes your garden more beautiful. • Reduce meat consumption and try to eat lower on the food chain. • Think before you shop: more than a third of us go shopping without a list. By shopping with meals in mind, you end up throwing less food away. • Eat seasonally, which reduces the distance that food travels by 40%. • Learn the different techniques of preserving food e.g. canning, salting, drying, freezing, sugaring and pickling.

As a follow up to the environmental audit, the environmental club members may choose to undertake additional audits, which can further delve into ESC issues. For example, environmental clubs can audit food consumption, where learners can measure the amount of food they consume in twenty-four hours by asking themselves these questions:

- Where is their food from?
- How far has it travelled to get to them?
- How was it packaged and presented?
- How much was wasted?

These questions can improve their understanding of how food is closely linked to environmental challenges. Each learner should be provided with a timesheet that lists all possible food consumption activities. The results are totalled after a 24-hour period and the problem areas are discussed in their clubs. Such activities can help develop strategies for reducing wasteful food practices and seeking sustainable solutions, using the process outlined in Table 4.

After completing the food audit, learners can participate in discussions and actions that can contribute to solving the problems that have been identified in the audit. Learners could develop meal plans for their families that incorporate sustainable food practices.

Conducting action research

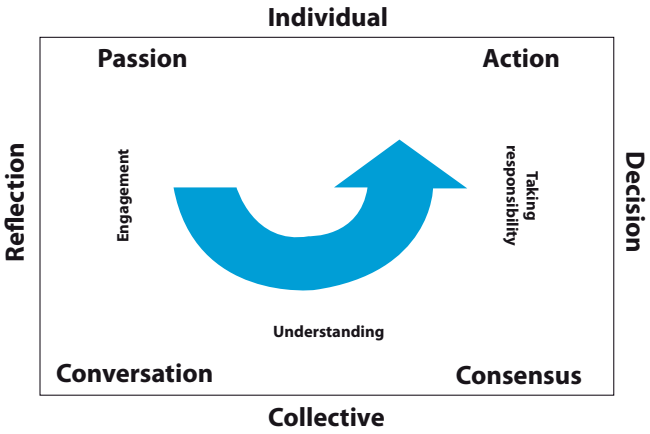
Environmental clubs may also undertake additional research that integrates ESC issues. For example, action research is a continuous evaluation process (Praxis), where learners engage in problem solving and continuously reflect on their work and evaluate its effectiveness (Wals,1994). Educators should engage learners in action research by:

- Defining the problem: e.g. there is too much food loss and waste.
- Understanding the root causes: e.g. lack of meal planning and excessive food shopping cause families to waste food.
- Setting objectives: tackling food waste involves meal planning, food preservation, buying what you need and in small quantities and buying local produce rather packaged products to limit emissions, among others.
- Working in groups: joint decision-making, avoiding pitfalls, coalition building.
- Deeply analysing the problem.
- Designing an action plan: e.g. developing tips that tackle food waste and how to consume food more sustainably.

This diagram explains how increased individual reflection and understanding can stimulate decision taking and action, which are important elements in action research.

4.7 Identifying key actors in ESC implementation in formal education

The implementation of ESC in the formal education



sector involves key actors that can be grouped in the following manner: (i) the Government of the United Republic of Tanzania, (ii) formal educational institutions and (iii) civil society organizations. The Tanzanian Government can implement ESC through Vice Presidents' Office (VPO), which is the national custodian of environmental matters in the country, and the National Environment Management Council (NEMC), which is the technical arm of the government on issues related to the environment. This process should be done collaboratively with the Ministry of Education and Vocation Training (MoEVT) as the main pioneers and crafters of ESC nationally in the education process.

MoEVT is also partly implementing ESC topics and issues through teacher training colleges under their direct supervision and inspectorate directorate who are mainly responsible for inspecting implementation of ESC in training institutions. There is the Prime Minister's Office, Regional Administration and Local Government who are the implementers and currently are administering these training institutions.

The implementation of ESC in formal education process, extra-curricula and co-curricula teaching activities, involving school clubs and the neighbouring communities, involves a multitude of actors as noted below.

i. The Government of the United Republic of Tanzania

Central government agencies are best positioned to implement ESC in its basic functioning systems and teacher training institutions. Currently, there are various programmes and campaigns like Kilimo Kwanza, tree planting, cleanness and waste awareness programme that implement some activities on the environment, which are linked to policy, legislative authorities and programmes. These programmes are national in focus or extend across several regions. These activities are implemented by agencies like NEMC and ministries such as the Ministry of Agriculture and Food Security, as well as the Dar-es-Salaam City Council and the Tanzania Food and Drugs Authority (TFDA) who are generally responsible for approving, planning or implementing infrastructural projects, resource management and control and undertaking social services such as health education, social and community development or economic planning.

More specifically, MoEVT can engage curriculum experts and developers to explore the best means of integrating ESC into existing subjects and activities in formal education, as well as in teacher training activities. This calls for developing examples that are specific to Tanzania that address national contexts, priorities and needs as related to sustainable consumption.

The central government through various policy documents like the National Environmental Policy 1997, the Education and Training Policy 1995 and international agreements, has expressed a commitment to quality education, a healthy environment and sustainable human development. These documents provide some guidance, which the Government can use to put some of those commitments into action through supporting initiatives in both the formal education system and in the area of non-formal learning that are geared towards environmental awareness, sustainable consumption and education. The Government is therefore urged to integrate ESC in its national policies and mainstream ESC in formal education through curriculum review and changes, and through the organization of ESC training educational zones. Effective action for ESC requires an interactive process, involving all levels of government, rather than a unidirectional approach – from the top down.

Local government authorities have major responsibilities regarding environmental management and sustainable community development and can therefore devise innovative means – including education – to achieve environmental goals.

ii. Formal educational institutions

Both teacher training institutions and schools at the pre-primary, primary, secondary and tertiary levels have major roles to play in providing teachers and students with the knowledge, skills, attitudes and action-orientation required to prepare citizens to

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address the challenges of unsustainable consumption and sustainable lifestyles. This responsibility extends to those agencies responsible for curriculum development and assessment such as the Tanzania Institute of Education (TIE), the National Accreditation Council of Tanzania (NACTE) and the National Examination Council of Tanzania (NECTA). These key players must be involved in the development and mainstreaming of ESC in formal education. These institutions are also key in facilitating ESC in teacher training.

Education experts and academicians play a lead role in research, policy setting, training and resource development. Engaging them provides a good opportunity for enhancing and adapting ESC for Tanzania in academics, general education and social life. The formal education sector provides the most direct route of education for a major portion of Tanzanian youth. Through ESC implementation, teachers can also benefit from significant professional development opportunities, including more holistic, relevant, learner-centred methodologies enhanced and researched by academic institutions and professional development. Students, exposed to appropriate knowledge, skills and attitudes will be well prepared to create a sustainable future.

iii. Civil society organizations

Civil society organizations (CSOs) are instrumental in ESC implementation in the formal education sector as well as in non-formal and information education. For example, CSOs can undertake comprehensive research that can strengthen the foundation for what is taught in ESC by providing insights into consumption trends and impacts. CSOs can also gather ideas on pedagogical approaches that work best in Tanzania for teaching ESC, and the kinds of issues and topics that need to be emphasized. These findings can then inform how ESC can be implemented in Tanzania. Since CSOs aim at advancing their common interests through collective action, they are best positioned to strengthen connections. For example, CSOs can cooperate with educators to improve the quality of ESC by providing up-to-date bases of expertise upon which teachers and students can draw (UNEP, 2010c).

5.0 IMPLEMENTING ESC IN NON-FORMAL AND INFORMAL EDUCATION

5.1 The role of non-formal and informal education in ESC

In Tanzania, non-formal and informal education is recognized as arenas where ESC can be taught. Achieving widespread behavioural changes is possible by making ESC compulsory for students in formal education and accessible for students in informal education. It is important to recognize that ESC is an activity for teachers and students as well as informal lifelong learning that take place in families, the local communities as well as informal and non-formal educational settings.

ESC that is implemented in non-formal and informal settings must ensure that:

- It bridges gaps between generations by identifying common values, setting goals together and promoting interaction and cooperation at the community level;
- It encourages listening to, learning from and caring for knowledge and ways of being that are different from our own. This allows students to find viable solutions built on both innovation and traditional and indigenous knowledge, while recognizing alternative lifestyles; and

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- It provides opportunities for stimulating constructive social activism. Through this social involvement, they can become informed consumer citizens who are equipped with the necessary knowledge and skills to become instrumental in the globalization of civil society concerns.

These characteristics, which are outlined in UNEP's Here and Now! can also be applied in ESC implementation in formal education.

5.2 Identifying key actors in ESC implementation in non-formal and informal education

Some of the key actors that should be active in implementing ESC in non-formal and informal education are civil society organizations (CSOs), the private sector, the business sector, labour organizations, the donor community, consumer organizations and the media.

i. Civil society organizations (CSOs)

Many CSOs such as non-governmental organizations (NGOs) and community-based organizations (CBOs) operate at the community level and focus on a range of mandates such as promoting sustainable

community development or ecosystem management. Various CSOs operate as environmental NGOs and CBOs with environmental mandates and incorporate environmental activities into their programmes and activities. While CBOs are less inclined to focus on the environment, they tend to emphasize participatory and problem-solving skills consistent with ESC competencies. CBOs can do a good job in sensitizing the community on ESC and sustainable lifestyles since they operate at the community level where they experience the sentiments, feeling and perceptions of the community. Most NGOs and CBOs seek linkages with other similar groups and with public and private sector partners in order to strengthen their work, achieve collective lobbying or share experiences. This is particularly important because most of these organizations are challenged by human and financial resource constraints.

In Tanzania, the NGO and CBO communities have played crucial roles in raising the level of awareness on the state of human interaction with the environment and the need to move towards a sustainable future. Full engagement of this sector in implementing ESC is vital to future efforts, particularly in the areas of community mobilization, interaction with the formal education sector, and national advocacy geared towards promoting widespread behaviour change.

Faith based organizations are critical in ESC implementation. Although the Tanzanian Government does not collect data on religious identification, according to religious leaders in the country, the population is 50% Christian and 50% Muslim. Tanzania is home to numerous religious organizations, all of which must be registered with Ministry of Home Affairs on Tanzania Mainland and the chief government registrar in Zanzibar (United States Department of State, 2012). Religious organizations develop and conduct numerous social services activities, such as providing education. For example, the National Muslim Council of Tanzania (BAKWATA) is active in educational and empowerment programmes and the Christian Social Services Commission and the Tanzania Ecumenical Development Group aim to include government policy on education through lobbying (Leurs et al, 2011). Religious organizations are therefore well-positioned to integrate ESC into their work on education since sustainable consumption principles, including sufficiency, are rooted in the two major religions of Tanzania: Islam and Christianity.

If CSOs are actively engaged in ESC implementation, more Tanzanians can become aware of the challenges involving unsustainable consumption and in creating the workable solutions needed for sustainable consumption and lifestyles. Social groups and peer pressure is a major force for monitoring and enforcing compliance and in encouraging the change that is needed for sustainable consumption to be realized.

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ii. The private sector

The private sector has been known to support community-based initiatives in communities near to their operations or even through the media in relaying consumer-related information. Various opportunities exist to fully engage the private sector in implementing ESC at the community and workplace. The private sector can help set examples by emphasizing the applicability of ESC and the need to start changing our consumption habits and adopting sustainable lifestyles. Involving this sector confirms the fact that sustainable consumption concerns everyone and that we should all actively contribute to sustainable human development. The private sector can apply ESC in numerous ways such as by developing and/or supporting awareness-raising activities on sustainable consumption and lifestyles, including media campaigns, competitions and developing awareness materials and teaching tools on ESC, among others. The private sector may choose to undertake research that tackles consumption issues in Tanzania and its findings can be used in all education sectors as well as awareness-raising activities.

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iii. The business sector

The interaction of the economy on the environment is a major element in the degradation of the natural environment, survival of ecosystems and enhancement of social life. Business therefore has a responsibility to join in efforts to escalate knowledge on environmental and sustainable development issues as well as skills and create positive attitudes among the citizens who make up the workforce of business. Less unselfishly, business needs citizens with the requisite skills to hold their own in an increasingly environment-conscious. Businesses involved in tourism and other natural resource based operations have a direct vested interest in environmental protection and sustainable human development. Thus, businesses can work with government and other stakeholders to implement policies relating to environmental protection, including education. Businesses can also support or partner with programmes and projects within communities that they are attached to. Some organizations have already taken steps in this direction. There is also room for sector-specific initiatives, including standard setting and workforce education, which provide ideal avenues to integrate ESC into these activities.

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iv. Labour organizations

Environmental concerns are continually expressed at the workplace through health and safety. Wider considerations relate to the role and future of workers based on exploiting natural resources including the tourism sector, the possibility of new jobs based on emerging environmental and sustainable development considerations and consequent skills training opportunities. There is scope for labour and professional organizations to take a pro-active role in urging the preparation of workers for new job standards and expectations. Other professional associations have potential roles in helping to galvanize awareness, attitude change, skill augmentation and action in other relevant sectors.

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v. The donor community

At the international level, the vital importance of education and awareness on the environment and the promotion of sustainable development and sustainable consumption patterns are well established. The potential exists for significant support in Tanzania in developing and implementing ESC activities across various education sectors. What is needed in this context is support from the donor community that can lead to the incorporation of ESC in education (formal, informal and non-formal) sectors as well as the development of activities (educational, capacity-building, awareness-raising) that focus on fostering sustainable lifestyles.

vi. Consumer organizations

Tanzania is home to a number of consumer organizations, such as the Tanzania Consumer Advocacy Society (TCAS). These consumer organizations aim to ensure that all Tanzanians are well-informed consumers who are aware of their rights. Consumer organizations often develop programs and educational materials that cover a variety of ESC topics and issues such as financial literacy and sustainable consumption, while providing support to consumers so they are well-informed. Consumer organizations can work with educational institutions to develop courses that address roles of consumers in sustainable consumption, as well as stimulate discussion on sustainable consumption through the media, including social media.

vii. The media

Information and awareness-raising can encourage widespread behaviour change. In earlier years, there were broad campaigns to promote environment-friendly behaviours. However, it can be said that general awareness campaigns have not been effective in promoting more sustainable consumption behaviours or lifestyles.

The media is one of the most dominant influences on our lives. Because of technology, the media can influence people from childhood to adulthood. Children grow up being bombarded with images of physical appearance, violence, and shows about the lifestyles of others. This continues on for the rest of a person's life. When most people reach adulthood, they are aware of what is going on in the world around them, and they make their decisions based on those occurrences. Teenagers get exposed to shows that portray the lifestyles of individuals whom they eventually idolize. The media starts to negatively affect their lives once they start to want those kinds of lifestyles because of the way they are portrayed on television. The media is crucial in promoting sustainable consumption and lifestyles messages.

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6.0 MONITORING AND EVALUATION OF ESC

It is crucial to develop means of monitoring and evaluating the implementation of ESC and the various related initiatives once implemented in Tanzania both from the informal and formal education systems. Without adequate monitoring and evaluation (M&E), it will be impossible to know if ESC is making a difference and what that difference is nationally and locally. A key aspect of monitoring and evaluation is the identification of suitable and relevant indicators at local and national levels and for each initiative and programme. Monitoring must be done at various levels, including monitoring the learners themselves, training institutions like schools, examining bodies like National Examination Council of Tanzania (NECTA), National Accreditation Council of Technical Education (NACTE) and curriculum developers like Tanzania Institute of Education (TIE) and so forth.

In monitoring, the periodic oversight of ESC implementation (e.g. activities, projects or programmes) is conducted. This will establish if inputs (resources invested), processes (activities undertaken and their quality) and outputs (direct deliverables) are proceeding according to plan. It includes the regular collection and analysis of data to assist decision-making, ensure accountability and provide the basis for evaluations and learning.

The evaluation process will determine, as systematically and objectively as possible, the relevance, effectiveness, efficiency, merits (value–added), sustainability and/or impact of ESC intervention, project or programme. Activities are assessed periodically by both external parties and beneficiaries to put into perspective the contribution of activities and their relevance, performance, efficiency and possible impact as stated in the programme's objectives. Evaluation will most appropriately be conducted towards the end or mid-term of the specific intervention/ project.

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6.1 Developing a monitoring and evaluation scheme for ESC

ESC places emphasis on cooperation through the integration of ESC topics and issues into existing curricula, activities, programmes, networks and alliances among others. It is therefore crucial for each grouping to set up its own objectives, outcomes and indicators within the ESC implementation plan. M&E must take place at many levels, national, regional, local, institutional, etc. and should be an integral part of new initiatives and directions, which may stimulate widespread behavioural changes. Both qualitative and quantitative evaluation methods are necessary to track as well as longitudinal and community-wide studies.

In Tanzania, the teacher is responsible for choosing the ESC evaluation criteria and methods. The evaluation itself can be carried out in collaboration with students using self-evaluation, peer evaluation and other methods. In some schools, written individual exams are the traditional form of evaluation. Individual written examinations do not necessarily give feedback about the extent to which the student is actually able to function in society. Nor do they reflect the student's ability to apply the knowledge the student has gained.

If the final goal of ESC is to develop critical, aware, consumer citizens, alternatives to the usual exam might be more useful in evaluating ESC.

There are three different styles of measurement that can be employed in M&E for ESC:

- *Process:* What was done, where and how often? For example how many events were held? How many people attended? This is particularly helpful for evaluating ESC implemented in formal, non-formal and informal education.
- *Outcome:* How did the project or information obtained through teaching helped learners change their lifestyles? Did it change their awareness, attitudes or behaviour? This usually requires a survey before and after the information on ESC is shared.
- *Impact:* What impact has the information had on the overall sustainable consumption objective? What impact did the changes in lifestyle have on the environment?

It is important to ensure that the right M&E measures are chosen. There are different ways to evaluate ESC implementation depending on the objectives. Monitoring and evaluation of ESC implementation in informal and non-formal education can consist of:

- Website traffic (hits, unique visits) and online feedback.
- Attendees at events (and quality of the public exchange).
- Media coverage (e.g. through web searches or a press cuttings service).
- Public opinion surveys (e.g. for awareness levels).
- Showcasing, such as producing a (school) newspaper article on SC issues, making an exhibition or creating "professional" presentations: boards, video, tapes are ways of making concrete summaries that can be used for evaluation of the learning process.
- Research on products, production and services can be used for assessment.
- Demand for services from the public, media, business, civil society etc.).
- Examining the projects on sustainable lifestyles and consumption that have generated policy-relevant recommendations and influenced policy-making processes, and the amount and kind of research carried out on sustainable lifestyles and ESC.

Monitoring and evaluation of ESC implementation in formal education can consist of:

- Examining the number of courses/modules across all educational levels (from pre-primary to tertiary) as well as teacher training that include ESC content, as well as the provision and quality of teacher training and in-service learning for teachers on ESC.
- Observing changes in strategic priorities/objectives from key sectors (Ministries, consumer associations, etc.) and evolution of community (local and national) initiatives.
- Portfolio assessment as a means of evaluating the student's progress by selecting examples of their work throughout the learning process that indicate progress and content
- Group examinations are a positive tool for assessment. Because many ESC issues may be considered somewhat controversial, a group examination demands that students move from opinion to a higher level of thinking that enables understanding, analysis, and control of one's perception processes.
- The Internet is one form of assessment that can test students' abilities to carry out research via the Internet and to use it as a communication platform for consumer citizenship and adoption of sustainable lifestyles.
- Self-evaluation: This is the students' own evaluation, during the course, at the end of the course and after some time (maybe one month after the end of the course), which examines if the learning process had any impact on their way of life.
- Pass/fail status: In many cases, this assessment can be trickier than in *"traditional subjects"* – there are not so many final truths and everyone has a right to their own opinion. One can assess participation, open-mindedness, and understanding of the main problem areas. Classes can be on a pass/fail course, not graded at different levels.
- Since ESC is interdisciplinary, the inclusion of questions/tasks about ESC topics and issues in existing exams in other subjects can be a valuable form of evaluation.
- Examining the guidance provided to curriculum developers and teachers on ESC, sharing examples of modules, courses, themes and material (which also focus on processes and systems, topics such as accountability, social responsibility, stakeholder involvement, civic engagement etc.) that have been developed and integrated into national formal curricula.

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6.2 Self-monitoring and self-evaluation for ESC

Self-monitoring involves recognizing and recording the occurrence or non-occurrence of certain expected activity or outcome or even behaviour. The evaluator first uses self- observation to note the behaviour and then records the action on a checklist or recording form. Self-evaluation is the comparison of achievements with that of a self-or externally determined standard. This is determined through self-monitoring, but the student must also be able to compare the behaviour to some standard and then make some judgment about the quantity or quality of their performance (King-Sears & Carpenter, 1997). Self-evaluation should follow self-monitoring of behaviour and determine self-reinforcement. This makes self-evaluation a critical skill to enhance student self-involvement in goal setting and problem solving activities. This type of monitoring and evaluation could be done locally and focus mainly on levels of awareness and interest on ESC and SC; degrees of commitment to sustainability and the vision of the youth about the future and their potential role as leaders in the development of more responsible consumption patterns.

6.3 Existing institutional frameworks that can be applied to ESC monitoring and evaluation

Tanzania's National Education Act No. 25 of 1978 Sections 40-43 and the Education Act No. 10 of 1995 Sections 3-32 establish the legal basis for the inspection of schools in Tanzania. The school Inspectorate is empowered to monitor delivery, adherence to stipulated curriculum, ensuring efficiency and quality in education. The school inspection is the tool for monitoring and evaluating the implementation of education by assessing the education achievements, promoting school improvement and advising all stakeholders in education. The Inspectorate provides feedback to MoEVT, education agencies, school owners, managers and administrators at all levels on the status of education in the country. The decentralized and liberalized education as the policy directs, needs efficient and effective monitoring mechanisms to document success.

In regards to technical and higher education, in 1995, the Government of Tanzania amended the Education Act of 1978 and established the Higher Education Accreditation Council (HEAC) as an organ to regulate the establishment of Technical and Higher Education institutions and studies offered in these sub-sectors. Technical education is regulated by NACTE while vocational education and training is regulated by the VETA. Programmes offered by Folk Development Colleges are regulated by the Ministry of Community Development, Women Affairs and Children through

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a secretariat based in the Community Development Department. The School Inspection Department must work very closely with these other organs in order to effectively perform the ESC monitoring and evaluation. The information gathered through this process can help to improve and broaden the dissemination of ESC to a wider audience.

The quality control bodies such as NECTA, TIE, VETA, School inspectorate and the use of a harmonized qualifications framework can further enhance the effectiveness of monitoring and evaluation across sector and vertical movements of graduates could be monitored on the side of vocational education and training. School inspectorate can also be used as an external evaluator based on their roles and powers to provide mechanisms for monitoring and

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evaluation of ESC, which could be anchored in their daily activities after training and acceptance. School inspection is a vital means of monitoring the delivery of education, adherence to the stipulated curriculum and set standards, and ensuring efficiency and quality education will be enhanced. The efficiency and effectiveness of delivery of education under the decentralized and liberalized education system requires closer monitoring of schools and horizontal feedback mechanisms between the school inspectors and education agencies, managers and administrators at zonal, regional and district levels. This could be encouraged through reports and experience sharing by visits to improve the ESC implementation process.

Monitoring and evaluation can be further enhanced through the use of the Complimentary Basic Education in Tanzania (COBET) whereby successful programmes can be determined on how well they have managed to have an impact and demand driven training based on specified competence levels.

The current monitoring systems tend to focus on accounting for inputs and activities rather than on evaluating the effectiveness of outputs and outcomes. These systems should be broadened to focus on ESC outcomes.

To implement this monitoring approach effectively, the following changes are required:

- System performance indicators should be assessed rather than collecting information on activities that have taken place;
- Monitoring frameworks should take account of outcomes related to long-term changes in behaviour relating the outputs to short and medium term expectations; and
- Ensuring that the results of monitoring activities are transparent and available in a digestible format that encourages feedback from stakeholders.

7.0 TESTING OF THE ESC GUIDELINES, LESSONS LEARNED AND PROPOSED WAY FORWARD

7.1 Testing of the ESC guidelines: trainings in Tanzania

In mid to end of 2013, ESC trainings were conducted in two education zones, the central zone and southern highlands of Tanzania. This was in an effort to test the application of the guidelines and gather feedback on the same. This was preceded by focused discussions in a small ESC task force team to structure the way forward for the ESC trainings.

The pilot training workshops aimed at:

i. Giving the participants an overview of ESC and its rationale;
ii. Orienting the participants to the ESC guidelines;
iii. Supporting and orienting participants on the integration of ESC in teaching and learning processes (e.g. in schemes of work, lesson plans) and in teaching methods and strategies; and
iv. Introducing participants to ESC implementation through extra-curricula and co-curricula activities and community involvement and school clubs.

7.2 Experience sharing: Challenges and lessons learned from the ESC trainings

An experience-sharing meeting was held in April 2014, bringing together various players involved in the testing of the ESC guidelines, such as NEMC, MoEVT, UNEP as well as the trainers involved in conducting the ESC trainings. This meeting provided a platform to collect feedback on the lessons learned, actions undertaken since the trainings and discussions around the various components of the guidelines in order to fine-tune and improve this publication prior to translation into Swahili, printing and dissemination.

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This meeting further facilitated the following:

- Orienting participants from other zones on innovation and best practices of ESC;
- Showcasing examples of innovative practices implemented in the trained zones;
- Generating new ideas/solutions on some core issues and challenges facing ESC;
- Linking participants with networks that can assist in progressing ideas after the meeting; and
- Promoting reflections on the strengths and weaknesses of our organizational cultures.

The modalities of collecting experiences and were organized in two ways:

1. Through presentations from the zones that participated in ESC trainings;
2. Through designed guiding questions, which

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were discussed in groups having representations from the trained zones. Specific questions were addressed in the course of the experience- sharing workshop based on the two trained zones.

A. Challenges

Based on the testing of the ESC guidelines, the experience-sharing meeting identified the following key challenges facing ESC implementation:

i. Large number of learners and poor learning environments

Tanzanian schools have high number of students in the classrooms, with un-conducive learning environments such as lack of chairs. These challenges limit the general smooth transferring of knowledge in a classroom setting, including ESC. To address this challenge, there is a need to also deploy other strategies such as imparting the ESC knowledge through established environmental clubs, wherever they exist. This will enhance what is learned in the classroom.

ii. Lack of cooperation from other untrained teachers

Poor understanding of ESC from the untrained teachers from participating schools and the limited ability to share the knowledge from the trained sect of teachers contributed to a lack of cooperation in pioneering ESC and actual teaching in schools. To address this challenge, there is a strong need to conduct massive training of teachers on ESC as this will create the much- needed ownership and awareness that will create the desired impact of implementing ESC.

iii. Lack of involvement of communities around schools

The involvement of the communities around schools related to ESC issues and initiatives is still low. This could be due to low awareness on ESC and sustainable consumption issues and the failure to correlate and contextualize these issues with daily activities. Therefore, more strategies and approaches need to be deployed to enhance awareness and acceptability in communities around schools. Innovative practices and motivation to attract community members to attend school meetings and social gathering so that ESC sensitization can be conducted is very low. This has contributed to failures of some community members to attend ESC meetings organized by schools, which hinder application and replication of success stories in their respective areas.

B. Lessons learned

Based on the testing of the ESC guidelines, the experience-sharing meeting identified the following key lessons learned from the ESC trainings:

i. Use of other strategies to disseminate and implement ESC

Participants revealed that teachers managed to employ other mechanisms apart from classroom teaching to include the use of school clubs, mass media, advertising, billboards, flyers, brochures and signboards to disseminate some ESC messages and information. They also reported that they used influential people to disseminate some environmental information and messages. This option has shown good results and it is proposed that this be applied extensively in ESC implementation.

ii. ESC has led to proper utilization of resources

ESC has contributed to proper utilization of institutional funds in aspects of purchasing things needed for teachers and learners and rehabilitating school water pipes to stop water leakages and power infrastructures to avoid electric current wastages. This has lowered water and electricity bills, which if replicated to other institutions, will enhance efficient use of resources. In a way, this has assisted in realizing ESC aspects and complemented some inadequacies of some materials for enhancing ESC like lack of water for extra- curricular activities.

iii. Using projects and activities to enhance ESC in schools and teachers' colleges

Participants also reported that they have managed to establish demonstration plots and activities like speeches during morning assembly and games where ESC information can be shared. This is a good strategy to be replicated for ESC knowledge to be well- spread and disseminated amongst students and teachers. If well established, it could spread ESC ideas much faster among teachers, learners and other members of schools and teachers' college communities.

iv. Assessment of ESC

Participants raised the crucial need to devise means of ensuring adequate assessment of ESC knowledge dissemination and activities, particularly given the fact that there is a tendency of ignoring what is not assessed by both teachers and students. Therefore if examiners are not oriented on ESC activities and integration in teaching and learning processes, the

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efforts, which are in place, might not bear much expected impact among the learners and the community. Hence, participants reinforced the need to ensure the inclusion and close collaborations with institutions like NECTA, and school inspectorate units of the MoEVT, when assessing ESC implementation.

v. Traditional values and taboos can enhance ESC

Some traditional values and taboos could enhance ESC and therefore, they can be used to raise awareness and acceptability of the knowledge in the local context. For ESC knowledge dissemination and application to be effective, understanding the local contexts in terms of sustainable consumption and resource management is very important. Identification and documentation of best sustainable consumption practices in the local contexts can facilitate the understanding of ESC.

7.3 Proposed way forward from the experience sharing meeting on the pilot ESC trainings

Based on the ESC trainings and feedback gathered at the experience-sharing workshop, the proposed way forward on ESC implementation included the following:

1. Efforts should be made to orient all teachers and teachers' college tutors in the zones, which have not been trained on ESC. The trained participants indicated that ESC is important education that is needed for improving the quality life for all and encouraging the sustainable use of our meagre resources.
2. The ESC guidelines should be developed, translated and made available and accessible by all teachers in schools and colleges to enable them to make references and teach effectively.
3. Resources should be allocated for producing documentaries and narratives on what is successfully conducted in various parts of the country as far as the ESC activities and initiatives are concerned and to replicate its efforts and gather information on how it complements other related initiatives and programs in the country. This can start with the actual follow up and monitoring of what has been shared from the piloted educational zones by producing a documentary of the follow up actions after the trainings and the impacts it is starting to create.
4. More creative awareness-raising ideas need to be thought through by the trained institutions and schools. Important celebrated holidays in the year that are celebrated while learners are in school can be used to disseminate ESC, such as World Environment Day or Earth Day. This goes further by making use of other important events in the community and demonstrating some art or performances to raise awareness on various issues in the community, while incorporating ESC.
5. There should be a formal policy circular from the Commissioner of Education (Chief Education Officer) to authorize the use of these ESC guidelines in actual teaching learning process. This will, in a way, force teachers to start incorporating ESC into their teaching and thereby improving their pedagogical skills and masterly of ESC content, which will eventually improve school performance.

7.4. Proposed way forward by the ESC task force members on specific structures and avenues for ESC dissemination

As noted earlier, it was vital to create a small task force on ESC to help guide the development of these national guidelines on ESC. The ESC task force comprised of members from the following institutions:

- The Ministry of Education and Vocational Training (MoEVT) (including the department of teacher training and environment unit)
- The National Environment Management Council (NEMC)
- The Teachers Educators Programme (TEP) coordinator
- Representatives from the teachers' college

Based on their diverse and rich experience in education system of Tanzania, the task force

proposed the structure and way forward for ESC trainings in formal education.

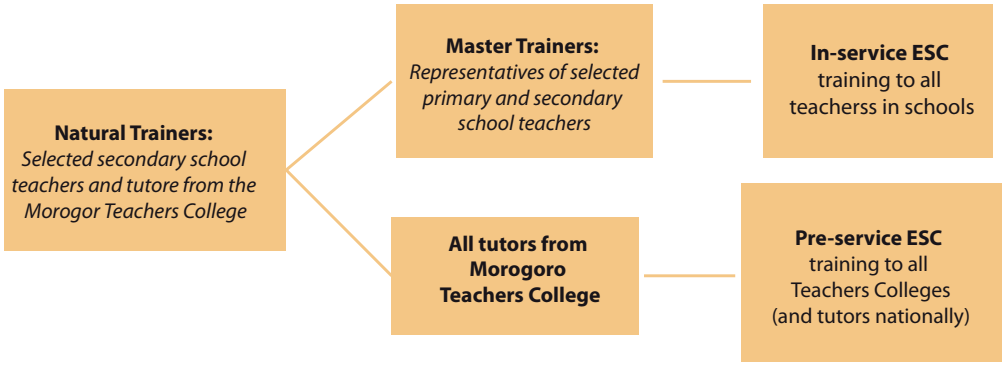
7.4.1. Dissemination plan

The task force suggested that the best way to introduce ESC in formal education is through the pre-service and in-service teachers. Pre-service teachers will learn about ESC from the teachers' college as part of crosscutting issues that they are taught. In-service teachers will get the ESC knowledge and skills through on-the-job-training.

The ESC task force proposed that ESC trainings start with few, selected secondary school teachers (one from each region = about 26 in total) and TEP Morogoro tutors. This initial group will be trained on ESC as National Trainers (NTs). After graduation, National Trainers will train Master Trainers, who will be representatives of selected primary and secondary school teachers and all tutors from Morogoro Teachers Colleges (MTC) who are expected to be the central training zone as currently, it is the sole institution, which offers in-service training courses.

Tutors from the Morogoro Teachers College will train all tutors in all teacher colleges as scheduled. Pilot schools will again be used to train new pilot schools. The circle will continue until all in-service teachers are competent in facilitating the ESC knowledge and skills as the figures below suggests.

Training Structure in Basic Formal Education System



Dissemination plan for primary and secondary schools

The ESC task force proposed that this is implemented through 26 pilot secondary and primary schools, with one secondary and primary school from each region. Each pilot secondary school and primary school will be mentoring fellow teachers from three other schools (hence additional three primary and three secondary school teacher will be trained by one trained teacher). The next phases follow the same structure until all secondary and primary schools are covered.

7.4.2. Roles and responsibilities

The aim is to develop awareness to key implementers (Heads of primary and secondary schools; District

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Education Officers (DEOs), Town Education Officers (TEO) and Regional Education Officers (REO) so that they understand their roles and responsibilities (funding, organizing, training, plan and other logistical matters) for smooth implementation of ESC. Below is an overview of the roles and responsibilities of the key players.

National trainers (NTs): Their role will be to train the master trainers (MTs). These trainees will be incorporated in monitoring and evaluation of ESC.

Master trainers (MTs): This will involve six education zones out of the existing 11 zones. The selection of zones will be based on the Teachers Educators Program zones, with a balance of both on rural and urban areas. Also, environmental stress should be considered as it influences consumption behaviour. The selected zones are Central Zone covering Singida and Dodoma regions; Southern Highlands covering Iringa and Ruvuma regions; Southern zone covering Lindi and Mtwara regions; Northern zone covering Tanga, Moshi and Arusha regions; Western Zone covering Tabora, Kigoma and Shinyanga; Lake zone including Kagera, Mara and Mwanza regions.

The ESC trained participants will further be identified based on their potential role and positions to facilitate the dissemination of ESC. Selection of district and schools from within the covered regions will be based on their proactive role on environment related issues including the availability of environmental clubs as well as those who pioneered the ESD programs.

Using this structure, trainers will disseminate knowledge and skills gained in the programme to all teachers and tutors in the country. The trained staff will be tasked to integrate ESC issues in the pre-service and in-service teacher training programmes so that all teachers graduate with the required knowledge and skills on ESC. This training is fundamental, as it will equip teachers with the ability and awareness to integrate ESC into their teaching across various subjects as well as in extra-curricular activities.

7.5. Strengthening ESC implementation through the global 10-Year Framework of Programmes (10YFP) on SCP

Developing these ESC guidelines for Tanzania has shed some light into the current situation of ESC development and implementation globally. Although we have seen increasing international recognition of SCP, the implementation and mainstreaming of ESC in formal education curricula and informal education remains a challenge for many countries around the world, including in Africa, because ESC is generally not yet considered a priority for both developing and developed countries alike. There are numerous networks, initiatives and tools on ESC and related issues; however, this has not succeeded in having a significant and efficient impact on educational policies and practices, in Tanzania and beyond. The development and implementation of this pilot project on ESC is aimed at contributing to efforts that can open the setting of an experience-based model for the institutional strengthening of ESC through policy-making and implementation at a national level.

At the United Nations Conference on Sustainable Development (UNCSD) Rio+20 Conference in June 2012, Heads of States adopted the 10-Year Framework of Programmes (10YFP) on Sustainable Consumption and Production – a global policy and action framework to enhance international cooperation on SCP. The 10YFP programmes – at the heart of the 10YFP - will contribute to meeting the goals and principles of the 10YFP, while responding to national and regional needs, priorities and circumstances and encouraging the participation of all relevant stakeholders. The 10YFP identified an initial and non-exhaustive list of programmes, which builds on the experience gained through the Marrakech Process as well as areas that were identified in regional SCP roundtables, strategies and action plans from around the world. One of the initial 10YFP programmes is on sustainable lifestyles and education, which aims to provide enabling frameworks for sustainable lifestyles, stimulate the emergence of new initiatives and scale up and coordinate existing activities, projects and programmes at the local, national, sub-regional, regional and international levels aimed at both mainstreaming and promoting sustainable lifestyles and consumption patterns through cooperation, research, innovation and education.

It is hoped that the profile of ESC will be raised through the 10YFP, in particular through the 10YFP programme on sustainable lifestyles and education and its activities. Implementing and mainstreaming ESC in formal and non-formal/informal education channels and networks, including the development of teaching/learning approaches and tools, as well as teacher training on ESC globally and regionally, can help stimulate further development and implementation of ESC in Tanzania. Likewise, Tanzania's experiences in ESC, through this project and beyond, is also crucial in promoting ESC regionally and globally by encouraging the replication of this pilot project and the development of these guidelines and engaging more countries in the integration of ESC into education systems, among others.

In addition, 10YFP National Focal Points (NFPs) can help further this work on ESC given their crucial role in supporting the vision, objectives and goals of the 10YFP, as well as exchanging and disseminating relevant information on SCP plans, programmes, activities and events. NFPs are also instrumental in developing and implementing national SCP action plans/programmes. It is therefore vital for Tanzania's 10YFP NFP(s) to be actively engaged in the development, mainstreaming and implementation of ESC nationally, which can contribute to raising the profile of ESC regionally and internationally. Tanzania is also in a unique position in that one of the members representing Africa on the 10-YFP Board is from Tanzania.

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ANNEXES

Annex 1*: Identifying areas where ESC themes and topics can be integrated within ESD in Tanzania's education system

Environment Pillar			
ESC Thematic focus	**Sample ESC topics**	**Possible area of practice as examples**	**Examples of desired learning outcomes**
Consumption and the environment and resources	Energy	• Urban forests and reforestation of watershed for power generation and scenery beatification.	• Switching off lights and electrical appliances when not in use; • Using renewable energy sources such as solar energy, and buying energy-efficient electronics and appliances.
	Waste management	• Environmental friendliness in all sectors in the community; • Conservation of the remaining pristine physical environment	• Reusing packaging materials, such as boxes and plastic bags; • Recycling, reusing, repairing products; • Proper disposal of waste mainly solid and liquid waste; • Sorting waste and proper disposal of solid waste.
	Conservation of natural resources	• Wildlife (plant and animal) and habitat protection; • Conservation of biological diversity by responsible management of the environment; • Addressing natural habitat changes to help minimize biodiversity loss or migration; • Improving the quality of water, air and land based on acceptable levels.	• Using water conservation practices such as turning off taps when brushing or bathing, rainwater harvesting practices etc.; • Consumption patterns, which are sensitive to biodiversity e.g. not consuming endemic and or endangered species; • Interrelatedness of systems and processes and efforts that encourage sustainable practices.
	Housing	• Using efficient and renewable con- struction materials, appliances etc.	• Using locally available materials in construction of housing and buildings; • Valuing traditional, durable and environmentally friendly local products and using traditional knowledge wherever possible.
	Climate, soil and water protection	• Environmental friendly actions in all sectors from production, consumption and management of waste or storage that can minimize impacts of climate change; • Development of clean technologies; • Soil and water conservation practices; • Improving transportation systems.	• Reducing pollution and improving waste management; • Implementing sustainable practices in agriculture and relevant industries food production and consumption; • Using efficient and low cost means of transport like public transport, car sharing or car-pooling and cycling instead of individual cars.
	Product lifecycles	• Product lifecycle and traceability.	• Determining lifespan of products and understanding the product lifecycle approach and how impacts of consumption stem from every stage in a product's lifecycle. • Consuming sustainable goods and services, with minimal environmental impacts; • Reusing, repairing and recycling products and their packaging.

Economic Pillar			
ESC Thematic focus	**Sample ESC topics**	**Possible area of practice as examples**	**Examples of desired learning outcomes**
Consumption and the environment	Tourism	• Sustainable tourism and eco–tourism practices.	• Enhancing and establishing community conservation groups and associations that focus on sustainability; • Strengthening and establishing animal refuges centres; • Establishing community tourist information centres that promote sustainable tourism practices and routes; • Promoting the aims of sustainable tourism e.g. economic viability, employment quality, resource efficiency, environmental purity, biological diversity, local prosperity etc.
	Transportation	• Sustainable transport with reduced pollution and waste management.	• Making better and environmentally friendly transport choices, which can be cheaper than using individualized cars, such as car-pooling, car sharing, public transportation, cycling etc. • Having toilets along major roads; • Collecting waste within the transporting vehicles/trains; • Educating individuals about the effects of improper waste disposal.
	Communication	• Communicating sustainability as a force of change.	• Communicating (e.g. digital communication through computers, mobile phones etc.) the value of sustainable lifestyles and responsible consumption choices; • Engaging social networks, media and the entertainment industry to promote sustainable practices across industries; • Communicating with decision-makers, governments, private sector etc. on the need for sustainable practices.
Economics	• Sustainable trade • Sustainable production • Sustainable consumption • Serving loans • Social responsibility • Economic models, production and practice • Multinational companies • Integration of environmental issues in planning • Corporate social responsi- bilities, urban and local de- velopment	• Economic issues of sustainability to be emphasized; • Urban forests and reforestation of water-sheds; • Wildlife and plant habitat protection; • Production and trade development; • Management of marine and coastal environment; • Environmental friendly practices in all sectors like transport, construction, education and health	• Promoting consumption practices that reflect economic models and sustainable lifestyles • Understanding how international and local trade systems and trade production influencing consumption patterns; • The impact of multinational companies in the consumption habits and roles; • The role of investment in ensuring sustainability and sustainable consumption; • Responsible consumption that reflects savings for future use, e.g. community-based saving and credit schemes, and other financial literacy programs for learners; • Investments that reflects the need for sustainable consumption; • International and local trade systems and production influencing consumption patterns and habits; • Growth of e-commerce and financial services and instru- ments that promote sustainability and efficiency, e.g. mobile money transfer (Tigo Pesa, M-Pesa).
Change manage- ment	• Active citizenship • Stakeholder involvement • Community service • Advertising and persuasion • Labelling • Future perspectives • Creativity and innovation	• Positive change towards sustainable consumption; • Engagement of producers and consumers in promoting sustainable consumption among consumers in the community; • Education and awareness programmes, active campaigns to sensitize people on sustainable consumption; • Media involvement in promoting sustainable consumption through programmes and adverts; • Effectiveness of the community in requesting for details of the products before purchasing and consumption practices.	• Consumer rights and responsibilities highlighting active citizenship (e.g. laws and norms, transparency/accountability, conflict resolution); • Education and awareness programmes on sustainable consumption; • Examples of how producers and consumers promote sustainable consumption among consumers; • Examples of media programmes promoting sustainable consumption through adverts; • Examples of communities requesting details of the prod- ucts before purchasing and consuming; • Scenarios of future sustainable lifestyles and the role of social innovation.

Social Pillar			
ESC Thematic focus	**Sample ESC topics**	**Possible area of practice as examples**	**Examples of desired learning outcomes**
Life quality	• Values, needs, desires • Human rights, ethical codes and spiritual principles • Sustainable consumption • Decision-making	• Development of human capital and skills • Community cohesion • Social equality • Health and quality of life • Demography • Equal opportunities • Meeting basic needs • Management of migration and cultural diversity	• Values, needs and desires that are guided by reasonable and responsible consumption; • Consumption habits that are sensitive to human rights, ethical codes and spiritual principles e.g. restriction of using certain species of plants or animals; • Understanding sufficiency and moderation, principles of doing more with less etc.; • Consumption habits that consider others needs and future supplies; • Embracing alternative and sustainable lifestyles to improve life quality; • Adopting behaviours and attitudes that are attuned to sus- tainable development and consumption.
Lifestyles	• History of social and eco- nomic development • History of consumption • Present social conditions • Present consumption patterns • Symbolic roles of consumption • Roles of a family in consumption • Alternative lifestyles	• Changes of lifestyles and social status; • Impact of globalization on social and economic lives of societies and lifestyles; • Impact of consumption habits on society; • Impact of media on consumption habits; • The social economic status of the family; • Sustainable consumption habits associated with consumption of limited choices; • Assessment of consumption in the family; • Alternative family lifestyles towards con- sumption.	• Examples of societies that influence consumption patterns, • highlighting the power of consumers; • Examples of lifestyles that promote sustainable consumption (past and present) e.g. consumption of fresh and organic foods in the past as compared to the present; • The influence of globalization on the social and economic lives of societies and how this affects lifestyles choices; • Consumption habits such as preference of processed and pre-packaged foods, desire to possess luxurious properties such as cars and numerous home appliances; • The impact of media and the entertainment industry on the consumption habits of individuals, particularly youth; • The socio-economic status of the family, the rich tend to consume more unsustainably than the poor and how this can be changed; • The sustainable consumption habits associated with consumption of limited choices e.g. vegetarians.
Consumer rights and responsibili- ties	• Laws and norms • Consumer protection policies • Transparency/ accountability • Complaints, redress, re- placement, reimbursement	• Existing laws and regulations, norms and habits towards consumption; • Existing policies and guidelines; • Readiness to provide information and impact liability to producers; • Awareness on consumer rights and responsibilities of producers to act on complaints.	• Government efforts towards protecting consumers; • The role of policies, guidelines and standards in consumer rights and protection; • Consumer awareness association towards consumption rights and responsibilities; • Examples of consumer advocacy organizations and their promotion of consumer rights and responsibilities.
Health and safety	• Food safety • Genetically modified • organisms (GMO) • Diet and nutrition • Ecological, organic food • Lifestyle illnesses and • epidemics • HIV/AIDS • Labelling and quality • control	• Food safety regulations and hygiene; • Knowledge of natural foods and genetically-modified organisms (GMOs); • The nutritious value of food; • Lifestyle illnesses such as diabetes, obesity etc. • Knowledge on HIV/AIDS; • Importance of product labelling, quality and quality control agencies	• Unhealthy food environment and the spread of diseases, such as diarrhoea; • Benefits and risks associated with Genetically Modified Organisms (GMOs); • Required food consumption of people with HIV/AIDS; • The role of agencies for quality and quality control like Tanzania Bureau of Standards (TBS) and Tanzania • Food and Drug Authority (TFDA); • Understanding the nutritious vale of varied foods, e.g. the benefits of organic foods, fruits and vegetables etc.; • Unhealthy lifestyle choices and their impacts such as tackling obesity particularly among children, youth and the elderly; • Importance of food labelling and growth of eco-labels.
Global aware- ness	• Global interdependence • Poverty and its impacts • Human rights Millennium Development • Goals (MDGs)	• Current state of poverty nationally, regionally and globally • Human rights abuses • Future of MDGs	• State of poverty in Tanzania and efforts to curb this and to ensure that individuals consume enough to meet their basic needs such as shelter and food; • Examples of human rights successes and abuses and their impact on society; • Accomplishments of the MDGs for Tanzania and the next steps, particularly the Sustainable Development Goals.
Information management	Peer pressure	• The impact of peer groups; • Communication enhancement and improvements.	• The impact of peer groups and the media on consumption habits, behaviours and attitudes of individuals particularly children and youth; • Using efficient communication systems e.g. electronic mails instead of letters to promote sustainable consumption.

* Annex 1 identifies some areas where ESC can be integrated in the education system and the desired learning outcomes.. The three pillars of sustainable development are used in grouping of subjects to highlight the close links between sustainable development and consumption and to show how ESC topics and themes can be embedded within ESD through these pillars. This is a non-exhaustive list and only provides some pivotal examples using ESC topics.

Annex 2*: Specific guidance and examples of how ESC can be integrated into various subjects

1. The Social Studies		
Subject	**ESC integration into subject**	**Specific ESC topics and issues**
Geography	Geography recognizes that the environment is a delicate asset and emphasizes that we should handle it with care. It propagates urgency mission in caring for, conserving and managing the environment sustainably. ESC can therefore be integrated as follows: a. Resource distribution: sustainable and responsible management of land, water, energy, wildlife, minerals b. Efficient and wise use of the earth's resources: sustainable use of water, land, wildlife, forests, fishing, minerals, and energy, sustainable agricultural practices, animal keeping, energy consumption, industrial practices, sustainable provision of social services like transportation, health services, waste management (Reuse, Recycle and Reduce) etc. c. Population studies: high population growth rate, overpopulation, production and consumption patterns (economic activities) and technological development.	**Resources: e.g.**: *natural, human, and interre- latedness of systems and processes* **Consumption & the environment:** *e.g.: climate, soil and water protection, biodiversity, tourism, waste management, ecological impact* **Global awareness:** *e.g.: global interdependence, energy, trade, commerce, agriculture, land use*
History	History can facilitate the transfer of knowledge, which is related to environmental understanding and enable consolidation and development of attitudes and practical skills. It can be used in pointing out the chronology of events, such as harnessing energy through ages and its social, economic and environmental effects, sustainable practices of ancient societies and indigenous knowledge on sustainable consumption.	**Lifestyles:** *e.g. history of social and economic development, history of consumption, the symbolic roles of consumption*
Civics	This is the re-introduced subject to replace the defunct Siasa (Political Education) of the mid-1990s. This field covers aspects of environmental concerns unlike Siasa. Civics is designed to educate citizens about public/ community life, such as politics and the role of citizens. Unfortunately, teachers have not been trained on how to execute its content in the classroom. Concepts of development and sustainable development, economic production, citizenship and civil rights are among the content covered. ESC can be integrated through teaching of the following: a. International forums calling for sustainable consumption patterns like the 1992 Rio Summit and Agenda 21 and the Johannesburg Summit on Sustainable Devel- opment (2002), calling for governments to take action in changing unsustainable patterns of consumption and production. b. Basic values of sustainable consumption: Honesty, integrity, justice, freedom and peace and avoiding greed, fraud, excess and violence.	**Global awareness:** *e.g. poverty, human rights, labour rights, crime, precautionary principle, fair trade, Millennium Goals, world citizenship* **Life quality:** *e.g.: values, needs and desires, human rights, ethical codes and spiritual principles, sustainable development* **Lifestyles:** *e.g.: present social conditions, role of the family* **Economics:** *e.g. social responsibility* **Change management***: e.g. active citizenship, stakeholder involvement, community service* **Information management:** *e.g. digital and media literacy, advertising and persuasion, peer pressure, con- sumer support agencies*

2. The Sciences		
Subject	**ESC integration into subject**	**Specific ESC topics and issues**
Physics, Chemistry and Biology Mathematics, Information and communication technology (ICT)	Scientific analysis most often involves the classification of specific objects, animals or places. It is from this context that scientists develop specific theories, laws or principles, which relate to attitudes and values. Value classifying can be a product of behavioural related development that transcends education curriculum content. Science, Mathematics and ICT are key factors in the achievement of future pros- perity and improved quality of life and wellbeing. Students can conduct local in- vestigations, case study analysis, and internet research on various issues addressing sustainable consumption issues.	Physics and Chemistry Consumption and the environment: e.g. product lifecycles and traceability, packaging, recycling, reusing, repairing products, energy, housing, transportation, communication Resources: e.g. technological, organizational, balances and imbalances Information management: e.g. data-based information systems, labelling Biology Consumption & the environment: e.g. tourism Life quality: e.g. sufficiency and moderation, sustainable consumption Health and safety: e.g. food safety, gene modified organisms, diet and nutrition, ecological, organic food,

2. The Sciences		
Subject	**ESC integration into subject**	**Specific ESC topics and issues**
		additives, lifestyle illnesses and epidemics, HIV/AIDS, labelling and quality control, product safety Mathematics Economics: e.g. economic models and practice, production and trade, multinational companies, savings, loans, investments, financial services and instruments, e-commerce Resource: e.g. financial ICT Information management: e.g. digital literacy, Data-based information systems

3. The Arts		
Subject	**ESC integration into subject**	**Specific ESC topics and issues**
Fine arts, music, performing arts, sports, vocational skills	This is the field that we should be proud of and feel advantaged in our social communication. Human beings communicate numerous messages, including environmental, using the arts, which provide an expressive perspective. The messages perpetually provide challenges with simulation, which is decoded with clear meaning while providing workable solutions. Fine arts, music, performing arts, sports and vocational skills are avenues for transforming behaviour and therefore can influence consumption behaviour. The arts are a valuable means of learning, which arouse the interests of many people, especially the young generation. The arts are crucial in helping people develop sustainable consumption awareness and adopt more sustainable lifestyles.	*All ESC topics and issues can be integrated* into the Arts given the flexibility and creativity allowed in this field. Attention can be focused specifically on the following: **Lifestyles:** *e.g. present consumption patterns, alternative lifestyles* **Consumption & the environment:** *e.g. entertainment* **Consumer rights & responsibilities:** *e.g. laws and norms, agreements and contracts, consumer protection policies, transparency/ accountability, complaints, redress, replace- ment, reimbursement, conflict resolution* **Health and safety:** *e.g. social services* **Change management:** *e.g. creativity and innovation, future perspectives*

4. The Languages		
Subject	**ESC integration into subject**	**Specific ESC topics and issues**
English, Kiswahili, French	Any language, which is a tool for communicating ideas and messages, is a function and product of social and physical environment where it evolved. We employ various skills and behaviour in studying the environment, which depend on the language. The teaching of languages can be used in developing and strengthening knowledge on sustainable consumption issues. Aspects of ESC can be integrated into structure lessons, reading and comprehension exercises, composition writing, short stories and poems.	*All ESC topics and issues can be integrated into the Languages. Attention can be focused* specifically on the following: · *Health and safety* · *Global awareness* · *Lifestyles*

5. Religious Studies		
Subject	**ESC integration into subject**	**Specific ESC topics and issues**
Christian and Islamic Knowledge	Religious studies is designed to help reinforce personal values and beliefs, as well as respect for other peoples' religious believes. They help to inculcate values like honesty, reliability, respect for the law, tolerance, fairness, caring or compassion and non-discrimination. Since every student in Tanzania shall be required to study the religion of his/her denomination, this provides a great opportunity to integrate sustainable consumption principles, which are dominant in the two religions practices the most in Tanzania: Islam and Christianity.	**Lifestyles***: e.g. the role of the family, alternative lifestyles* **Life quality:** *e.g. sufficiency and moderation* **Economics:** *e.g. social responsibility* **Health and safety:** *e.g. social services* **Change management***: e.g. future perspectives, community service* **Global awareness:** *e.g. human rights, world citizenship*

* Annex 2 identifies some few examples of where ESC topics and issues can be integrated in the five subject groups across various subjects in the formal education system of Tanzania.

Annex 3: Examples of specific topics in the existing primary education curriculum that can be used to integrate ESC

Subject	Topic	Class/Standard
Science	Health and disease prevention Security in the living environment Our environment Energy Living Things Energy machines and Work Principles of health The Blood System Basic needs for good health and life Cleanliness and food quality Environmental conservation Changes in the environment	I – VII I – III &VI I – VII I II – VI II – VII IV V V
Mathematics and Arithmetic	Statistics Percentages Commercial maths	IV – VII V VI - VII
Vocational Studies	Picture drawing Theatre Arts Music Agriculture Cookery Laundry Agriculture and animal husbandry Carpentry	I – VII I – VII I – VII III– VII III – VII III – VII V – VII V - VII
Geography	Most of the topics in Geography can integrate ESC themes.	III—VII
History	A history teacher can look at how industrial production and human consumption rates have changed over the last 2 centuries Also indigenous production and consumption of different societies can be discussed	III—VII
ICT	Use ICT to search for literature on ESC in various subjects	III—VII
Kiswahili English	The teacher can use SC content in teaching structure, comprehension, composition,oral exercises reading and various language activities	III—VII

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NATIONAL GUIDELINES ON EDUCATION FOR SUSTAINABLE CONSUMPTION FOR TANZANIA

This publication provides guidelines aimed at Tanzanian policymakers and educators on how to best integrate and implement Education for Sustainable Consumption (ESC) in the Tanzanian education system. The objectives of these guidelines are to (1) enable Tanzania to better understand the principles of ESC; (2) assist in strengthening ESC techniques and teaching methods that incorporate sustainable consumption and lifestyle choices; and (3) promote and encourage ESC based on existing pedagogical techniques.

This publication is part of the United Nations Environment Programme (UNEP) pilot project on the institutional strengthening of Education for Sustainable Consumption – Advancing ESC Policy and Implementation Strategies, implemented in Tanzania from 2011 to 2014.

United Nations Educational, Scientific and Cultural Organization

United Nations Decade of Education for Sustainable Development 2005-2014

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Global Action for Sustainable Consumption and Production

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