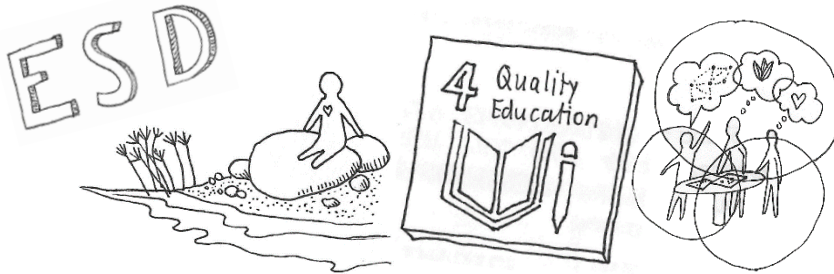


TEACH for ESD



ESD CONCEPTS

OVERVIEW

Education for Sustainable Development (ESD) is an **integrated concept** that combines a progressive approach to education with the **universal purpose of protecting our Earth**. ESD is hands-on, exploratory and open-ended in nature.

ESD teaching and learning is **life-long** and involves everyone. It presents the opportunity to use a variety of teaching methods in different learning environments and demands attention on the issues fueling the environmental crisis.

This involves understanding our **environmental ethic** and the motivations behind our actions. Underlying ESD theory needs to be explored and understood to result in the change that we want to see in the world. How will **ESD result in action** for our planet today?

Competencies in ESD must therefore be understood and form the basis of assessment in ESD. ESD is a **core component of quality education** and a leader in its area.

1. WHAT IS ESD?

Education for Sustainable Development

"...Education for Sustainable Development (ESD) **empowers learners** to take informed decisions and responsible actions for environmental integrity, economic viability and a just society for present and future generations."

(UNESCO, 2017)

By further 'unpacking' this definition, ESD concerns itself with:

- *what* is being taught (content),
- *how* it is being taught (approach), and
- *why* it is being taught (outcome).

To achieve this, the ESD learning setting needs to fully **integrate sustainability in its practice**.

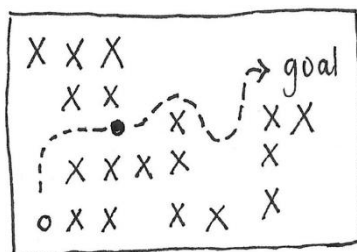


Read the brief article ***What is Education for Sustainable Development?*** and explore the UNESCO **website** to get an overview of the term and international work being done.

In many ways, ESD can be (and at times needs to be) confrontational. Educators - and adults in general - admittedly do not have all the answers to the many wicked problems that the environmental crisis presents. Thereby, **teachers are also learners of ESD**.

Focused on solving real-life problems in different cultural and value contexts, ESD presents the opportunity to use alternative forms of teaching such as outdoor learning, collaborative real-world problem solving and experiential learning.

Although there are exceptions, traditional teaching takes place indoors often includes rote learning and is teacher focused. Learning is pre-determined by a set curriculum, that may allow for teacher creativity, but is mostly strictly followed. Examinations, being promoted to the next grade level and securing a place at university are the main focus for the typical learner. Pressure is on the individual to out-compete fellow learners.



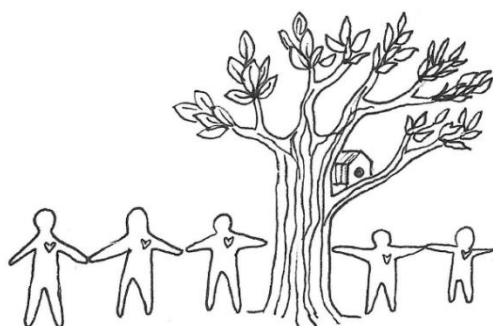
Contrary, the **end goal of ESD** is for learners (and educators) to **become a part of the solution** to our global environmental crisis.



Watch the video ***Learning to change the world!***
What is Education for Sustainable Development?



ESD recognizes that learning is a **life-long process**; and that we are all learners with our own **diverse backgrounds** (i.e. age, gender, language, culture) contributing to the depth of ESD.



It moves far beyond providing knowledge and facts, and instead, is **holistic in its purpose and design**. Closely linked with global citizenship, ESD has social, economic and environmental justice at its core. The challenge for ESD is to remain responsive to sustainable development issues and the changing global context.

Quality of life on Earth is the assessment. Everyone needs to do their part and work together. Sharing and collaboration is critical. This may seem daunting or not feasible, but, a significant global (and local) network of ESD educators and learners has evolved, creating a wealth of experience and resources in ESD to share and learn from. ESD can be summarized in the five pillars of learning and quality education:

FIVE PILLARS OF LEARNING AND QUALITY EDUCATION



(UNESCO, 2018)



Read ESD Expert-Net's article, **What is ESD?** to further your understanding. This article also explores the concepts of education, sustainability and sustainable development.

2. THE ESD TEACHING AND LEARNING ENVIRONMENT

What should an ESD teaching and learning environment look like? There is not one answer to this question. There are many different ways and places where ESD can take place. An ESD teaching and learning environment is composed of underlying **educational** and **ethical theories**, key **ESD themes**, **ESD settings** and the ESD **approaches** and **methods**.

2.1 ESD THEORIES

Theories are a set of principles or ideas that guide practice. They are the underlying explanation for *how* and *why* something is done. Here we look at educational theories and the environmental ethics that underpin the values that form the basis of ESD.

EDUCATIONAL THEORIES

Traditional educational theories, e.g. behaviourism, have not been successful in changing people's environmental behaviour. As such, educational theories for ESD needed to evolve. There is now a wealth of educational theories that have been tested and adapted to ESD.



Read the section "Theories Relevant for ESD" on **pgs. 54-56** in ***Guidebook on Education for Sustainable Development for Educators***.



A good overview of many different educational theories can be found in "What Kind of Education?" on **pgs. 4-6** in the ***CAPE Conservation's Teacher Education Workbook for Environment and Sustainability Education***.

"It is overly simplistic to think that, because we teach ecology, or citizenry ... students will realize their connection to their environment. Effecting changes in behavior that have positive, significant impact on the environment will take much more than just curricula. Somehow, we must stimulate some relationship to nature that makes sense... We need to care about the things we are asking ourselves to preserve"

SAYLAN & BLUMSTEIN, 2011



ESD

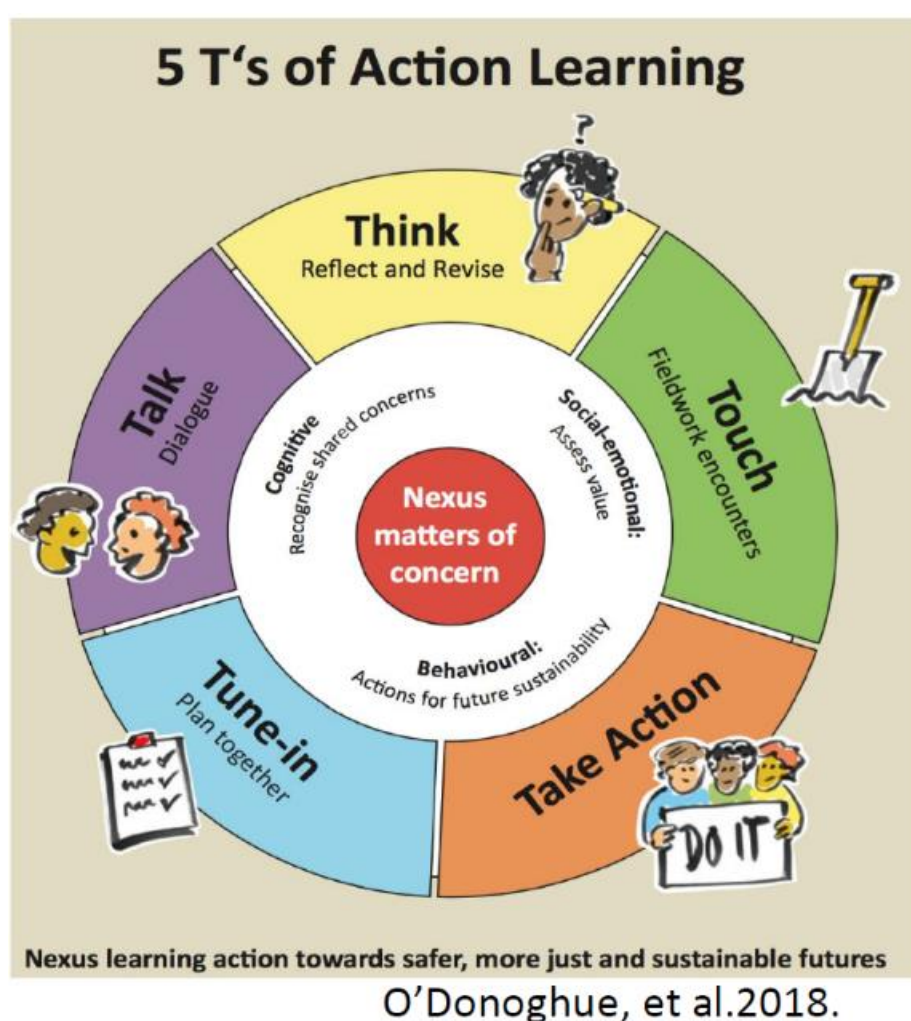
TOOLKIT 2.2 ESD CONCEPTS

As educators, we have a strong influence on the ethics conveyed in our teaching and learning environments. It is important to consider and reflect on the educational theories that shape our approaches and to avoid indoctrination or social marketing. To empower learners to become active global citizens, our teaching needs to be innovative and transformative.

RESOURCE
CHECK

Watch the **Learning Theory for informing ESD 1** and **Learning Theory for informing ESD 2** videos from Professor Rob O'Donoghue.

This diagram of the **5Ts of Action Learning** illustrates that the focal point of learning is on “matters of concern”. These are issues that are of relevance and importance.



RESOURCE
CHECK

Read **Chapter 5** (How are learning and training environments transforming with ESD?) on pgs. 111-131 in *Issues and Trends in Education for Sustainable Development*

2.2 ENVIRONMENTAL ETHICS

Why do you want to become an ESD practitioner and protect the environment (through education)?

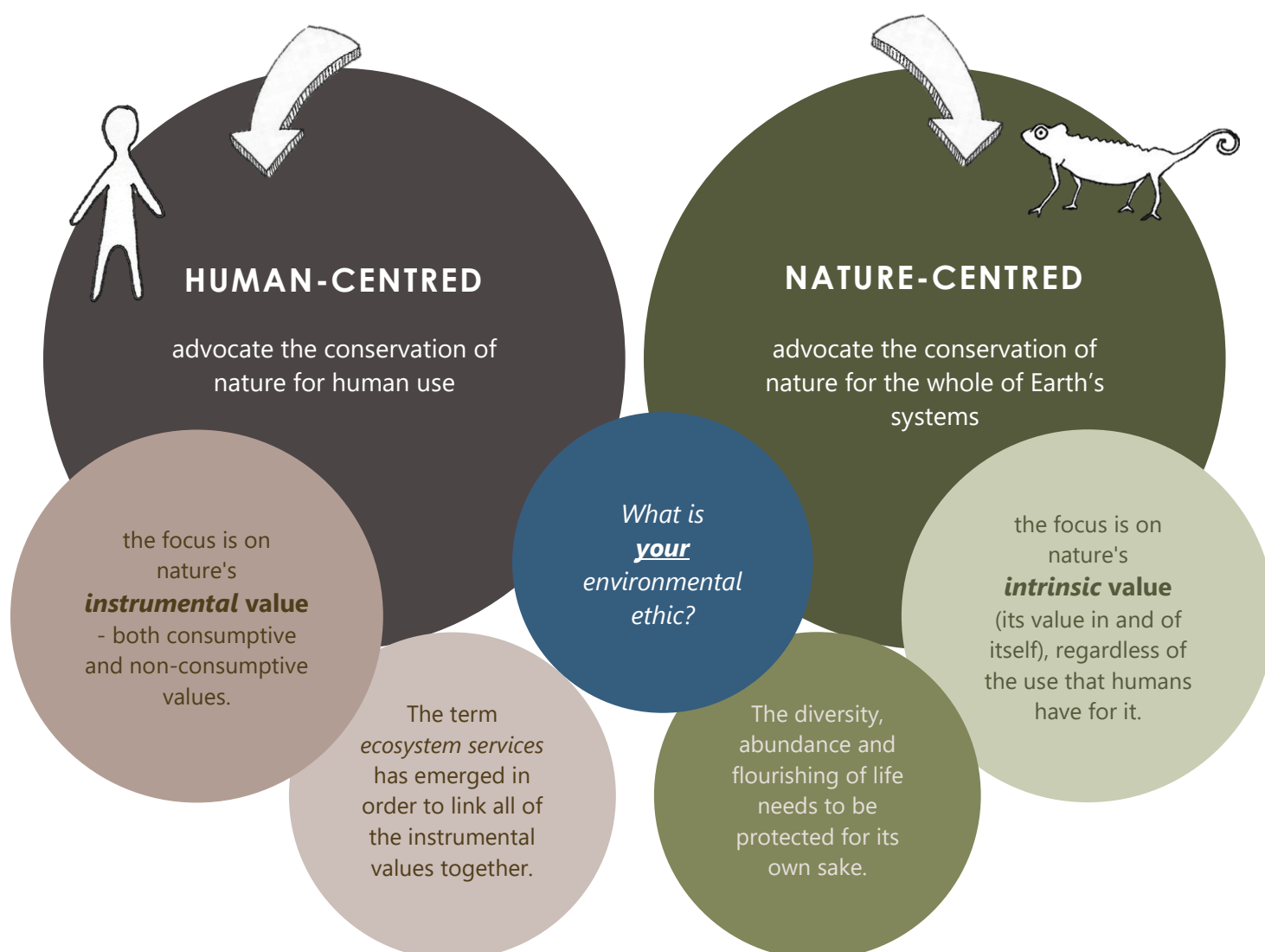
Why do you care?

ETHICS

Moral principles that govern a person's behaviour.

Striving to bring about sustainable development has, at its core, the necessity to face *ethical choices*. Environmental ethics inform part of the **why** in ESD. Environmental ethics - an important and expansive field of its own – for our purpose here can be divided into two broad categories:

HUMAN-CENTRED and NATURE-CENTRED



RESOURCE CHECK

Read "Ethics and the Environmental Educator" on **pgs. 2 – 3** in the UNDP's *Environmental Education, Ethics & Action: A Workbook to get Started*.

Our environmental ethics are influenced by our upbringing, life circumstances, surroundings, traditions, indigenous knowledge and our religious beliefs to mention a few.



If you're interested in reading more about these topics, read the research articles ***The Rehabilitation of Indigenous Environmental Ethics in Africa*** and ***The Roles of Religions in Activating an Ecological Consciousness***.



To look at how ESD can be incorporated in faith-based teaching, refer to the teacher's toolkit ***Faith-based Education for Sustainable Development***.

EARTH CHARTER



The Earth Charter is an **ethical framework** produced through a decade-long, worldwide dialogue on shared values, aiming to inspire a global movement for building a just, sustainable and peaceful world. It calls for shared responsibilities and a global interdependence.



Have a look at the ***Earth Charter*** document and the ***Earth Charter website*** to learn more about the guiding sixteen principles.

2.3 KEY ESD THEMES

Education for Sustainable Development is integrated into all of the 17 SDGs; however, it is important to note the key themes that are critical for sustainable development processes: **climate change**, **biodiversity**, **sustainable production** and **consumption** and **global justice** and **poverty reduction**. Many of these environment-related themes have been explored in the previous section of the Toolkit.



There are many "ESD Manuals", as well as topic-oriented databases that provide examples and teaching activities. These are featured in the ***Let's Get Practical*** section of the Toolkit.



Read the section on "The Essential Messages in ESD", found on **pgs. 102-106** in the ***Guidebook on Education for Sustainable Development for Educators***.



ESD is closely related to Global Citizenship Education (GCED) and, therefore, both are part of SDG#4 Target 7 and often discussed together. The main components of GCED are focussed on civic responsibilities, cultural awareness, human rights, peace and sustainability.



Watch this video to hear what people around the world define as a global citizen. ***What is a Global Citizen?***

ESD SETTINGS

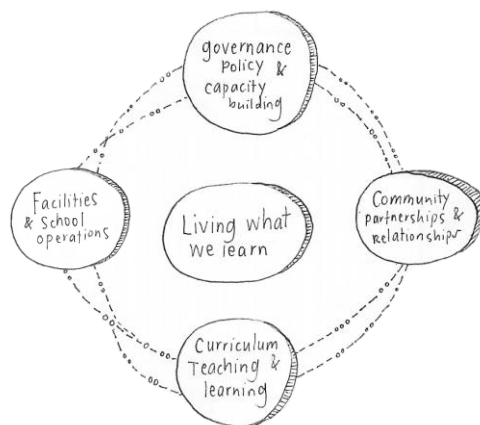
ESD settings refer to where the teaching and learning take place. **Settings play a significant role** in how learners understand sustainability and can experience first-hand the aim of ESD: a sustainable world. This is well illustrated at NaDEET's environmental education centre where, for example, all food is prepared using solar energy instead of fossil fuels or wood. Teaching and learning at NaDEET is not just about climate change, but also practices mitigation measures and contributes to the solution.



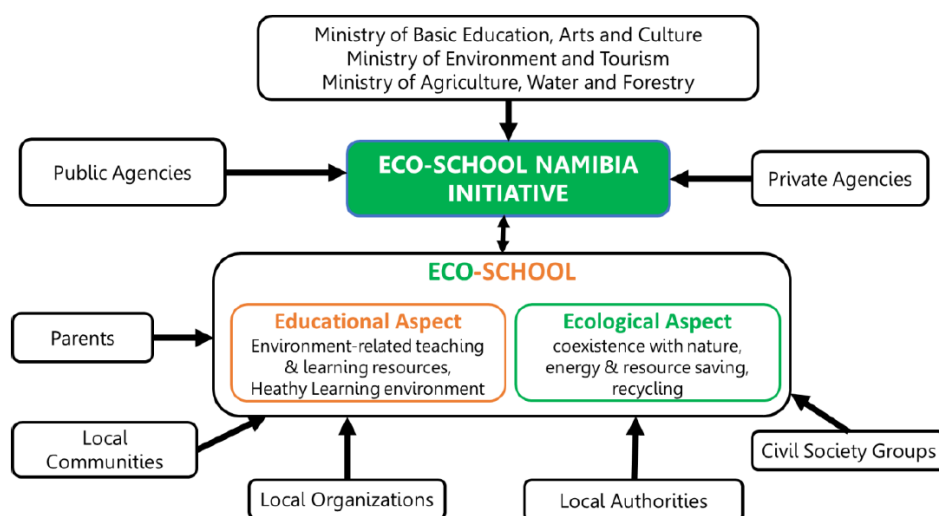
Watch this video about **NaDEET Centre** to learn more how the centre's facilities integrates sustainable solutions to energy, water and waste.

WHOLE-INSTITUTION APPROACH

The Whole Institution (or School) Approach identifies that ESD does not just take place in the classroom alone. Rather, it is a **transformational change** to the entire school, connecting its many functions. It gives a framework for integrating the running of the school (management, building, policies, community) together with teaching and learning.



Some programmes provide a very structured plan on how to achieve the Whole School Approach. The ESD Expert Network proposes that it is not a structure to be followed alone; but rather as a basis for continuous self-assessment. The following model here was developed by a Namibian teacher and balances the educational with the ecological aspects of a school.



Shakumu, A- Eco-School Namibia Initiative



Learn more about the whole school approach in this handbook developed by Shakumu **Eco-School Namibia Initiative** that is found in the **Let's Get Practical** section.

ESD METHODS AND APPROACHES

As we explore these various theories we will, at times, ask what is the difference between theories, approaches, methods and our own work? Here the term *praxis* can be very helpful as it illustrates the connectivity between the theory behind our teaching and the actual practice of teaching.

Teaching methods that you may have heard of may include collaborative real-world projects, service learning, field work and storytelling. This is the **how we teach**. Reflect back on your own schooling or adult learning courses. Is there anything that stands out that you enjoyed and want to reflect and integrate in your own teaching?

PRAXIS

a synthesis of theory and practice in which each informs the other.

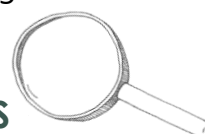
FREIRE, 1985

RESOURCE CHECK

Listen to this TedTalk by Bandile Phiri, **Connecting Nature and Education**, as she advocates for the education model to be in connection with our natural world, learning from and about it.

It is important to use a variety of methods as **everyone learns differently**. Some people need to listen and watch while others need to read and write to understand and process information. Developing activities that incorporate these different approaches to learning is important for engaging all learners. Methods can generally be categorised, although most are overlapping.

DIRECTORY OF METHODS



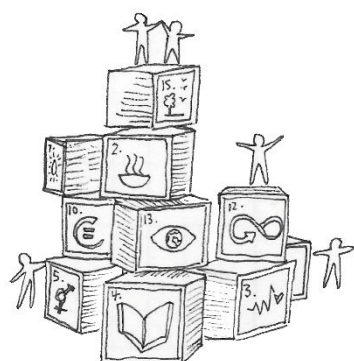
Information transfer

Experiential

Investigative

Learning by doing

Deliberative



By using these different methods in ESD we can improve the quality of teaching and learning. These methods can also help us address the ESD challenges of each of the Sustainable Development Goals.

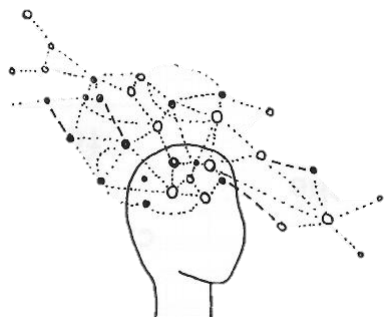
Rosenberg, E., O'Donoghue R. and Olvitt, L. (2008)

RESOURCE CHECK

Refer to the *Fundisa for Change* guide on **Methods and Processes to Support Change-Oriented Learning** to understand the terminology and for further explanation of different ESD methods.

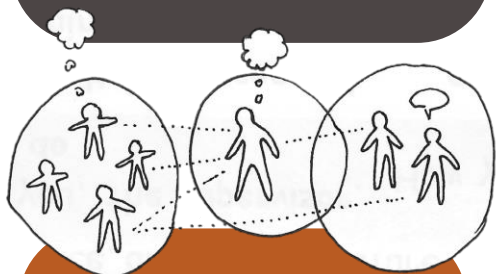
The ESD Toolkit section 3 is on **Let's Get Practical**. This section will provide you with many different ESD activities that fall under these different methods.

3. ESD COMPETENCIES



SYSTEMS THINKING

- Recognise and understand relationships
- Analyse complex systems
- Deal with uncertainty
- Think of how systems are embedded in different areas, and on different scales



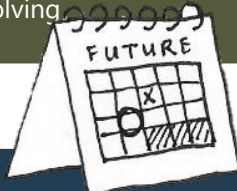
NORMATIVE

- Understand and reflect on the norms and values that underlie actions
- Negotiate sustainability values, principles, goals and targets (in the context of conflicts of interest/trade-offs, uncertain knowledge and contradictions)



COLLABORATION

- » Learn from others
- » Practice empathetic leadership – understand, relate to and be sensitive to others needs, perspective and actions
- » Deal with conflicts in a group
- » Facilitate collaborative and participatory problem solving



ANTICIPATORY

- ~ Understand and evaluate potential futures (possible, probable or desirable)
- ~ Create visions for the future
- ~ Apply the "precautionary principle"
- ~ Access action consequences
- ~ Deal with risks and changes



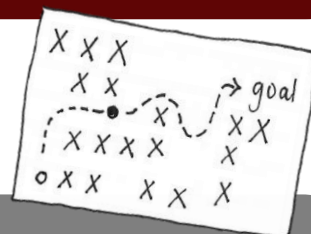
SELF-AWARENESS

- Reflect on one's role in the community and society (globally)
- Evaluate and further motivate and understand impact of one's actions
- Deal with one's feelings and desires



CRITICAL THINKING

- Question norms, practices and opinions
- Reflect on one's own values, perceptions and actions
- Take a position in the sustainability conversation



STRATEGIC

Collectively develop and implement innovative actions that further sustainability (locally and further afield)



INTEGRATED PROBLEM-SOLVING

- ◆ Apply different problem-solving frameworks to complex sustainability problems
- ◆ Develop viable, empathetic and reasonable solution options that promote sustainable development, integrating all the other competencies

TOOLKIT 2.2 ESD CONCEPTS

In teaching and learning ESD, we recognize that there is not one solution to the issues facing our communities and the world. Therefore, there is not one answer nor one set of skills to be taught and learned. ESD competencies cannot simply be taught, but must be developed through experiences, self-reflection and discussion. How do you understand competencies that need to be developed by learners before they are *able to act*? Remember, learning is life-long; we *all* must acquire these ESD competencies. Reflect on the stories below. What ESD competencies are being developed and used to address problems?

COMPETENCIES

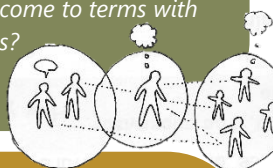
A set of characteristics and skills that enable one to achieve a desired outcome.



COMING TO TERMS WITH CONFLICTING VALUES

Mrs Katjikuru faces a moral dilemma. She has recently learned that meat – especially beef – has a very high ecological footprint. However, owning cattle and eating meat is central to her culture. While she herself would not mind reducing her meat consumption, she is concerned that her family and friends would strongly oppose this lifestyle change.

What ESD competencies can she use to come to terms with these conflicting values?



SOLVING TWO ENVIRONMENTAL PROBLEMS AT ONCE

At Oshona Primary School, parents are responsible to provide the fuel for the school feeding programme. The parents are worried as there is little firewood left and they do not have the resources to pay for other fuel sources. They are relieved when the enviro-club teacher presents the alternative of using recycled fire-bricks. The parents embark on sourcing used paper products in their community.

Which ESD competencies can they use to find a sustainable fuel source for the school feeding programme?



WORKING TOGETHER

The enviro-club of Thulena High School is upset that a lot of water is being wasted in the bathrooms and schoolyard. They bring the issue up with the LRC who advises them to consult with Mr Vries, the institutional worker, to help identify the various causes and thereby the solutions to the water wasting problem.



What ESD competencies can the enviro-club use to engage the whole school community to address this problem?

ASSESSING SHORT-TERM PROFITS AGAINST LONG-TERM IMPACTS

The Kavango oil prospectors promise job opportunities for the local communities. Most people welcome these as unemployment is high. Mr Absalom, a traditional leader, wants his community to prosper, but foresees the long-term damage that this oil drilling will have on the many ecosystem services that the community depends on.

What ESD competencies can he use to engage stakeholders to opt for more sustainable income source e.g. eco-tourism.

RESOURCE CHECK

See ESD Expert-Net's article **Getting out of the confusion of E-S-and D Competencies** for a great breakdown of ESD related competencies – important for your own understanding.

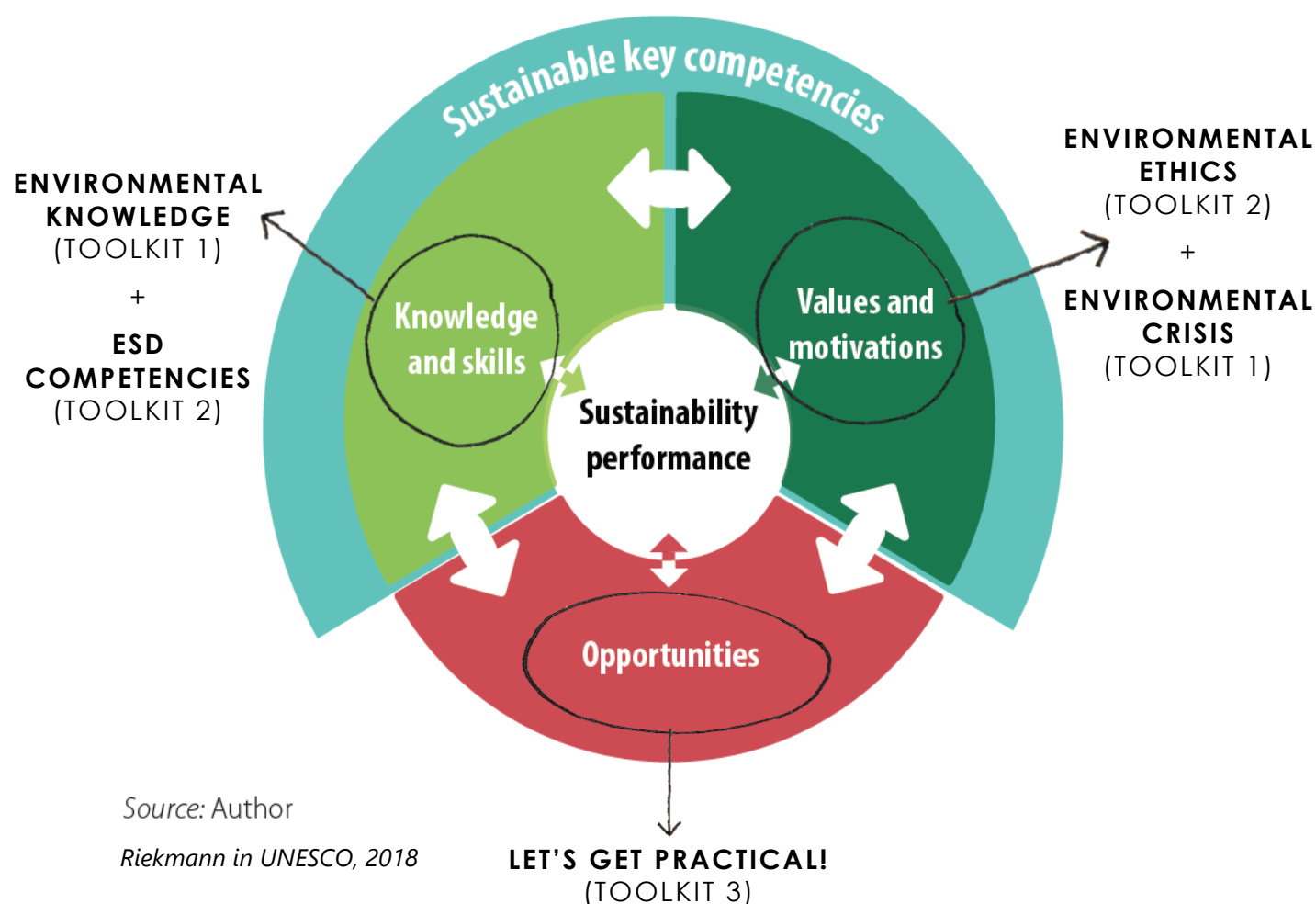
RESOURCE CHECK

See UNESCO's **Education for Sustainable Development Goals: Learning Objectives** booklet to further your understanding of these concepts.

SUSTAINABILITY PERFORMANCE

Even mastering the ESD competencies does not always equate with action. Personal behaviour and the decision to act **sustainably still depends on motivation and opportunity**.

Figure 1: Key competencies and performance of sustainability citizens

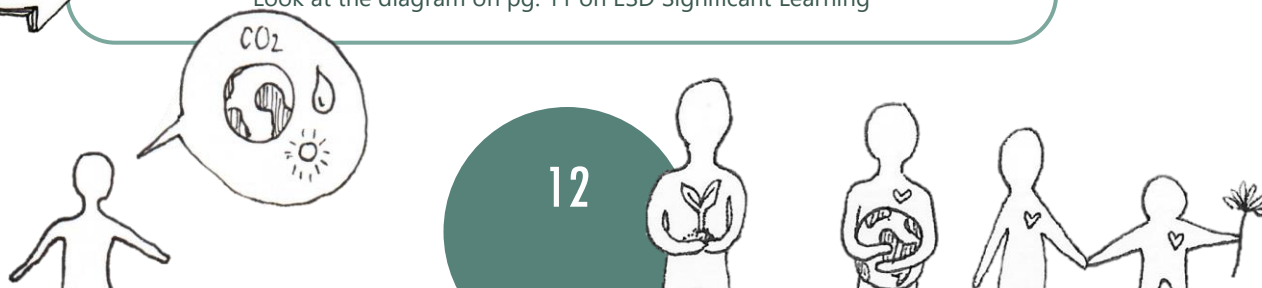


Become inspired by indigenous knowledge of ESD in the case studies in ***African Heritage Knowledge in the context of Social Innovation***. They are great examples of sustainability performance.

We have explored (environmental) knowledge through Section 1, and considered **skills, values and motivations** through Section 2. Now, in order for learners - and teachers - to take action (sustainability performance) we need to be provided the opportunities to do so. This is where Section 3 of the Toolkit, *Let's Get Practical* comes in to unite the *what, how and why!*



Another guide to help with assessments is from UNESCO programme, ***Sustainability Starts with Teachers: Assessment Guide (Learning Action 4)***.
Look at the diagram on pg. 11 on ESD Significant Learning



RESOURCES

SOURCE KEY

Hardcopy



Softcopy



Online



1. WHAT IS ESD?

What is Education for Sustainable Development?



ARTICLE and WEBSITE: UNESCO's explanation of ESD, its objectives and the role it plays in sustainable development (including the SDGs). The website links to ESD articles and resources from UNESCO on ESD.

AUTHOR: UNESCO

Link: <https://en.unesco.org/themes/education-sustainable-development/what-is-esd>

Learning to change the world! What is ESD?



VIDEO: This short video explains ESD and the power it has to change the world. It also references how ESD fits into the SDGs and why education is such a crucial part of a sustainable future for all.

AUTHOR: UNESCO (2021)

Link: <https://www.youtube.com/watch?v=YUFqamr78Xk>

What is ESD?



ARTICLE: This article breaks down each component of ESD – “Sustainability”, “Sustainable Development” and “Education for Sustainable Development,” explaining how they fit together and why it is important.

AUTHOR: T. Hoffmann and H. Siege (2017)

Link: https://esd-expert.net/files/ESD-Expert/pdf/Was_wir_tun/Lehr-%20und%20Lernmaterialien/What_is_Education_for_Sustainable_Development.pdf

2. THE ESD TEACHING AND LEARNING ENVIRONMENT

Guidebook on Education for Sustainable Development for Educators



GUIDEBOOK: This guidebook has been created as a tool for teacher education and training on how to stream sustainability into all aspects of education. It includes useful information concerning teaching, learning and assessment approaches to help achieve the ESD goals and learning outcomes.

AUTHOR: UNESCO (2018)

Link: <https://unesdoc.unesco.org/ark:/48223/pf0000367474?posInSet=39&queryId=55cb2ac4-0a2a-4421-9304-f1b1670d1a3e>

Teacher Education Workbook for Environment and Sustainability Education



BOOKLET: This workbook gives a great background to ESD and highlights how to build professional capacity for curriculum-based environmental education. It should be used as a tool to strengthen knowledge of what environmental education is and how to integrate it into all aspects of schooling.

AUTHOR: E. Rosenberg (2009)

Link: <https://www.sanbi.org/wp-content/uploads/2018/03/conservation-ed-teacher-ed-workbook-environment-and-sustainability-education.pdf>

RESOURCES

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Learning Theory for Informing ESD



VIDEO: These videos (split into two parts) explain the learning theories, concepts and practices that inform ESD learning environments. Refer to Chapter 5 of Issues and Trends in ESD (resource below) for further detail on the case studies and theories that are mentioned in the video.

AUTHOR: Rob O'Donoghue (2019)

Link: <https://www.youtube.com/watch?v=5YISKks3Kso>

Link: <https://www.youtube.com/watch?v=Ed1r1ivaB6c>

Issues and Trends in Education for Sustainable Development



BOOKLET: This booklet reviews trends and challenges in education, and identifies potential challenges to come. These will be important to understand when making sustainable education decisions for the future. Chapter 5 explores how ESD transforms learning and training environments.

AUTHOR: A. Leicht, J. Heiss and W.J. Byun (eds) (UNESCO) (2018)

Link: <https://ensi.org/global/downloads/Publications/433/Issues%20and%20trends%20in%20Education%20for%20Sustainable%20Development.pdf>

Environmental Education, Ethics & Action: A Workbook to Get Started



WORKBOOK: To understand the role of ethics in the ESD field, this workbook provides explanations and a breakdown of what environmental ethics are, including how to bring them into your teaching.

AUTHOR: B. Jickling, H Lotz-Sisitka, R. O'Donoghue, A. Ogbuigwe (2006)

Link: [https://wedocs.unep.org/bitstream/handle/20.500.11822/7719/-](https://wedocs.unep.org/bitstream/handle/20.500.11822/7719/-Environmental%20Education%2C%20Ethics%20and%20Action%20A%20Workbook%20to%20Get%20Started-20063918.pdf?sequence=3&isAllowed=y)

[Environmental%20Education%2C%20Ethics%20and%20Action %20A%20Workbook%20to%20Get%20Started-20063918.pdf?sequence=3&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/7719/-Environmental%20Education%2C%20Ethics%20and%20Action%20A%20Workbook%20to%20Get%20Started-20063918.pdf?sequence=3&isAllowed=y)

Rehabilitation of Indigenous Environmental Ethics of Africa



RESEARCH ARTICLE: This is a great article to give understanding into how the many culture-specific African societies view their relationship with the natural world. It explores how environmental ethics are grounded in indigenous traditions and broad ecological perspectives.

AUTHOR: W. Kelbessa (2005)

The Role of Religions in Activating an Ecological Consciousness



ARTICLE: This article gives insight into the relationship between ecology and religions (with examples). It explores the cross-section between religion and an ecological consciousness, suggesting their interdependence, particularly when it comes to environmental ethics.

AUTHOR: J. Grim (2013)

RESOURCES

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Faith-based Education for Sustainable Development



BOOK: This toolkit for teachers in Kenya gives a background in linking ESD concepts and themes to different faiths. It also presents viewpoints from Kenya regarding faith and culture.

AUTHOR: B.D. Otieno (n.d)

Link: <http://www.arcworld.org/downloads/ARC-Faith-based-ESD-toolkit.pdf>

Earth Charter



BOOKLET and WEBSITE: This is the primary Earth Charter document. It outlines the sixteen principles that are the result of a worldwide, collaborative dialogue addressing a sustainable future. Read the document and visit the website to familiarise yourself with the principles and ethics behind them.

AUTHOR: Earth Charter International

Link: <https://earthcharter.org/>

What is a Global Citizen?



VIDEO: In this video people from around the world and with different backgrounds are asked what they think it means to be a global citizen. The varying answers give a broad overview of the concept, and the general attitude towards global citizenship.

AUTHOR: UNESCO (2015)

Link: <https://www.youtube.com/watch?v=XVSgbU6WVSk>

NaDEET Centre



VIDEO: Namibia's NaDEET Centre is explored as a groundbreaking education base for teaching on the environment and sustainable development, from a whole institutional approach.

AUTHOR: NaDEET

Link: https://www.youtube.com/watch?v=ilJYLEP_Xw

Connecting Nature and Education



VIDEO: In this video Bandile Phiri talks on how although humans come from and are nature, we are not adequately learning how to live - in connection with it. She suggests changing the education model to be more nature-centric, ultimately changing human advances to be more considerate of our living planet.

AUTHOR: TEDx (2016)

Link: <https://www.youtube.com/watch?v=nVj3qizoWS8>

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3. ESD COMPETENCIES

Methods and Processes to Support Change-Oriented Learning



BOOKLET: This guide provides educators and teachers with a range of ESD methods and methodological frameworks to help improve our teaching and learning. It is a course guide from the South African Fundisa Programme.

AUTHOR: E. Rosenberg, R O'Donoghue and L. Olvitt (2013)

Link: <https://www.fundisaforchange.co.za/wp-content/uploads/2013/08/Methods-Processes.pdf>

Getting out of the confusion of E-S-and D Competencies



ARTICLE: This article answers the main questions on the five critical competencies needed to be understood when teaching ESD. They are each described relative to education, sustainability and development, and how these competencies cross-cut each other. An important understanding when educating on ESD.

AUTHOR: S. Menon and T. Hoffmann (2017)

Link: https://esd-expert.net/files/ESD-Expert/pdf/Introduction_3_Out-of-the-confusion.pdf

Education for Sustainable Development Goals: Learning Objectives



BOOKLET: UNESCO recognises that ESD is fundamental to achieving the SDGs and as such, this publication is created as a guide that both identifies ESD's role in each of the SDGs and how it can be implemented (i.e. learning objectives including activities, course design and national strategies).

AUTHOR: UNESCO (2017)

Link: <https://unesdoc.unesco.org/ark:/48223/pf0000247444>

African Heritage Knowledge in the Context of Social Innovation



BOOKLET: This booklet is an assembly of case studies of the interconnectedness of indigenous knowledge, ESD and sustainability practices. It provides inspiration for ESD sustainability performance.

AUTHOR: United Nations University Institute of Advanced Studies (Eds. R. O'Donoghue, S. Shava, C. Zazu, A. Dirksen, A. Atiti) (2013)

Link: http://collections.unu.edu/eserv/UNU:5760/African_Heritage_Knowledge_2013.pdf

Sustainability Starts with Teachers: Assessment Guide (Learning Action 4)



BOOKLET: This booklet focusses specifically on the assessment of ESD. It identifies why the nature of assessment needs to be shifted from outdated traditional methods, suggesting alternatives that are in line with ESD principles.

AUTHOR: UNESCO (2019)

Link: <https://sustainabilityteachers.org/wp-content/uploads/2020/05/Learning-Action-4-Sustainability-Starts-with-Teachers.pdf>