

Flag and cargo

Wind Organ; Raphaël Opstaele

Education for
Sustainable
Development





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Introduction

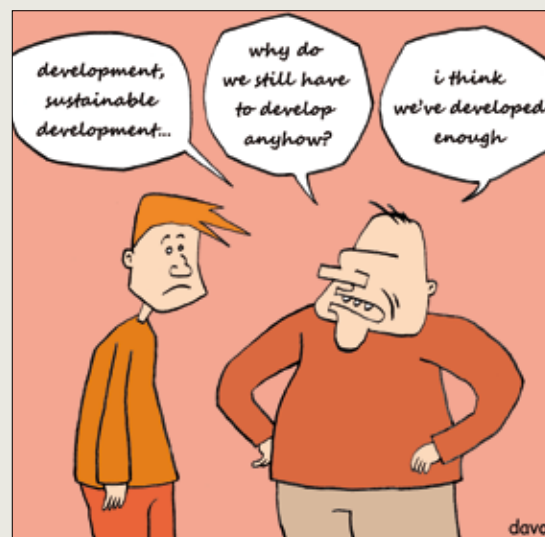
Education for Sustainable Development or ESD is a concept that is slowly but surely gaining ground in the educational landscape. This is not only the case in Flanders - it is clearly a global trend. The United Nations have therefore designated 2005-2014 as the '**Decade of Education for Sustainable Development**'. But this is not the only explanation for the rise of ESD.

Increasingly teachers, educational workers, lecturers, youth workers, etc. are faced with extremely complex social phenomena. They are characterised by a strong interdependence of various factors. Ecological, economic, cultural, historical, ethical, religious, technological, social and political issues all have an impact on our society and, what's more, they also influence each other. In such a complex and unpredictable world new **needs for education arise**. The capabilities we need to deal with such phenomena cannot be acquired through a mere knowledge transfer or by compartmentalising reality or reducing everything to linear cause-effect sequences. ESD can help shape a different perspective on education. One that better equips the target audience to address complex sustainability issues. Although many believe that ESD is important, the subject also elicits a lot of questions. What exactly is ESD? Or what is it not? Is it as new as we think it is? Or is it old wine in new bottles? Does ESD require additional work? Or rather a different approach from what we already did? How do you actually implement it? And what is sound ESD?

Because discussions about ESD often end with people searching for answers to these questions, we

have prepared this brochure. As we are aware of the fact that we are dealing with a dynamic concept that is (still) constantly evolving, we want to provide teachers, educators, lecturers, youth workers, etc. with a practical understanding of the key **principles of ESD**. It is an instrument with which practitioners can examine their own work and further continue to shape it. The aim is not to provide mandatory criteria for ESD but to offer 'tools' to assess ESD products and projects and, above all, to initiate a dialogue. In this way, we want to provide a tool to encourage the development of a vision and maintain a creative and critical thought process about ESD. In this brochure we provide an overview of some key 'principles' for ESD and further elaborate them based on a number of 'reflection questions' that render the principles more concrete.

ESD is a flag that covers a rather diverse cargo: it is applied in various and very different fields. Not only



in education - from kindergarten to university - but also in youth work and in social-cultural work aimed at adults. Not only in nature and environment education, but also in global education, peace education and health education. And so on. As a result, ESD is not a 'new form of education' but rather a guiding and binding concept that you can approach from different angles. And yet there are a number of principles that are relevant for ESD beyond this diversity. They clarify what makes education ESD, regardless of the chosen angle.

Again: the principles and reflection questions are not an 'instrument' to test whether a particular product or project can be considered quality ESD. They do, however, provide food for thought for anyone who wishes to put ESD into practice. In this frame it is important to initiate a dialogue on this subject within one's own organisation and / or with external stakeholders. In doing so you will arrive - both individually and within your organization - at a stronger vision on ESD. It will increase your skills so you can start putting them into practice. A teacher or education worker can work by himself on some principles. Others are only feasible at the level of the entire school or organisation. The interaction between the individual and collective levels is important and therefore requires the necessary attention when working with the principles and reflection questions.

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Part 1:

ESD - What, why and how?

A lot remains to be said and written about what 'sustainable development' really means or should mean. There are hundreds of definitions of this concept in circulation. Often it is described as 'a development that meets the needs of present generations without compromising the ability of future generations to meet their own needs'.

The definition has been subject to criticism: it is too abstract or too vague, it does not focus on social injustice, and so on. Perhaps the following definition, once recorded from a child's mouth, is still best suited to explain what actually is ESD: 'enough, forever and for everyone'. It shows that sustainable development has a time and a space dimension. In other words: the concept is based on the realisation that what we do now affects the future and what we do here also affects others elsewhere in the world.

The United Nations have defined Education for Sustainable Development as follows:

'Education for sustainable development develops and strengthens the capacity of individuals, groups, communities, organizations and countries to make judgements and choices in favour of sustainable development. It can promote a shift in people's mindsets and in so doing enable them to make our world safer, healthier and more prosperous, thereby improving the quality of life. Education for sustainable development can provide critical reflection and greater awareness and empowerment so that new visions and concepts can be explored and new methods and tools developed.'

That's quite a definition! And the question remains whether a youth worker, teacher or trainer will decide to roll up his or her sleeves and immediately put this into practice when he or she has read this explanation. Because, let's face it, the explanation does not really cause a massive *aha-erlebnis*.

However, it is not exactly easy to explain ESD in a few words or phrases. ESD is a complex and comprehensive concept. That is why we have opted in favour of a short, simple description, on which we will elaborate in section 2 based on some key principles. These, in turn, will be put into practice with a number of reflection questions on ESD practices. The practical examples, work methods and suggestions that are interwoven throughout the entire text will help explain ESD.

If sustainable development means 'enough, forever, and for everyone' then we can interpret ESD as learning to think about and working towards a livable world, now and in the future, for ourselves here and others elsewhere on the planet.

The aim is therefore to equip individuals and groups with the skills they need to make conscious choices for such a livable world.

To achieve these aims ESD has to pay attention to¹:

1. transferring new knowledge
2. promoting systems thinking
3. value development
4. dealing with emotions
5. action-orientedness.

You can work on this by 'expanding', 'connecting' and 'integrating' in educational practices. All these starting points will take shape in a substantive and procedural approach to ESD.

Schematically we can represent this as follows:

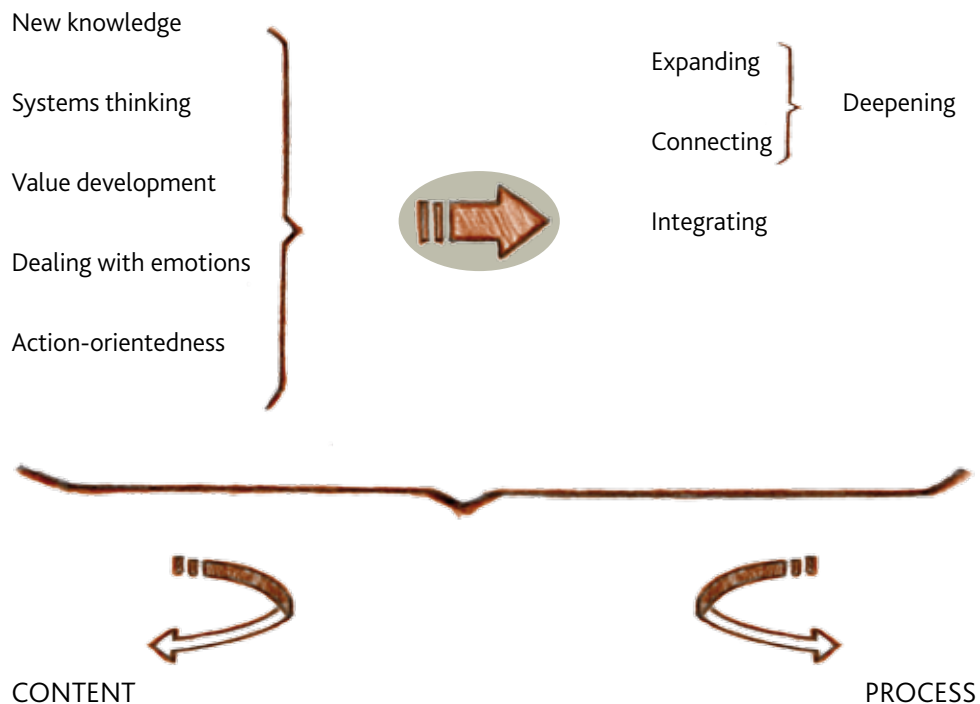
WHAT?

Education for Sustainable Development (ESD) = learning to think about and work towards a livable world, now and in the future, for ourselves and for others, here and elsewhere on the planet.

WHY?

ESD wants to equip individuals and groups with skills to make conscious choices in favour of a livable world, now and in the future, for ourselves and for others, here and elsewhere on the planet.

HOW?



¹After: Sleurs, W. e.a. (2008). *Duurzame ontwikkeling. Hoe integreren in het onderwijs?* Antwerp: Uitgeverij De Boeck.

Part 2:

ESD – Key principles

ESD requires new knowledge and insights

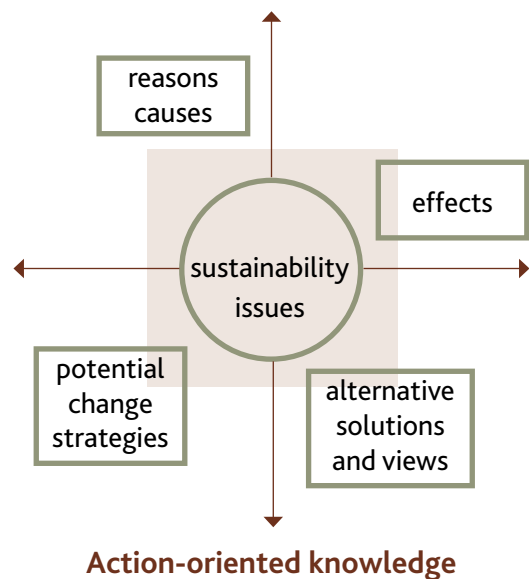
The number of subjects that can be associated with ESD is quite high. It is impossible to discuss them in great detail all at once. And there is no need to do this either. What is essential for sustainable development can be identified through diverse content, themes and projects.



Key elements for ESD are knowledge and an understanding of:

- ✓ the interdependence of ecological, economic, cultural, historical, ethical, technological, social and political phenomena;
- ✓ the time and space dimension of sustainable development: what we do *now affects* the *future* and what we do *here affects* others *elsewhere* in the world;
- ✓ the uncertainty that characterizes sustainability issues and the associated precautionary principle
- ✓ earth's capacity to shoulder this burden
- ✓ biological, cultural, social and economic diversity

Knowledge about specific sustainability issues should not be limited to knowledge about the effects of the problem. Knowledge about the main reasons for the problem, potential change strategies and alternative solutions and views also have to be covered.



(Jensen & Schnack, 1997)

Reflection questions:

- ⑤ Are sustainability issues reviewed in their entirety: from an ecological, technological, social, economic, political, cultural, historic, ethical, aesthetical, etc. angle?
- ⑤ How are the interests of / the consequences for the present and the future addressed here and elsewhere?
- ⑤ How is the target audience prepared for dealing with uncertainty as a part of daily life?
- ⑤ How is attention paid to reducing future risks?
- ⑤ How is attention paid to the limited capacity of our planet as an ecosystem?
- ⑤ Does the target audience understand (biological, social, economic and cultural) diversity?
- ⑤ Are short-term and long-term effects of the decisions made compared with the alternatives to these decisions?
- ⑤ Are the root causes (and not just the immediate causes) of sustainability issues addressed? How?
- ⑤ How is the target audience encouraged to look for alternative developments and changes for the future?
- ⑤ Does the target audience gain an insight into strategies that could lead to social change?
- ⑤ How does the target audience gain an insight into different interests, stakeholders and relations of power?

The student social workers at Arteveldehogeschool in Ghent were asked to write a paper on a sustainability issue of their own choice for the subject of 'Sustainable Development':

'After a problematising historical explanation of your subject, analyse it from a social, economic and ecological perspective. In the last chapter of your paper you should think in function of the future and weigh every possible long-term solution. Your conclusion should consist of a personal conclusion as regards the selected sustainability issue.'

Students elaborated on such subjects as food miles and consumer behaviour, money and sustainable development, gold fever in Peru, water scarcity and conflicts worldwide, ecopsychology in the margin of climate wars, the effects of logging on indigenous people, etc.

Source: Monsecour, F. *Examination assignment Sustainable Development*, Ghent: Arteveldehogeschool.



Future primary school teachers at XIOS Hogeschool Limburg are given a similar assignment. Students have to develop a theme in a paper in the frame of the elective module, 'sustainable school'. They outline the issue and try to relate it to the three pillars and the time and space dimensions of sustainable development. They then present their paper to their fellow students, who are encouraged to ask critical questions.

The aim is to ensure that students understand a given aspect in the frame of sustainable development. Themes that were covered include for example: 'climate sceptics talk', 'biofuels: a subject that has lost

much its sense of purpose', 'green energy: affordable for citizens and industry?', 'EVA (Ethical Vegetarian Alternative) goes head to head with meat eaters', 'soy: praised and reviled', etc.

Next to this the students are asked to elaborate an educational package at the request of a partner. In so doing they learn to translate the theme to educational practice. In this frame students for example developed the educational package, 'Ik snoep van de aarde' (I nibble at the world) in cooperation with Heempark in Genk, as well as a package for the site of the Thousand-Year Old Oak in Lummen at the request of the Lage Kempen Regional Landscape Administration.



Source: Figure: Stadsbestuur Genk



Source: Quanten, E. *Educatie voor Duurzame Ontwikkeling* [unpublished], XIOS Hogeschool Limburg.



Concepts that lend themselves perfectly to translating the limited capacity of our world in an educational manner are the ecological footprint and Earth Overshoot Day. The ecological footprint indicates the amount of land that one person, one group or one country uses to provide in his / her needs. The calculation of the ecological footprint makes clear that the footprint of the total world population exceeds our planet's capacity, but also that earth's resources are clearly unevenly distributed. Earth Overshoot Day is the day of the year on which we start consuming more of the earth with all of humanity together than what earth can produce in terms of resources over one year. In 2010 we started 'living beyond our means' from August 21st onwards in ecological terms.

More information on this subject can be found at www.footprintnetwork.org, www.voetafdruk.be en www.voetzoekers.be. There is a lot of educational material available that is based on the ecological footprint: Handbooks, educational packages, theatre performances, exhibitions, games, campaigns, etc.

We can also use the *Serieus Gek Geld Spel™* (Seriously Mad Money Game) to gain an insight in the alternatives to a situation that we take for granted. This game wants to show people how different monetary systems have a different impact on society and the economy.

The *Serieus Gek Geld Spel™* is not competitive. It lets people experience the basic concepts of public funds in a fast and playful manner and teaches them the distinction between old and new money. It shows participants how conventional money and public funds are different things; what is the impact of the difference between these two monetary systems; what is the value of using both monetary systems and how public money systems can be used without risk.

'The twins, Sinbad and Aladdin, and their families lived in harmony for many years. But now their father, King Midas, is dying. The brothers saw this coming and have agreed to split the country in half; Sinbad and Aladdin each will become king of their own part.

For years they have thought about a thorough reform of their monetary system and now they have a great opportunity for an experiment. They agree that Sinbad will maintain the current monetary system, which we now have, and that Aladdin will use the new monetary system that they invented together.

As part of a competition they decide to build a new capital in their respective countries in just ten years. After 10 years, the monetary system of the person who builds the most beautiful city where people are happiest will also be introduced in the other country. In which city would you like to live?'

Sources: <http://aardbron.nl/serieus-gek-geld-spel/> and <http://muntuit.eu/serieus-gek-geld-spel/>

WWF wants youngsters between the ages of 14 and 16 and classes of the second stage of secondary education to explore the ecological, social and ethical impact of their mobile phone.

Moob-X is a technology fanatic who loves the latest generation of mobile phones. From behind his webcam he shows students around www.moobx.net and lets them explore every aspect of their mobile phone. He proposes six games to young people in which they can become a character: a technician, an adman, a manager... Or themselves. They always find out unexpected things

about their mobile phone. In each game the players make use of the available background information to complete their assignment successfully and to score as many points as possible.

For teachers of the second stage of secondary education Moob-X also makes an educational file available. It can be found in the separate 'teacher space' on the website.

More information: www.moobx.net



'Vlucht uit Tuvalu' (Flight from Tuvalu) by the De Vroente nature education centre wants to explain the idea of sustainable development and the limited capacity of our planet by means of an active outdoor game for young people.

The game is about dealing with raw materials in a sustainable manner, taking into account each other, keeping the future in mind and the idea that everyone 'wins', even Earth, if we work together.

More information: www.milieueducatie.be and www.devroente.be

ESD encourages systems thinking

Increasingly we are faced with extremely complex social phenomena. They are characterised by a strong interdependence of various factors. Ecological, economic, cultural, historical, ethical, technological and socio-political issues all have their impact on our society and also influence each other.

Sustainability issues therefore require an integrated approach whereby the various aspects should not be separated from each other. Establishing links and systems thinking are crucial when working with ESD, although this is still not very established in our society.

Systems thinking can be put into practice by taking the following basic principles into account:

- ✓ study the whole issue rather than aspects of it
- ✓ look for dynamic relationships rather than for linear cause-consequence chains
- ✓ pay more attention to processes than to facts
- ✓ try to discover patterns rather than looking for details



Reflection questions:

- ⑤ Are themes and questions addressed in an integrated manner?
- ⑤ How does the target audience gain an insight into the interdependence of all living, creatures and the ecological, economic and social system in which we live?
- ⑤ How is the complexity of sustainability issues clarified, in line with the capabilities of the target audience?
- ⑤ Are things not simplified too much?
- ⑤ How does the target audience have an opportunity to discover dynamic relationships and interdependencies?
- ⑤ Does the target audience learn that change in one of the aspects of a phenomenon can affect the whole system?
- ⑤ From which various (scientific) disciplines are theories and ideas used?
- ⑤ Are facts and details transcended by searching for processes and patterns?

In its environment and health project 'De wereld van DALY' (DALY's World), the nature and environment education centre (NMEC) De Helix uses a variant of Milton Bradley's Jenga game to explain the complexity of sustainability issues and to promote systems thinking.

HOW THE GAME IS PLAYED

Jenga is a game consisting of 54 wooden blocks that have to be stacked on top of one another to build a tower. Each block has a number corresponding with a projected photo of an animal, plant or ecosystem.

The group is split into four and sits down around the tower. Each group takes turns to draw a block from the tower. The group that makes the tower collapse loses.

The main theme of the Jenga game is the loss of biodiversity: drawing one block from the tower amounts to the modification of a plant, animal or ecosystem.

In the case of each plant, animal, ecosystem you learn more about the causes and the importance of biodiversity and about plants, animals and ecosystems under pressure.

Once the tower collapses, the game ends.

In 'De wereld van DALY' (DALY's World), this Jenga game is linked to the problem of the loss of biodiversity. It illustrates the complexity of this phenomenon and how much uncertainty is associated with it. One by one blocks (species or ecosystems) can disappear from the system but at some point one block will suffice to make the whole tower collapse. It is impossible to predict when this will happen.

More information: NMEC De Helix – www.dehelix.be

A number of visual aids are particularly suited to encourage systems thinking. They are useful in many situations and in the case of different target audiences.

There are several benefits to using such resources: they offer opportunities to deal with the various forms of intelligence; they provide a framework to better deal with the enormous amount of information coming at us; you can structure knowledge and facts with them; they clarify relationships and connections and lead to a deeper understanding of

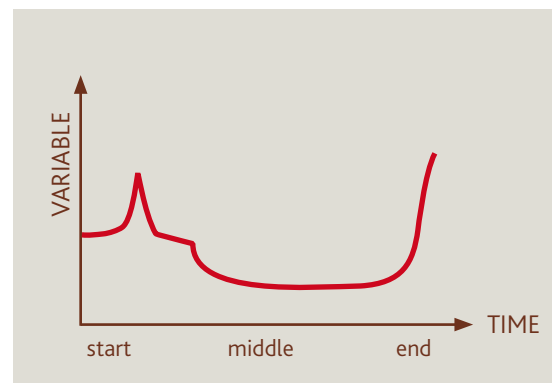
reality; they show that the world is complex; they give rise to communication, they optimise self-reflection, etc.

Behavioural pattern charts

Systems thinking is aimed at seeing and understanding the connections between components or elements. These components are also called 'variables'. Through behavioural pattern charts we can show a pattern of change over time, i.e., the reduction or increase of a variable. These are the most elementary and simple resources of systems thinking.

Working with behavioural pattern charts generally involves three consecutive steps:

1. Describing a problem. This can be done by narrating a picture book, reading a story or studying an informative text.
2. The search for the key variables: what are the key factors that play a role in this story? What increases or decreases in the story? The careful search and formulation of the variables is one of the most important and difficult aspects of systems thinking.
3. Drawing the pattern of the variable(s) in the behavioural pattern chart. The line in the graph shows how the variable increases or decreases over time.



example of a behavioural pattern chart stimulating systems thinking

Time is always indicated on the horizontal X-axis, the variable (the 'behaviour' that changes) is on the vertical Y-axis.

Relationship circles

Behavioural pattern charts are an excellent preparation for working with relationship circles. Because the chart does not show why something increases or decreases. A relationship circle does.

How? The starting point once again is a problem, a story, a newspaper article, the subject of a biology class, etc. Draw a large circle (on a board, flip chart and / or a sheet of paper) and arrange the most important key elements (variables) in the story around it. Limit the number of variables (5 to maximum 10). The variables have to be able to increase or decrease: this is very important. Look for a variable that causes an increase or decrease in another variable on the circle and draw an arrow from the cause to the effect. Look whether the arrow can point in the other direction and draw the arrow points. Start looking for other relationships between variables and draw the arrows. Let the participants tell their story in the margin of the circle.

Causal loops

One of the characteristics of systems thinking is a different way of looking at cause-effect relationships. The language that we are accustomed to speaking is linear: A causes B. But systems work differently: they consist of 'circular lines', of elements that work together, that influence each other. A does not only cause factor B, but A and B influence each other constantly. This is known as cyclic thinking. In figures with causal loops this mutual influence is shown using arrows. From one element (a variable) to another and back again.

Causal loops can also be used in many situations. Like relationship circles they explain why something changes, while behavioural pattern charts above all show what has changed and how.

Source: <http://www.onderwijsmaakjesamen.nl/bijlagen/systeendenken.pdf>

More information: Jutten, J. (2003). *Natuurlijk Leren: systeemdenken in een lerende school*, Consent, Sittard.

Since the 2007-2008 academic year, the primary school teacher training course at Katholieke Hogeschool Limburg offers the optional course 'sustainable school' to students in their final year.

In the first weeks every educational activity starts with a news item or an article contributed by the students themselves. At first the students try to recognise the pillars and dimensions of SD, but soon they also start to work with relationship circles and pattern graphs. This shows how complex sustainability issues can be.

Elly Quanten, head of the training course: 'This approach contributes to students monitoring the news more closely and becoming more critical and less superficial. Generally speaking you can say that they become more 'sensitive' to the issue, that they are more attentive to it. Moreover I am happy to note that students also discuss these issues at home.'

Source: Quanten, E. *Educatie voor Duurzame Ontwikkeling* [unpublished note], XIOS Hogeschool Limburg.

ESD is aimed at value development

In essence, sustainable development is about the kind of world we want to leave to the generations that come after us. This means making choices and these choices are related to justice. Values and convictions thus play an important role.

ESD should include activities that clarify values and facilitate discussions and from which new values can be created. This can be achieved by working on significant themes in an experience-oriented manner. We learn the most by confronting our own values and beliefs with those of others. Diversity of opinions and underlying values do not constitute an obstacle but are considered enriching. It offers a wider and more varied sounding board against which we can test our own beliefs.

Reflection questions:

- ⑤ How does one encourage the target audience to determine its own position in relation to sustainability issues and to critically evaluate it?
- ⑤ How does one encourage the target audience to examine the effects of one's own worldview and behaviour and to critically evaluate them?
- ⑤ How does one incite the target audience to share one's values and findings with one another?
- ⑤ Are competences such as reflection, showing mutual respect and understanding for one another's values reinforced?
- ⑤ Are values and opinions imposed on the target group or is the target audience given the right amount of space to form its own points of views and make informed choices?
- ⑤ How does the target audience learn to distinguish between factual knowledge and value-based opinions?
- ⑤ Is the target group encouraged to investigate the values and the interests behind opinions? How?
- ⑤ Are values such as justice, equality, solidarity, respect, tolerance and sustainability addressed?
- ⑤ How is critical thinking encouraged in the opinion-forming and decision-making process?



The Den Haag Environmental Communication Department uses choice boxes in order to work on developing values among children and to teach them skills to arrive at informed choices.

An approach in nine steps has been developed. Each step comes with an instruction card for the teacher and for the pupil. Using the instructions on the instruction cards the students formulate their own opinion after an introduction. Dilemmas are used to do this. The often bizarre and unexpected solutions encourage the students to respond. Then the students start examining these questions and their ideas using the Internet. Links to appropriate websites help the students develop a carefully considered opinion. The students use information from the Internet to create a presentation for their classmates. The emphasis is on reflection on the original opinion of the students. The idea is to make students take action. What can I do with the knowledge that I have now? The results of this exchange of ideas are passed on to the next school that borrows the box on a USD stick. In lieu of a conclusion the students respond to the ideas of the previous school. In so doing they make a conscious choice by formulating their own opinions and by gathering information.

More information: www.denhaag.nl

The Earth Charter is a widely accepted 'declaration' about the ethics and values for a sustainable future. The Charter is the result of a global consultation. It was endorsed by 2,500 organisations including UNESCO and the International Union for the Conservation of Nature (IUCN).

The Earth Charter is often used in educational settings. More information on this subject, suggestions, documentation material, etc. can be found at www.earthcharter.org and www.earthcharter.nl (here you will also find a Dutch version of the Charter).

The Teacher Training Department at KH Leuven wants to work on acquiring value-based competences through a Socrates project. In this interdisciplinary project students of the secondary education bachelor defend a premise concerning sustainable development during a public debate with external assessors. In this way students learn to look at the theme based on different perspectives and values.

Source: Lambrechts, W. et al. (2009). *Duurzaam Hoger Onderwijs. Appel voor verantwoord onderrichten, onderzoeken en ondernemen*. LannooCampus, Leuven, pp. 61-62, 76.



A sustainable society needs visionary people. By philosophising with children and young people they learn to think critically about their own values and judgments. They can exchange opinions and experiences, get new ideas and be encouraged to look at something in a slightly different way.

The aim of philosophising with children and young people is to develop a number of basic skills: organising and articulating thoughts and questions, clarifying concepts, listening to each other, finding out that there are different opinions, reasoning based on their own beliefs, arguing positions, analysing assumptions, searching for general principles and views, developing alternative viewpoints, stimulating critical and creative skills, mutual respect and tolerance, etc.

One philosophical question is at the centre of a philosophical discussion: a question that does not have a definitive answer. The topics that may be covered are very varied. There are many opportunities to philosophise about sustainability issues.



Example:

'How bad is it if one bird species becomes extinct?', 'Or the Orang Utan, one of mankind's closest relatives?', 'How bad would you feel if mankind becomes extinct? Why is this bad?', 'If mankind becomes extinct, how much will it cost?', etc.

Is it wrong to nurture ideals or dreams?', 'Is it wrong to make an effort to achieve them?', 'Is it wrong to impose your ideals on others, even if you are sure that this is in everybody's interest?', 'What are your dreams?', etc.

More information:

Anthone, R. & Mortier, F. (1997) *Socrates op de speelplaats*. Leuven: Acco.

Lipman, M. (1999) *Nous. Verhaal en handleiding. Materiaal om te filosoferen met kinderen*. Leuven: Acco.

www.wijsneus.org

www.lerenfilosoferen.nl

www.kinderfilosofie.nl

www.zenopraktischefilosofie.be

Sources:

Sleurs, W. e.a. (2008). *Duurzame ontwikkeling. Hoe integreren in het onderwijs?* Antwerp: Uitgeverij De Boeck.

Roorda, N. (2007). *Werken aan duurzame ontwikkeling*. Groningen/Houten: Wolters-Noordhoff.

Working on value development assumes that the participants can hold a discussion with one another on equal footing. Discussions techniques stimulate this.

In a premise game you formulate a number of clearly defined premises that require an open answer. Participants must take a stand, for example with coloured cards or distribute themselves across the space (position themselves on a pro/contra line, sit down or stand up, position themselves on a continuum, etc.). They give arguments in favour or against. Prepare a sufficient number of sub-questions to help

relaunch the discussion. Sufficient information is important: make sure additional information (figures, research, quotes, etc.) is available.

The 'magic microphone' ensures that everybody gets their say and promotes listening to one another. The participants pass around an old microphone. Only the person with the microphone can talk. The others have to listen. Once the speaker has finished, the microphone is passed on.

Working with concentric circles is a method whereby the participants are divided into two equal groups. The first group is standing in a circle facing out, the second group forms a circle around the first group, facing in. Everyone thus faces an interlocutor. The facilitator introduces a question for discussion. After a while everyone moves up and a new question is put to the group.

The 'fish bowl' works well as a discussion method for larger groups. Divide the participants in two circles: a small circle with a larger circle around it. The participants in the outer circle can only listen; those in the small inner circle can discuss a topic. The people in the outer circle may tag someone from the inner circle during the discussion to take his/her place and contribute an additional argument to the discussion.

The Higher-Lower Sustainability game is a discussion method that has been developed by the Globelink youth service (www.globelink.be). The aim is to consider the choices that we make every day. The game is played in accordance with the usual Higher-Lower concept, but with cards that show visuals from daily life instead of ordinary playing cards. The group is split into two teams. They have to guess whether the object on the next card is more sustainable than the previous one. Every correct guess is

worth a point. In case of a wrong guess, the other team gets to play. The goal is that the teams not only gamble but that they discuss the card – once they see it. How do you weigh things against one another? One thing may have an advantage, but so may the other. The teams have to decide based on a discussion whether they deserve a point or not.

The text bundle 'De wereld op je bord' (the world on your plate / www.kbs-frb.be) contains background information and suggestions for working with controversial themes.

At www.knooppuntdemocratie.be you will find the class series 'En nu jij' (and now it's your turn) on media and debate.

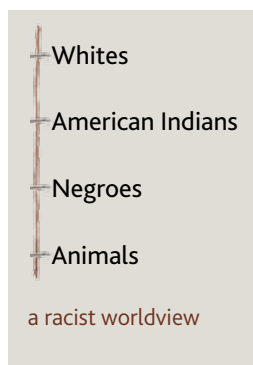
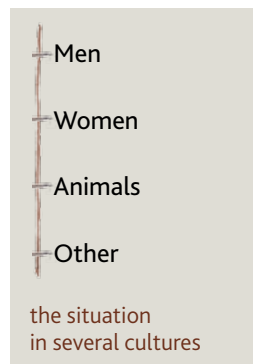
Source: Sleurs, W. e.a. (2008). *Duurzame ontwikkeling. Hoe integreren in het onderwijs?* Antwerp: Uitgeverij De Boeck.



'Visbokaal' - Internationaal Seminarie 'Crossing Boundaries and Expanding Horizons'
(Photo: Rebekah Tauritz, SOM Nijmegen, 2010)

Value schemes are a useful tool to address value development in ESD. In such schemes categories are ranked from highest (= more valuable) to low (= less valuable). They show how certain groups of people see the world.

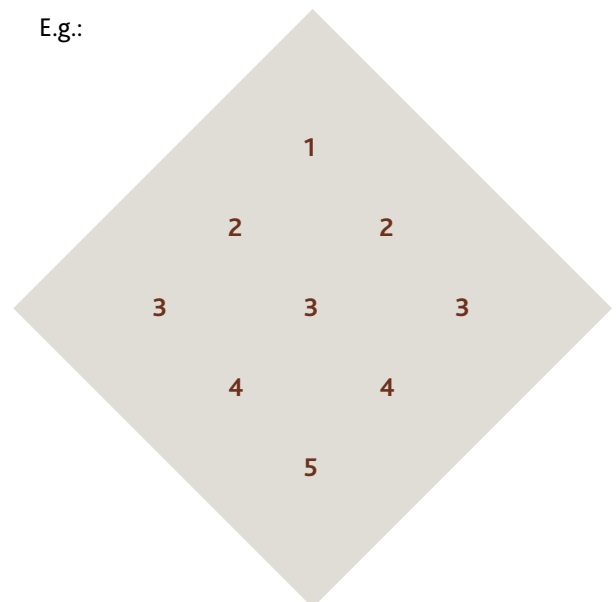
E.g.:



Such value schemes can be discussed by the participants: do they recognise themselves in one or more of them? Or perhaps in combinations thereof? Or would they draw their schemes in a completely different manner?

You can also ask participants to draw up such value schemes themselves in relation to certain sustainability issues. Let them select and rank categories. A classic, vertical ranking is a ranking ladder. You can also work with diamond classifications. Here too the most valuable categories are situated at the top and the least valuable at the bottom, but in a diamond pattern.

E.g.:



Sources:

Roorda, N. (2007). *Werken aan duurzame ontwikkeling*. Groningen/Houten: Wolters-Noordhoff.

Sleurs, W. e.a. (2008). *Duurzame ontwikkeling*. Hoe integreren in het onderwijs? Antwerp: Uitgeverij De Boeck.

ESD takes into account emotional aspects

Values and emotions are intertwined. As a result, education also has to take into account emotional aspects. These are, after all, inextricably linked to our thinking, reflecting, valuing, decision-making and actions. Emotions can be used constructively to improve situations. They are the driving force behind the motivation that ESD has to consider. People who have no emotional attachment remain untouched by the events around them.

ESD aims for 'emotional competence':

- ✓ understanding one's own emotions and feelings;
- ✓ understanding the emotions and feeling of others;
- ✓ being able to express emotions in a significant way;
- ✓ being capable of regulating emotions;
- ✓ being able to use emotions productively, e.g. when solving problems.

Reflection questions:

- 🕒 Is the target audience learning that it may feel involved?
- 🕒 How does the target audience gain an understanding of the emotions and feelings that sustainability issues elicit in them?
- 🕒 How does the target audience gain an understanding of the emotions and feelings that sustainability issues elicit in them?
- 🕒 Does the target audience learn to express emotions and feelings? How?
- 🕒 How is the target audience encouraged to listen to their emotions and to use them as a way of gaining a deeper understanding of problems and situations?
- 🕒 Is an atmosphere of respect and openness created for emotions and feelings? How?

Narrative Design or 'Story Line Approach' is a powerful technique to work on generating commitment and emotional competence. The Story Line principle is applied not only from kindergarten through to Higher Education but also in training sessions in the corporate world. It is a method in which all activities are planned in a storyline. This results in attractive and qualitative education, which, as a rule, is just as thrilling as a good book.

Storylines can be based on a book, but you can also invent your own. Every storyline comes with key questions. These key questions propose open problems to your target audience, which they have to actively solve. Children or adults, for example, are

asked to imagine that they are the main characters of a fairytale, a travel story, a detective novel, etc. They get caught up in the events invented by the teacher/facilitator and events invented by themselves. They walk in the shoes of characters that they created themselves and look through their eyes. Or they are challenged to set up a company together: a waste processing company, an organic farm, a ministry of sustainable development, an environment inspectorate, a conference, etc.

The target audience becomes emotionally involved with the characters and identifies with them. This makes it possible to work on value development and emotional competence within a safe framework.

A few examples:

'Rovers in het Biezebos!' is a Narrative Design for older kindergarten children and students from the first and second stages of primary education, based on the story by Marc de Bel. The students create their own Boeboek characters and experience the story from this perspective. They experience, based on their experience of the fantasy world of the Boeboeks, that what we do *now* has consequences for *later* and that the things that we do *here* also have consequences for *others elsewhere* in the world. 'Rovers in het Biezebos!' has also been developed as a method for youth camps.

More information: <http://edo.lne.be>

The Educational Counselling Department of the City of Ghent has several years of experience working with Narrative Designs as well as providing additional training and guidance to teachers who have been bitten by the 'Storyline virus'. They worked with the following topics among others:

In 'The rainforest' participants become scientists in very different disciplines. They are immersed in the power and beauty of the rainforest. But then something terrible happens ...

'The ecological neighbourhood' turns 6-12yr olds into builders of a new ecological neighbourhood near the school. They create the people who will populate this neighbourhood. One day a new family moves in: they are polluters in every possible way!

More information: www.pbdgent.be

Working on emotional competences can be achieved through dramatization. Ask participants to play a play or to portray a story! The text is set. Participants say their lines and act. They learn how to identify with the situations, problems and people by acting. They also learn how to deal with fear, doubt, frustration, insecurity and stress.

There are of course several variations possible. 'Charades' (mime) is a short game in which participants portray a concept, action or emotion. In play-reading participants receive a text which they have to recite in the right tone of voice without really acting. 'Tableau vivant' is a painting of living persons.



The participants portray a situation by adopting a given pose and remaining frozen in that pose. Facial expressions and body posture are very important in this case.

Pay sufficient attention to the debriefing.

Source: Sleurs, W. e.a. (2008). *Duurzame ontwikkeling. Hoe integreren in het onderwijs?* Antwerpen: Uitgeverij De Boeck.

'Leefsleutels' (Life Keys) wishes to promote the social emotional well-being of children and young people by paying attention to the development of social-emotional skills, social-emotional issues, the group climate and the way in which young people and children receive guidance.

The organisation mainly focuses on education and offers schooling after hours, guidance and materials. For example, there are trainings about interesting and pleasant classroom discussions and about reflection (reflecting on one's own experiences: how do you do this?).

More information: <http://leefsleutels.be>

ESD is action-oriented

The skills to address sustainability issues should best be acquired through personal experience. To this end learning should be focused on a capacity for action. It should help people to cope with feelings of fear and anxiety about things that go wrong and give them the courage and commitment to take action themselves.

We learn a lot by taking action ourselves. These actions are not designed to solve a problem as such, but to acquire the necessary skills to be able to participate as a citizen in society. Not every activity is such an action. These are activities that have been deliberately chosen, on which we should reflect on and which are aimed at finding solutions to a specific problem.

Reflection questions:

- ⑤ How is the target audience encouraged to play an active role?
- ⑤ How does the target audience gain an insight into potential solutions, into the initiatives that people take to this end, etc.?
- ⑤ Can doomsday thinking be avoided?
- ⑤ How does the target audience learn to think in a problem-solving manner?
- ⑤ How is creative thinking encouraged?
- ⑤ Does the target audience learn to apply the acquired knowledge?
- ⑤ In which actions can the target audience take part to influence the problem?
- ⑤ Is the target audience's involvement in actions related to reflection on local and global effects and to the comparison of risks and opportunities of alternative decisions? How?
- ⑤ Is the target audience looking for examples of what has proved fruitful and useful in other situations in order to imagine new possibilities and alternative actions?
- ⑤ Are actions chosen because of their educational value or to solve problems?
- ⑤ How is the personal choice of an ecologically sustainable and socially justified attitude and lifestyle promoted?
- ⑤ Does this reinforce the idea that the individual behaviour of many people helps solve sustainability issues? In which way?
- ⑤ Is there attention for social structures and (policy) processes, when searching for solutions, and not just for individual behaviour and lifestyle?

Many organisations want to involve their participants by setting up a letter-writing campaign.



E.g., the students of the third stage of the municipal primary school 'De Puzzel' wrote a letter to the alderman for education with the request to provide a sufficient number of garbage cans in the playground. The students of the environmental working group of primary school *Scheut* also wrote a letter. They insisted on a number of energy-saving measures. The aldermen have no choice but to respond quickly and the students very quickly see the results of their actions.

Every year thousands of young people take part in Amnesty International's Schrijf-ze-VRIJdag (Write them free-Friday). In 2009 more than 100,000 young people wrote letters for the slum dwellers in Kenya and used the associated educational package. Amnesty letter-writers all over the world work daily to send letters, e-mails and faxes to the authorities of countries where human rights are violated.

Youth houses who are committed to the EcoSpot Charter write to their town council in the hopes

that they will also commit. By signing the Charter, youth houses commit to pay attention to environmental concerns during activities and environmental efforts in their own organisation.

Source: Milieuzorg Op School, *Schrijf een brief*, MOSterd nr. 14, October 2009 – www.ecospot.be – www.aivl.be

In March 2009 the primary school *Zonnekind* in Kalmthout won the energy competition organised by Minister Crevits (Environment Minister at the time). The students developed – on paper – the idea of a shopping cart which generates a sufficient amount of electricity to light a supermarket. A large tube is attached to the shopping carts, which, as is the case with bumper cars, is connected to a magnetic network. Dynamos on the wheels would be able to generate sufficient energy to light the store. The design was also shot into space thanks to the Flemish TV program, 'Hartelijke groeten aan iedereen'.

Source: Milieuzorg Op School, *Tweemaal winnaar*, MOSterd nr. 14, October 2009

Every year, marketing students of KHLeuven, Department of Economic Higher Education organise a comprehensive survey about sustainable development themes among a broad cross-section of the population of Flemish and Walloon Brabant. In recent years the following topics were covered among others: organic and ecological food, attitude and behaviour of the 'cultural creative', mobility and energy.

After the survey the various student teams have full responsibility to further examine one aspect of the theme (study, assimilation, questioning, processing and presentation of results). Students are encouraged - based on the results of the survey - to offer



concrete solutions to the target audience in order to encourage more sustainable behaviour. The results of their project are presented in a public exhibition with both internal and external evaluators and visitors.

More information: www.uteltmee.be

Source: Lambrechts, W. et al. (2009). *Duurzaam Hoger Onderwijs. Appel voor verantwoord onderrichten, onderzoeken en ondernemen*. LannooCampus, Leuven, pp. 67-68.

Edward de Bono developed a practical method to give content and shape to creative thinking processes and to convert thoughts into action: The Six Thinking Hats.

With this method the thought process is divided into six levels of thinking, represented by six different hats. Participants put a hat on in the colour in which they wish to communicate at that time: green for new ideas, yellow to catalogue the bene-

fits, black to indicate drawbacks, red to make the emotional aspect discussable, white to underpin ideas with concrete facts, blue to moderate the process and draw up an action plan.

The hats make it possible to think and say things we never think and say otherwise. By collectively putting on the same hat as a group, maximum use is made of existing ideas and creativity. A method can help people to leave the beaten paths of their normal ways of thinking and approach issues (e.g., sustainability issues) in a different way. It immediately becomes clear that there are many perspectives on the topic in question.

More information: De Bono, E. (1995) *Zes denkende hoofddeksels*. Business-contact.

Source: Sleurs, W. e.a. (2008). *Duurzame ontwikkeling. Hoe integreren in het onderwijs?* Antwerp: Uitgeverij De Boeck.

'Backcasting' is an invented word. It is a variant on 'forecasting', which means to 'predict'. It may not be possible to predict the future from the present but we can do the opposite: we can say something about the present based on the future. Hence the term 'backcasting'.

It is a method, based on future scenarios, to devise what actions are possible in the short term to move towards the desired future images.

In a first step, a series of future scenarios are designed. These are both 'Utopias' (images of a dreamy, pleasant world) as well as 'Dystopias' (doomsday scenarios about a world where everything goes wrong). The most interesting creative process occurs when people with different backgrounds and values are involved in the group.

In step two, these future scenarios are made con-

crete by formulating real goals for the long term, for example, fifty years from now. Then the actions required to achieve these goals are determined. This is done by returning step by step back in time from the desired period in the future to the present. The final step provides for realistic actions that can be implemented now. You can do this for several preferred futures.

In the third step the most appropriate actions are selected and implemented. In the meantime the world continues to develop, partly through the actions carried out, partly due to unexpected events. As a result the scenarios and images of the future change. Thus backcasting does not set out a definitive course for a longer period of time, but just a directive for a shorter period. It is a continuous process.

Source: Roorda, N. (2007). *Werken aan duurzame ontwikkeling*. Groningen/Houten: Wolters-Noordhoff.



Transition towns or villages aspire to prepare the local community for a future with less oil, while simultaneously providing a response to the issue of Climate Change. Motivated residents work locally to create a society that no longer is dependent on fossil fuels. The idea of transition towns comes from England, where the number of initiatives since 2007 has rapidly increased.

There are now many towns and villages where the citizens have taken matters into their own hands to create a defensible community that can defend itself against the inevitable consequences of energy scarcity and climate change. It all starts when a small group of motivated individuals within a community comes together around a concern they share: how can our community respond to the challenges and opportunities, of peak oil and climate change? They start by forming a Steering Committee that wishes to implement the model of 'transition towns' with the intent to convince a significant proportion of the inhabitants of the city or village to launch a transition initiative and to join the initiative.

What follows is a creative and comprehensive process: organising awareness-raising activities, joining forces with existing groups within the community, building bridges to the local authorities, connecting to other transition initiatives, forming groups on all key aspects of life (food, energy, mobility, health, spiritual health, economics, etc. ...); starting projects that help people understand why resilience, reducing emissions and shared commitment are so important and ultimately devising a local Less Energy Plan for a period of 15 to 20 years and implementing it.

Source and more information: www.transitie.be



As part of an energy project of GREEN vzw Brewery Haacht asked the Don Bosco Institute Haacht to formulate a recommendation for the energy-efficient heating of its installations.

'There is a lot of know-how in technical and vocational schools. With the European project, Schools for Intelligent Energy Use (SIEU) we bring together school and society', says Leen Van Gijssel of GREEN vzw. 'A question about energy research is submitted by a customer, in this case Brewery Haacht. The students work with their teachers to find an appropriate response. This recommendation is solemnly presented to them during a formal presentation.'



The teachers and director of Don Bosco are enthusiastic. Caroline Wille and Eli Van Duffel: 'Students will thus experience how things go in the real world'. The work they deliver is really used. That is very motivating for them. Their creativity and technical skills are used.

There are two specific questions that need to be addressed. First, the students will examine the feasibility of solar panels for floor heating, with the existing boiler as back-up. Second, they will examine the possibility for a heat pump to be used in the underfloor heating.

More information: www.greenbelgium.org/sieu

ESD requires 'expanding', 'connecting' and 'integrating'

ESD is based on an organic, relational approach to reality whereby the sum prevails on all the constituent parts. You can work on this by 'expanding' (at the level of perception), 'connecting' (at the level of thinking) and 'integrating' (at the level of taking action) in educational practices.²

Expanding perception means broadening one's horizons. We look not only at the 'here and now' but also at the 'elsewhere-and-later', not only at individuals and private affairs but also at social structures and processes. With ESD you pay attention to the people around you, to remote environments, to other people, to future generations and other species, to the way we organise our society, to the various aspects of sustainability issues, etc. This leads to a greater empathy.

²After: Sterling, S. (2007). *Riding the storm: toward a connective cultural consciousness*. In: Wals, A.E.J. Social learning towards a sustainable world. Wageningen : Wageningen Academic Publishers.

Reflection questions:

- ⑤ Is the target audience encouraged to look at things from different perspectives: children – adults, man-women, city-countryside, past-present-future, local-regional-global, North-South, ecological-social-economic, etc.? Which?
- ⑤ How is the target audience encouraged to empathise with the perspective of others and to develop empathy by identifying with others ?
- ⑤ Is the target audience given the opportunity to give arguments for various premises?
- ⑤ How does one pay attention to power relations and conflicting interests, e.g., in local situations, between social groups, between countries, between current and future generations, etc.?
- ⑤ Does the target audience get an accurate picture of different views, interests and stakeholders?
- ⑤ Is the target audience confronted with conflicting scientific explanations? How?
- ⑤ Are different opinions or conflicting scientific explanations presented in a critical and balanced way?
- ⑤ Are individual aspects as well as social structures and processes taken into account?

The multicultural primary school, Pee & Nel in Leuven uses the diversity in the school to expand pupils' views. When working on the theme of water, students check how water is used elsewhere in the world. If healthy food is the topic, then they examine how people in other countries eat. When focussing on the theme of nature, they look at how nature elsewhere in the world is doing. The school often calls on the parents or grandparents of students who are not originally of Belgian nationality to help. This is an enrichment.

For the annual theme, which was energy, students looked at where countries get their energy. They discovered that all of the oil that we use comes from other regions. And yet we are a rich country. Conversely, countries with ample natural resources are sometimes less prosperous.

Ms Annemie Dermine, a teacher: 'We think it is important that our students realise that life is good here. Many soon realise this once they look into the lives of their grandparents in their native countries.'

Source: Milieuzorg Op School, *Beken je de MOS-kleur?*, MOSterd nr. 12, November 2008.

Contacts with people, schools or projects from the South are particularly instructive. Kleur Bekennen (Show your true colours) has developed the book 'Expeditie Exchange', full of information about how one can set up exchanges with the South. It can be obtained for free at kleurbekennen@btctb.org.

Climate change is changing the living conditions on our planet, here and elsewhere. The WWF (World Wide Fund for Nature) is launching a DVD with testimonials of animals and humans. For them it is high time.

The DVD contains five thematic clips about the impact of climate change (on the north and south poles, on Belgium, on the oceans, on the plant world and on the drought and floods), four interviews with climate witnesses (from Fiji, Germany, Belgium and Nepal) and 35 clips of animals 'telling' their story.

The footage on the DVD is attractive, approachable and a good way to introduce the topic of climate change in class. Teachers who want to elaborate on certain topics can use the existing educational dossier, 'In de weer voor het klimaat' (working for our climate). The DVD is free and designed primarily for teachers of the third stage of primary school and the first stage of secondary education.

More information: www.wwf.be/school/sosklimaat

Through the module 'Diversity: (un) equal opportunities in school and society' 110 graduate students from the Bachelor's in education / elementary education of the Arteveldehogeschool in Ghent find out more about this complex problem. The emphasis is heavily on mechanisms of poverty and social exclusion among indigenous and immigrant groups and their impact in education.

Students work in groups of 13 students led by a lecturer. The program includes interviews aimed at raising awareness with experience experts, an introduction to the welfare sector through visits, literature, a lecture focussing on social analysis, a lecture on the experience side of people in poverty, relations with motivated people working in primary schools, interviews with recent graduates, a movie etc. The new experiences and insights are discussed daily in their group. At the end they present their new insights, which then will also be applied in their work placements. Sometimes comments or questions to politicians are also formulated.

The two weeks of immersion in the problem are meaningful and exciting for students. The approach encourages critical thinking about their chosen profession and the realistic possibilities of education in function of unequal opportunities. One fifth of the student group is also committed to the project 'De-Katrol' Ghent, where they provide support every week to poor (immigrant or native) families every week.

Source: www.ond.vlaanderen.be

Moments of empathy, role-play and simulations on sustainability issues encourage people to look at these problems from different angles and to look at them from the perspective of others.

With experience stories, the dilemma requires careful listening. Then it is relevant to identify with the observed situation and / or individuals in order to understand different opinions and conflicts in this way.

Through experiential workshops you take on a character and you experience his or her life in a real life setting, in another country. Studio Globo (www.studiogloblo.be), Oxfam Solidariteit (www.oxfamsol.be) and Wereldwerkplaats (www.wereldwerkplaats.be) offer such initiatives..

In a role-play a situation is played out. The participants have a given role to work with. They use their own thoughts, motives and feelings and learn to empathize with other points of view. In spontaneous role-plays, participants are free whereas guided

role-plays have a clear structure within which the role-play takes place.

Simulation games are extensive role-playing games that deal with complex problems involving several people or groups. Participants must be familiar with the background of the problem. Information is provided through role descriptions. Sometimes a new element is introduced during the action.

More information: www.spelinfo.be

Very important in such methods is the debriefing!

Source: Sleurs, W. e.a. (2008). *Duurzame ontwikkeling. Hoe integreren in het onderwijs?* Antwerp: Uitgeverij De Boeck.

In the case of young children one should work with what they recognise, i.e., living with your family, playing with other children, being happy, sad, angry or afraid, etc. Starting from another family or a child from another culture is a rewarding way to broaden from various angles.

'Every possible theme can be linked to the family. The different themes discussed in the classroom every year (professions, toys, celebrations, clothes, food, family, animals) take on a more global aspect because they always refer to Julio from Guatemala or Kim from Vietnam. When I broach a topic, children almost spontaneously ask, well what about Julio or Kim? It makes everything very recognizable and tangible to students and it enables comparisons between here and there' (De Bolster, Neerijse).

Source: Salembier, E. (2007). *Wereldwonderwijs*. Brussels: Kleur Bekennen.

Connecting is about understanding relationships, patterns and influences between seemingly independent elements in all areas of life. It is all about recognising that our actions have systemic implications. This leads to a better understanding of reality.

Reflection questions:

- ⑤ Can the target audience look for links between the past, the present and the future in order to arrive at a historic insight into a sustainability question? How is this promoted?
- ⑤ How is the target audience encouraged to establish links between us and the other countries / populations of the world?
- ⑤ How are links established between ecological, economic, cultural, historical, ethical, technological, social and political aspects of a sustainability issue?
- ⑤ Does this teach the target audience to see relationships between choices of individuals and the way we organise our society (economic, social, political, ...)? How?



What is the connection between our diet and agriculture in Brazil? Visit www.sojaconnectie.be and find the missing link.

Have you never wondered about the fact that our daily piece of meat (or fish or soy burger) means that a piece of Brazil enters our house? Most of the soy that we consume, whether directly or indirectly (through a detour as animal or fish feed), is grown on large farms in Brazil and exported to Europe.

This website follows the path of the end product in Belgium and traces it back to the soya plant in Brazil. The consequences of and the alternatives to the massive soya production can be discovered through five characters: a Belgian teen, a Belgian farmer, a Brazilian industrialist, a Brazilian farmer and a Brazilian Indian.

Sojaconnectie.be is the result of the cooperation between FermLocal, Fetraf-Sul, MOS (Milieuzorg Op School/Environmental Performance at School), *WERVEL (Werkgroep voor een Rechtvaardige en Verantwoorde Landbouw/Working Group for Fair and Responsible Agriculture)*, the Flemish authorities and PIME (The Provincial Institute for Environment Education).

Source: www.sojaconnectie.be

In municipal primary school *De Windwijzer* in Laarne the children of the fifth grade discovered rapeseed in the school garden. One of them wrote in the school paper:

'Recently we found rapeseed in our class garden. These days you see whole fields of these yellow flowers in the countryside. The oil from the seeds can be used as fuel. It is a biofuel. The UN and other organisations are against this however. This is because

a lot of people in the world are hungry. Instead of growing rapeseed for driving cars people should grow food crops for people who are hungry.'

Or how ten-year olds can associate mobility and energy with the global food issue...

Source: Milieuzorg Op School, *Koolzaad*, MOSterd no. 12, November 2008.

With the training 'De wereld op je bord' (The world on your plate) Natuurpunt and Oxfam World Shops show that conservation, fair trade and sustainable development are inextricably linked.

'The world on your plate' takes participants on a journey. They explore our own natural resources

and roam – as they listen and taste – on to the far South: the Ethiopian highlands, the Bolivian forests and the green Indian rice fields.

Based on three concrete stories about three Oxfam products the training explains the link between these three difficult subjects. This is interspersed with facts about the fauna and flora of these regions, which highlight these fair trade products in their specific environment.

'The world on your plate' can take place anywhere. It is an ideal activity for local Natuurpunt Departments and local fair trade shops.

More information: www.natuurpunt.be/educatie



With the Gloop-Fanfare (Gloop Brass Band) Djapo vzw wants to teach children to see the connection between themselves and the world. It is a cross-media package which explains sustainable development in a fun, varied but especially understandable way to children with the help of Pieter Embrechts and the animated character, Gloop.

The package consists of a binder with teacher

guides and worksheets, a DVD and a CD and it is adapted to all grades of primary education. The following themes are covered: waste in the Philippines (1st grade), water in Senegal (2nd grade), nature in Ecuador (3rd grade), energy in the Philippines (4th grade), transportation in Senegal (5th grade) and trading in the Philippines (6th grade).

More information: www.djapo.be.

Integrating is seeking positive synergies and anticipating on the systemic consequences of actions. You act integrally based on the realisation that the whole is always greater than the sum of the parts. This leads to more responsibility.

Reflection questions:

- ⑤ How does the target audience learn to take into account the links between ecological, economic, cultural, historical, ethical, technological, social, and political aspects of a sustainability issue when making choices or decisions?
- ⑤ How does the target audience learn to take into account relationships between us and the other countries / peoples of the world when making choices or decisions?
- ⑤ How does the target audience learn to take into account the links between past, present and future when making choices or decisions?
- ⑤ How does the target audience learn to take into account relationships between individual behaviour and the way we organise our society (economically, socially, politically, ...) when making choices or decisions?
- ⑤ Is diversity used as an opportunity to broaden the choices for change? How is this promoted?

Many schools integrate Fair Trade in their (purchasing) policy. If students are involved in this choice, they learn a lot from it. .

They can also choose to open a fair trade shop at school. This can be a one-off sale of Fair Trade products or involve a structural fair trade shop operation: a real shop during lunch break or immediately after school where students, parents or teachers can buy things. More information on this in the manual 'Wereldwinkel op school' (a fair trade shop at school - www.oww.be).

Source: Salembier, E. (2007). *Wereldwonderwijs*. Brussels: Kleur Bekennen.

The following method wishes to incite people to take into account themselves, here and now, but also others, and later elsewhere in the choices that they make. The exercise also shows how our individual choices and behaviours are related to the way society is organised.

Have participants write down five products that they believe may change their life in some way.

Then they need to write down for each product three reasons why they would like to have this product. In other words, which added value do these products contribute or which problems do they eliminate?

In a next step they will look into the impact for each product of the production process in environmental and social terms. They should write down at least two effects. These can be positive or negative consequences.

Discuss a number of examples. Which effects do their choices have on others and/or for the environ-

ment? Which consequences do they have for themselves? Which of these effects will have the most impact in the long term? Are there products which prove to be a positive choice for themselves, the others and the environment? Which things would they buy in spite of the negative impact on others and/or the environment? Why? Which not? Why not? Etc.

Source: Sterling, S. (2005). *Linkingthinking*. WWF Scotland.

In 2001 Community Development Ghent launched the 'Sustainable House' project in the Dampoort district; it is a meeting place on energy, waste and housing where residents can go for a free exchange, information, demos and to learn. The organisation searched for solutions together with the residents to achieve greater comfort and cost savings: energy saving light bulb fairs, a working group for small energy efficient improvements, participating in the 'energy districts' project, etc.

From 2005 until 2007, in cooperation with the City of Gent, the pilot project, 'Building block renovation in the Dampoort district' was organised. 83 of the 218 houses were renovated in function of the residents and the block and in a sustainable manner. Anyone who participated benefited substantial financial compensation, technical advice, monitoring of the works and administrative support in applying for loans and premiums.

Source: De Regge, M. and Van Elslander, M. (2004), *Bouwblok-renovatie bouwblok Duurzaam Huis*. Stad Gent and RISO Gent, Ghent.

More information: www.samenlevingsopbouwgent.be



Building block renovation in the Dampoort district
(Photos: Frank Vandepitte and Kristof Gielen)

ESD is content and process

The principles of ESD become evident in the content discussed as well as in the educational process.

Here we list a number of reflection questions that can help you reflect on how an educational **process** is shaped. Key assumptions include participation, integration of ESD in the organisational culture and structures. In addition, several reflection questions that correspond to general principles for a quality educational process and a meaningful learning environment have also been included.

Reflection questions:

Participation:

- ⑤ Is the target audience sufficiently involved and are the concerns, experiences, ideas and expectations of the participants appreciated? How?
- ⑤ Can the target audience acquire experience in democratic participation processes? How is this addressed?
- ⑤ Is there an environment where everyone feels they can contribute without fear to innovative ideas and suggestions?
- ⑤ How is consultation, dialogue and joint decision making encouraged?
- ⑤ What methods are used to obtain active participation?

Integration in organisational culture and structures:

- ⑤ Does the organisation integrate ESD in its mission and does it develop its own vision on this? How?
- ⑤ Which principles of sustainable development does the organisation use in its own operation (infrastructure, purchases, personnel policy, etc.)? How?
- ⑤ Which opportunities do employees have to increase their ESD skills?
- ⑤ Does the organisation develop ESD quality assurance in line with its own vision and context? How is this handled?

General principles for educational processes:

- ⑤ Are methods and materials used that are adapted to the target audience's level?
- ⑤ Is learning content related to skills, values and attitudes?
- ⑤ How is independent learning and learning in groups promoted?
- ⑤ What opportunities are there for evaluation and improvement?
- ⑤ How is the target audience encouraged to collect information?
- ⑤ Is the aim cooperation to develop relevant information and ideas, to share and compare them? How?
- ⑤ Is the target audience encouraged to take initiatives in local, national or international networks? How?
- ⑤ Are flexible work plans used that are open to change?

- ⑤ How is the target audience encouraged to explore and examine its own living environment?
- ⑤ How are practical activities linked to understanding and theorising?
- ⑤ Which opportunities are there for experiential learning?
- ⑤ How does all this tie in with the world and experiences of the target audience?
- ⑤ Which new experiences does the target audience acquire?
- ⑤ Are relevant, tangible changes in the environment used as a learning opportunity and as an arena for real action? Which ones?

VTI Ostend integrated ESD in its own structures by establishing a 'Sustainable School' working group. It is a mixed team with a total of approximately 10 to 15 teachers.

Ignace Kint and Geert Vervale: 'When you use the idea of sustainable development as your starting point, you automatically have more angles to approach the same theme. You can cooperate better, you create a more powerful message, you work more efficiently, you are more convincing. It also benefits the consistency of your story. The result is greater than the sum of the different parts.

One of those results was a project involving the whole school and which focussed on the ecological footprint. In the third stage this is addressed in the geography handbook, but the working group noted that in other subjects and in other years there was also a margin to cover this subject. The religion teacher thus also discussed the footprint during

lessons about responsibility. The VTI organized the theatre performance, 'Volle Pot' by De Vieze Gasten and a package developed by Milieuzorg op School (Environmental Performance at School) was distributed to all teachers.

Source: Milieuzorg Op School, *Beken je de MOS-kleur?*, MOSterd no. 12, November 2008.

The 'Agenda 21 op School' by GREEN vzw offers schools support to turn sustainable development into their trademark. The project focuses on three essential areas: the pedagogical aspect, management (the school as a 'company') and social interaction (the school is not an island). The power of the project is that the school sets clear priorities, in the short and long term, and builds on what already exists.

Freinetschool GO! The *Reuzenhuis* in Tielt and its branch, De Koorddanser in Meulebeke interpreted the three areas as follows:

The working group will carry out an in-depth evaluation of a lot of *learning and living materials*: nature and environment education, health education, (world)citizenship, traffic safety, philosophy, geography, history, economy and technology. The coherence between the different educations (horizontal line) and between the different levels (vertical line) is preserved here.

At policy level the aim is to create a safe learning and living climate in which they can nurture the children. Attention is paid to consumption, water management, energy consumption, installation and maintenance of the buildings, waste management and health.



The school is not a closed fortress: there is a lot coming at us *from the neighbourhood, the municipality, the world*. We want to integrate the things that come at us, that affect us and sometimes also raise critical questions quite deliberately.

Source: Milieuzorg Op School, *Agenda 21 op School*, MOSted no. 12, November 2008.

With the support of the five Flemish Associations of Universities and Colleges and funding from the Flemish government Ecocampus and the Duurzaam Hoger Onderwijs Vlaanderen (DHO Vlaanderen-Sustainable Higher Education Flanders) project are working on integrating environmental and sustainable development in the curricula and the internal management of Flemish Higher Education.

'Learning networks' of teachers and trainers in Hi-

gher Education provide space among others to exchange teaching materials, to gather inspiration, to meet with colleagues from other colleges and universities and to learn from guest speakers.

Currently there are learning networks about the social work training courses, teacher training, engineering science, economic education, healthcare, media and communication science and tourism. Anyone interested can always join.

More information: <http://lerendenetwerken.lne.be>

KHLeuven defined a college-wide vision on sustainable development and sustainable Higher Education. This vision formed the cornerstone for preparing a college-wide policy plan on sustainable development for the period 2008-2013, focussing on six pillars:

1. *Policy-wise* KHLeuven's ambition is an optimal integration of sustainable development in consultation with all policy areas.
2. KHLeuven is in favour of efficient *communication* concerning its efforts in terms of sustainable development. Next to this efforts are also made to make the communication process more sustainable.
3. KHLeuven's aim is to establish sustainable *relations* with its internal and external stakeholders. KHLeuven would like to respond to the needs and expectations of the field and of society, but also be an inspiration to encourage the field and society to move towards sustainable development.
4. A more sustainable *education* is aimed at preparing students for the *great challenges* that we face

as a global society.

5. A more sustainable approach to *research and services* is aimed at a conceptual and methodological reorientation of this field. To this end more multidisciplinary and transdisciplinary research as well as the integration of research and education are encouraged.

6. In terms of its *own operations* KHLeuven takes concrete actions in function of man, the environment and society. To this end it works to develop an internal environmental care system and commits to implementing a sustainable personnel policy with room for participatory and transparent communication.

Source: Lambrechts, W. et al. (2009). *Duurzaam Hoger Onderwijs. Appel voor verantwoord onderrichten, onderzoeken en ondernemen*. LannooCampus, Leuven, pp. 44-45.

In order to explore a topic in-depth and to encourage independent work a group project is an appropriate way of working. This also offers opportunities as far as interdisciplinary work is concerned and to give students more responsibility for their own learning.

Phased work.

Step 1: division in groups and presentation of the (sub) themes. The students choose the topic.

Step 2: choice of a sub theme and one research question per group. The group draws up a plan and distributes the roles.

Step 3: collecting, analysing and processing information. The results and the group process are assessed and conclusions formulated.

Step 4: preparation and creation of a presentation, research dossier or status report.

Step 5: evaluation of the process and product.

Source: Sleurs, W. e.a. (2008). *Duurzame ontwikkeling. Hoe integreren in het onderwijs?* Antwerp: Uitgeverij De Boeck.



With MOS (Milieuzorg Op School/ Environmental Performance at School) schools join an actionoriented, educational environment project. MOS is an initiative of the Flemish government (Environment, Nature and Energy Department), the five Flemish provinces and the Flemish Community Commission for the Brussels-Capital Region. The project helps schools develop their own environment management system tailored to suit the school. Children and young people work with school staff on various environmental themes: waste prevention, water, energy, nature at school and mobility. In classes, at school level and in the school environment the whole school population works together to contribute to a more sustainable society.

A MOS school strives to achieve environmental profit but also aims to teach children and young people skills so that they can take their civic responsibility in society. Relevant experiences at school contribute to this.

MOS is a method, a way of working. A MOS school strives for quality by paying attention to the following criteria:

1. Vision and planning. This is not just about a few

haphazard actions. MOS schools are given a roadmap with which they can shape the project strategically and make it grow in function of the school.

2. Involvement. Active participation is essential. A MOS school thus involves the entire school population: as many students as possible, personnel, the school's directors, parents... They are given the opportunity to undertake their own actions, e.g., through an environment working group.

3. Communication. A successful project develops a good communication strategy. MOS schools regularly inform all actors and stakeholders - both internally and externally - and is open to their input.

4. Anchoring. Schools that promote themselves as environmentally friendly and sustainable take into account the suggestions and advice of the Environmental Working Group. The MOS activities are spread over the whole school year and environmental care is incorporated in the school regulations and/or school curriculum.

5. Educational benefits. A MOS school makes students more critical about their own behaviour. The students are no longer watching from the sidelines but know how they themselves can make a difference.

At the end of 2009 there were 2,698 MOS primary schools and 954 secondary MOS schools in Flanders. Next to this, 1,250 primary schools and 538 secondary schools already received one or more MOS logos in recognition of their work.

More information: www.milieuzorgopschool.be

Finally, here are some reflection questions to reflect

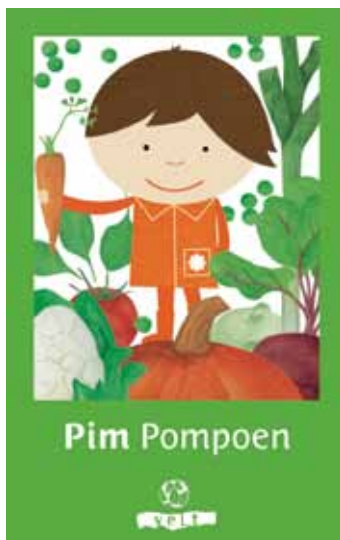
on the **contents** that are discussed in an ESD practice. These relate to the key principles of ESD and come with a number of general requirements for the contents used in educational practices..

Reflection questions:

- ⑤ Are the key elements of sustainable development covered in the content? (see 'ESD requires new knowledge') Which ones (not)?
- ⑤ Are contents framed in a systemic approach? How?
- ⑤ Is there attention to values? Which ones?
- ⑤ Is there attention to emotions? How?
- ⑤ Is there attention to (individual and social) action perspectives? How are these addressed?
- ⑤ Does the content contain well-documented and verifiable information?
- ⑤ Is the content offered in a non-propaganda, correct, smooth and clear language that is appropriate for education?
- ⑤ Is the content correct as regards wording and visuals?
- ⑤ Is the content reliable?
- ⑤ Does the content provide clear and correct sources?

Food is an obvious theme for ESD. You can approach it from many angles: health, environment, global food issue, animal rights, fair trade, etc. There is a wide range of educational materials on nutrition with attention for the key principles of sustainable development.

For example:



Velt vzw, MOS (Milieuzorg Op School/Environmental Performance at School), the Province of Flemish Brabant and KleurBekennen challenge primary schools in Flemish Brabant to take part in the competition '10

out of 10 for sustainable food'. The aim is to let students, teachers and (grand)parents choose delicious, healthy and sustainable food and snacks step by step.

More information: www.10op10.velt.be

The link between sustainability and food is examined in the 'Eigen Kweek (Home-grown)' exhibition created by Ecocampus. This exhibition was specially created for students and travels to the student restaurants of Flemish colleges and universities. You find out more about what a sustainable meal entails and how simple it is to prepare one. On the website you will discover everything you have always wanted to know about sustainable food: you can watch clips with recipes, play sustainable food quizzes and calculate the impact of the meal of your choice.

More information: www.lne.be/campagnes/eigen-kweek

Thursday Veggiedag is a campaign developed by EVA vzw, an organisation that informs the public about a vegetarian diet. It wants to encourage people to not eat fish or meat once a week, for health reasons, for the environment, for animals and for

other people. For 16 to 26-year olds EVA has developed an educational package.

More information: www.donderdagveggiedag.be

On its website Oxfam World Shops has gathered a lot of educational material on 'fair' food. 'Correct & Go' is a teaching method developed by Jeugd en Vrede (Youth and Peace), which uses three converted shopping carts (a cocoa, tea and rice cart) to explain fair trade to young people in the first and second stages of secondary education. **'Chocobasta!'** is a method binder developed by Oxfam World Shops, which includes a quiz, background information, worksheets, a premise game and recipes for young people aged 16 or older (third stage of Vocational and Technical Secondary Education). Centrum Informatieve Spelen and Oxfam-Wereldwinkels together developed the book, **'Tof van Commerce'**, which includes a host of small and big delicious and fair games for children of all ages (8-10, 10-12, 12-14 and +14). The games are particularly suitable for youth organisations. **'Sientjes Sapmap'** is a brochure for primary education about fruit juices and fair trade with musical activities, class proposals and work sheets.

More information: www.oww.be/infomateriaal

In the spring of 2006 Vredeseilanden and the Flemish government organised a competition in the form of a treasure hunt, a Food Hunt! The Food Hunt promotes the use of farm products and fair trade products among youth groups. The treasure hunt was made up of two parts. First youth groups had to search various websites for ingredients for a recipe. Then they took part in a physical treasure hunt on the site of the Mano Mundo Festival in Boom (May 2006). The five winning groups received and enjoyed free food from sustainable agriculture in the summer of 2006.

The Food Hunt was an excellent opportunity for the North-South movement and the environmental movement to work together on the theme of agriculture and sustainable food in the frame of the Millennium Goals. In 2007 Vredeseilanden organised this treasure hunt again.

More information: www.foodhunt2015.be, www.fermweb.be, www.ikbenverkocht.be



Mobility is a versatile theme in which several key elements of sustainable development can have a place. It lends itself perfectly to apply systems thinking,

brings values to the fore and elicits emotions and you can set to work in an action-oriented manner. The condition is that your content is not limited to road safety alone!

What is a Belgian's ecological footprint? What is the cost of a kilometre per car? How much faster are you by bike in the city than by car? What are the benefits of hydrogen engines? How many kilometres does an electric toothbrush cover during its production process? The sustainable mobility card game of Mobiel 21 provides an answer to these and many other questions. It aims to inform pupils in secondary education in a playful way about all aspects of sustainable mobility: ecological, economic and social aspects, health and the different transport modes.

More information: www.mobiel21.be

You will find several suggestions to work towards sustainable mobility in class, in your school and in your surroundings in the MOS theme package for primary education and in the Mobility at School theme package for secondary education.

More information: www.milieuzorgopschool.be

Actions for sustainable mobility can be linked to campaigns that can be launched on this topic. Mobiel 21's Sam the Traffic Snake guides children to school in a safe and environment-friendly manner (www.verkeersslang.be). Komimo's Aardig-op-weg-week (Courteous on the road) and its Heen-en-weer-week (Up and down week) encourage people to vary in traffic (www.komimo.be). And in Ik Kyoto (I Kyoto) the emphasis is on sustainable commuting (www.ikkyoto.be).

'Wereld in beeld' (Focus on the world) is an educational web TV series of reports on various aspects of globalisation. Twelve reports are available for viewing online:

'Saving our food. Farmer vs. agricultural industry'

'The impact of American cotton subsidies on African cotton growers'

'International division of labour. Life in Chinese factories'

'Globalisation and culture. India, home to the software industry and to tradition'

'Saving our health. Poverty will make you sick'

'Saving our welfare machine. Argentina: how a rich country is becoming poor'

'The distribution problem: the gap between rich and poor'

'Migration: where do people feel at home?'

'Saving our planet. Climate change'

'Saving our planet. Overfishing in the Pacific Ocean'

'Saving our planet. Deforestation'

'International division of labour. Where did Philips Hasselt's work go?' (Also available in French)

The initiative is first and foremost aimed at (future) teachers and students in every level of secondary education, but the reports can also be used in other learning situations.

More information: www.wereldinbeeld.be

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