

**Tuesday 10<sup>th</sup> March 12:00 – 13:00**

## **Session 1.1 Advancing Policy**

*Title of the paper: Redesign of the the French National Agenda 21 policy.*

**François Jégou (1); Christophe Gouache (2), Sandrine Fournis (3), Xavier Baylac (4)**

**Abstract:**

Agenda 21 processes emerged from the Rio conference in 1992 and developed since then with various levels of success and local sustainable transformation in the different countries around the world. After more than 20 years, the core Agenda 21 principles are still valid references. But compared to the many sustainable bottom-up movements (from Transition Town to Slow Food) emerged recently from social innovation, citizens' empowerment, participative governance or social networking, Agenda 21 tends to appear old-fashion and less appealing. In France in particular they face a paradoxical situation: Agenda 21 are criticized as top-down, heavy and administrative processes and, at the same more than 1000 local public authorities (municipalities, departments, regions) are actively involved in Agenda 21 and this number is constantly growing.

The French Ministry of Environment, Sustainable Development and Energy, which organizes the national Agenda 21 label, launched in 2013 a large participative redesign process of its national Agenda 21 policy.

The paper will start from a rapid overview of Agenda 21 development in France since 1992 and of the current challenges and opportunities it faces. It will then present the methodology developed to involve for more than one year over 100 stakeholders covering all French territory and all governance levels in a creative and participative process to reinvent and renovate the national Agenda 21 policy.

It will show in particular the range of tools used, mixing off-line and online interactions, involving story-telling, scenario building, simulation and quick prototyping technics issued from the emerging field of design knowledge applied to public policy.

Finally the paper will present the results obtained and the complete transformation of the national Agenda 21 label into a lighter and more useful process for local authorities, based on participation, peer-to-peer interaction, capacity building and mutual learning between stakeholders.

The conclusion will focus the methods used in the case of the French Agenda 21 label presented. In particular it will discuss how action-research, community-driven and participative design, co-creation and direct experimentation with stakeholders, sense-making and peer-to-peer interaction are renewing policy making processes, reconnecting them with users and field realities and stimulating public policy innovation.

*Institution(s):*

(1) Strategic Design Scenarios; (2) Strategic Design Scenarios; (3) French Ministry of Environment, Sustainable Development and Energy; (4) Etcharry Formation Développement

**Title of the paper:** *Unlocking the Potential of Education about Sustainable Lifestyles in Higher Education Institutions*

**Irina Liokumoviča**

**Abstract:**

This paper casts light on the role of higher education institutions in promoting sustainable and responsible living. Colleges and universities are vital institutions for addressing political, social and economic concerns at local, national and global levels. They are gateways into a future that is in our own hands. Institutions of higher education have a profound responsibility to use their intellectual and technological expertise in order to achieve a sustainable future. In an age of globalization and rapid development of information and communication technologies (ICT) people live and work in the complex interdependent society. Therefore higher education institutions are oriented towards preparing their students to think and act as global consumer citizens. Tertiary institutions are seen at the junction of global and local activities. The paper outlines main characteristics of millennial generation to which students belong (e.g. attitudes, values, aspirations, etc.). It considers the issue of what knowledge and key competences are required for students to become engaged global consumer citizens affecting a positive change in their local and global communities. The concept of information literacy and its types are examined. Building ties and promoting cooperation between universities, business representatives, self-governments and policy makers are central on the pathway to sustainable future. The paper reflects on the joint project of Riga Technical university (RTU) and Tallinn University of Technology (TUT) "UseScience" as a collaboration between science and business to respond to current needs. Opportunities of such coordinated effort are analysed. Overall, this will contribute to sustaining life now and in future.

**Keywords:** education for sustainable lifestyles (ESL), higher education institutions, role, collaboration

## Session 1.2 Transforming Learning and training environments

**Title of the paper:** *Social Learning for Sustainability: Advancing community-based inquiry and collaborative learning for sustainable lifestyles*

**Robert J. Didham and Paul Ofei-Manu**

**Abstract:**

The pursuit of sustainable lifestyles is one that occurs simultaneously at individual, collective and societal levels. Education for sustainable development has generally targeted individual learning and behaviour change, although there are several good examples of promoting cooperative and collaborative learning for sustainability in both formal and non-formal education. The subject of collective and societal learning and transformation for sustainable lifestyles has been less examined in research, and only a limited number of studies have attempted to understand the potential processes and benefits of social learning that occur in such opportunities.

A new perspective to social learning is evolving which combines ecological and educational approaches and aims to explain how sustainability learning can occur collectively and as a society. In this work, an analytical framework is developed to examine social learning processes across a comparative evaluation of five case studies from projects by Regional Centres of Expertise on ESD in East Asia. The main features of community of practice theory are examined across the cases as potential conditions for establishing an effective learning community. The action steps of experiential learning and cooperative inquiry theories are examined as potential components of a social learning process. The comparative case evaluation demonstrates a high level of benefit in achieving effective social learning in sustainability initiatives which contributes to smooth implementation of new initiatives as well as strengthening their overall efficacy and longevity. From the findings, three main procedural steps to improve effectiveness of social learning for sustainability are identified and elaborated.

**Key Words:** Social Learning, Sustainable Lifestyles, Community of Practice, Experiential Learning, Cooperative Inquiry

**Position to Conference Themes:** Either as Learning theme or as Multidimensional theme (covering learning and responding)

**Title of the paper: *Discipline and Methodology in ESD/ESC Research***

**Declan Doyle & Mariana Calheiros Lobo**

**Abstract:**

Sustainable Development, Sustainable Consumption and Sustainable Production are multidisciplinary fields attracting researchers from across and beyond the academy. These researchers are using different philosophies and methods to frame and inform their work. This paper asks whether a discrete discipline is being established or if ESD / ESC are fields of study researched from a number of disciplinary perspectives. The purpose of the article is to identify the disciplines involved in researching ESD/ ESC and the methodologies used by the researchers. This will allow academics and others involved in the field to assess the current position of ESD / ESC research and the pathways to its future development. The terms 'environmental education' (EE), 'education for sustainable consumption' (ESC) and 'education for sustainable development' (ESD) are used interchangeably in the literature. This paper reflects the terms those used by the various authors and uses the term 'Education for Sustainability' as an umbrella term.

The paper examines academic journals that are peer reviewed and research based. Use was made of the ISI Web of Knowledge citation reports. A set of key words was designed and used as search terms. The bibliographic analysis produced provides an overview of the key sources and shows the disciplinary background of the author, the primary focus of the journal and the methodological approach used.

There is currently a strong emphasis on using constructivist frameworks in researching sustainability issues. The analysis shows that Education for Sustainability involves the adoption of interdisciplinary / trans-disciplinary approaches to learning and teaching in conjunction with collaborative learning. Research is sparse in some disciplines, for example the arts and humanities but more commonly available in fields linked to science-based subjects such as engineering and geography, with business and management also well documented.

Keywords: discipline; sustainable development and consumption research; journal articles; methodology

## Session 1.3 Building the capacities of educators and trainers

**Title of the paper:**

***“Discovering What Matters”: Designing a values-centred toolkit for Education for Sustainable and Responsible Living (EfsRL) in secondary schools***

**Gemma Burford, Elona Hoover, Arthur Dahl & Marie K. Harder**

**Abstract:**

Research has shown that disseminating knowledge about sustainability issues is rarely enough, in itself, to motivate long-term behaviour change. Focusing on global problems such as climate change, biodiversity loss and poverty often serves to increase people’s sense of despair and helplessness, and may result in apathy rather than positive action. An alternative approach, however, is to help people to reflect on what is important to them in life – their core *values* – and to envision the type of future that they want on the basis of those values. This approach has already been found useful for closing ‘value-action gaps’ in organisations promoting non-formal education for sustainability.

The first section of this presentation will briefly describe the collaborative research project with civil society organisations, funded by the EU FP7 programme, which constituted the starting point for PERL Workgroup 1. The main section then reports on the work carried out by Workgroup 1 and affiliates to develop a values-centred toolkit for secondary schools. We illustrate how different qualitative sources were used to explore the values underpinning Education for Sustainable and Responsible Living (EfsRL) and how they might be enacted in schools. We then describe the process of translating these insights into a set of engaging, participatory and fun activities - the “Discovering What Matters” toolkit. Finally, we relate some of our experiences of capacity-building with prototypes of the toolkit in different schools, and share a vision for the future.

**Title of the paper: *Learning and teaching what really matters***

**Authors: Wim van Nispen, Hofstad Lyceum, the Hague, the Netherlands**

**Abstract:**

A series of toolkits designed to measure or assess what an organisation does to the people involved have been developed by PERL for secondary schools, based on the WeValue materials (Brighton University). The toolkits enable the measurement of important value linked dimensions that are usually considered hard to measure. This paper will present and reflect on experiences from the process and outcome of testing the student toolkit Discovering What Matters in the UNESCO school Hofstad Lyceum in the Hague, the Netherlands. This secondary school with 950 students and 100

teaching staff has chosen sustainability, peace and human rights, world citizenship and intercultural learning as themes for their activities. It has many exchanges with schools in other countries.

The process to start working with the values learning toolkits started in early 2014 with initial conversations with school leadership and continued in late spring with introduction of the lesson material. The project was enthusiastically adopted and an implementation plan followed that included translation of the material and testing it in all seven 'bridge classes' (12-13 year old students). The lessons from the student toolkit will be integrated in the 'mentor and study classes' between October-December 2014. In the paper we will document the application of the toolkit and particularly the evaluation and reflection phase of applying them that will take place in the school in early 2015. This will enable drawing preliminary conclusions on strengths and weaknesses of this toolkit and directions for improvement.

Key words: values, education

## Session 1.4 Empowering and mobilizing youth

**Title of the paper:** *Challenges and possibilities of promoting consumer education: Case project*

**Taina Mäntylä, Marjaana Manninen, Hanna Turetski, Sissel Annie Husebråten, Anita Forsnäsgrård**

**Work shop:** Promoting cooperation

### **Abstract:**

This abstract is introducing a cooperation project with an international working group and national consumer and education authorities. Nordic-Estonian Consumer Education Group, Finnish competition and Consumer Agency (FCCA) and Finnish National Board of Education were actively involved in the process.

Nordic-Estonian Consumer Education Group composed a document Consumer Competences – a Strategy for Consumer Education (2009) to describe the core of consumer education. After publication of the document the group was asked to study not only competences but also how to teach consumer skills to children of different ages. This took place at the same time as the Finnish curriculum reform, which is based on ideas presented in the United Nations' Convention of the Rights of a Child, where it is stated that teaching must be organized age-appropriately enhancing the child's healthful growth and development.

Traditionally consumer issues have been seen as knowledge and skills, covered in higher grades teaching and responding to the needs of adult life. Usually they have not been taught in lower grades. Finnish government act for the goals of basic education placed the economic and consumer skills as a vital part of know-how that the national education and teaching is to enhance. The basis of national syllabus is taking into account the requirements of different age groups and has thus contributed to the planning of age-appropriate consumer competence.

Nordic-Estonian Consumer Education Group started the project in 2012, aiming to study the contents of consumer education in different age groups.

After prolonged discussions it became clear that it was not easy to set learning objectives age-appropriately based on current research and knowledge. It was also difficult to find broad-based experts on these topics because consumer competences are described as challenges set out for schoolwork and teaching, not directly as learning objectives for pupils. Consumer competence combines the skills, habits, knowledge, attitudes, capacity and will needed to act consciously in different situations as a consumer in a complex world. The continuum of consumer education began to take its form in unison and in cooperation with the Finnish curriculum reform. These two processes were contributing to each other and it can be said that today the curriculum for basic

education in Finland proposes fairly comprehensively the objectives of teaching and learning of sustainable consumption.

**Title of the paper: *Mindfulness and the affective domain in consumer education: illuminating the dark side of the moon***

**Daniel Fischer<sup>1</sup>, Laura Stanzus<sup>2</sup>**

**Abstract:**

In the debate about education for sustainable consumption (ESC), the knowledge base resulting from educational theorizing, empirical research and practical experimentation has grown significantly over the last decade. Much of the work in the field focused on advancing models of learners' capacity as consumers to act responsibly in face of the sustainability challenges, conceptualized under such terms as competency, skills or literacy. These advancements have indubitably broadened the scope of a (too) narrow focus on behavioral change in ESC and provided a more refined and sophisticated understanding of what educational outcomes should legitimately be pursued. However, they are also facing criticism. In particular, they are criticized for overemphasizing the cognitive domain of consumer capabilities and for widely neglecting the question how these capabilities translate into action and behavior.

The research presented in this paper addresses this research gap. It draws on the work in the context of an interdisciplinary research and development project. In the project, educational scholars, psychologists and mindfulness trainers collaborate to design a training program focused on promoting mindfulness in consumption and to test its effectiveness. The concept of mindfulness encompasses the reflection of individual values and actions in each given moment, thus potentially aligning values and behavior sustainably. The paper presents a multidimensional approach to the conference theme: it explores the role of mindfulness for changing consumption practices (*learning*), sketches the conceptual contours of a mindfulness training course tailored to promote sustainable consumption (*responding*) and discusses implications for educational research and capacity building (*preparing and engaging*).

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Keywords: mindfulness, education for sustainable consumption, competency, attitude-behavior-gap

**Title of the paper: A World at Stake – Global Citizenship, Justice, and the Role of Museums**

**Sigurd Solhaug Nielsen and Jørgen Klein**

**Abstract:**

The purpose of this paper is to demonstrate museums' potential for promoting global awareness and social justice. The paper presents and analyses a controversial Danish exhibition titled *A world at stake*. The travelling exhibition was based on the concept of the United Nations' Millennium Development Goals and designed as a full-scale board game covering an area of 250 m<sup>2</sup>, large enough for a class of pupils to take the role of live playing pieces. The exhibition was launched in 2010 by the Danish science centre Experimentarium, and circulated in Denmark, Sweden, and Norway until mid-2014. The target group was mainly pupils from primary and secondary schools. The exhibition was controversial due to its presentation of an unjust world in an unjust manner. The paper critically analyses the exhibition and its embedded pedagogy by drawing on the concepts of global citizenship and social justice.

Keywords: global citizenship, museums, Millennium Development Goals, poverty, social justice

## **Session 1.5 Accelerating sustainable solutions at the local level**

***Title of the paper: Education for sustainable consumption at the workplace.***

**Ulf Schrader**

**Abstract:**

People learn for sustainable consumption (SC) not only – and usually not mainly – at schools, but in all spheres and periods of their lives. On workdays, many employees spend most of their time awake at the workplace or with commuting. Many of these employees see themselves as consumer citizens who want to practice SC. Employers who treat their employees as human beings and not only as human resources, could take into account these “private” values and attitudes by contributing to education for sustainable consumption (ESC).

The paper will present the concept of ESC at the workplace and the results from a representative survey in Germany. The data show, that there is a huge willingness to learn for SC at the workplace. Employees who experience support for sustainable consumption by their employers show higher satisfaction, retention, and commitment levels. A promising way to realise ESC is peer education, since especially employees with a high level of environmental consciousness show the willingness to bring in their SC-related ideas and experiences at the workplace and to support colleagues on their way towards responsible living.

The paper concludes with recommendations how ESC at the workplace may be put into practice.

***Title of the paper: Go Beyond ‘Just Recycling’ Routine: To Create a Sustainable Campus***

**Ayşegül Özbebek Tunç**

**Abstract:**

Sustainability have been a widespread issue among all shareholders of the world. People are interested in this concept at multi-ways such as individual, educational, social or economical levels. In this paper, we focus on the sustainable education areas, in short, campuses. We have an analysis for the oldest state university in Turkey to create a paradigm which goes beyond ‘just recycling’ idea. The paper aims to propose a model regarding to how universities lead to societies about sustainability. This model includes some components like partners, practices, solutions, etc. The best important component of this model is sensitivity to historical areas because of the its location and foundation year, 1453. We provide a set of soft and hard drivers to activate green campus idea which should not remain unfulfilled on just strategic plans. This paper also mentions about some obstacles to conceptualize sustainability and incorporate it to overall culture in Turkish universities. It aims to

explore the difference between expected and realized situation. This research also includes some comparisons with some other universities in the world.

Key words: sustainability, modeling,

## **Symposium 14:00 – 16:00 “Ethical transformation and Education for Service at the individual, Community and Institutional Level”**

Organized by the International Environment Forum

### **Title of the symposium: A Multi-level Approach to Ethics, Service and Responsible Living**

**Arthur Lyon Dahl**

#### **Abstract:**

From a systems perspective, it is obvious that responsible and sustainable living cannot be achieved by each of us acting alone. Individuals are part of communities that can either reinforce or impede sustainable actions. Learning the pleasure that comes from serving others in the community can provide positive reinforcement and build hope in the future. Just as an ethical approach can motivate individuals to live more responsibly and devote their lives to service to society, so it is important to unite communities around a shared vision of ethical sustainability values.

Many of today's sustainability challenges come from the irresponsible behavior of governments, businesses and other institutions, that are failing to provide a values-base for sustainable lifestyles. While governments are supposed to serve their citizens and often adopt lofty goals, the lack of ethical principles can easily lead them in other more self-serving directions. Businesses also consider too often that their ends of growth and profitability justify any means; if they are to contribute to a sustainable society and become socially and environmentally responsible, they also need to incorporate ethical principles and service to society into their institutional framework. If there is coherence between ethics and values at the individual, community and institutional levels, action at all these levels can become mutually reinforcing.

[introductory paper for the IEF session on Ethical Transformation and Education for Service at the Individual, Community and Institutional Levels]

Keywords: sustainability, ethics, individual, community, institutions

### ***Title of the symposium: An Evidence-Based Design Template for Effective Values and Behaviour Change Interventions (BCI)***

**Ismael Velasco**

#### **Abstract:**

In the context of the Millennium Development Goals UNESCO identified the “knowledge-action gap” as a key challenge, where understanding what needs to be done is not followed by concomitant

action. Education for Sustainable Development (ESD) as defined by the United Nations aims to “encourage changes in behavior that will create a more sustainable future in terms of environmental integrity, economic viability, and a just society for present and future generations.” Yet even after 20 years evidence-based interventions that measurably achieve this are rare.

What, then, are key design elements which, incorporated into a purposive educational intervention, can generate positive and sustained values and behavioural change? This is the question this presentation will seek to answer. A generic design template that others can apply for successful Behaviour Change Interventions will be proposed, with moderating human and institutional factors. This template has been “reverse engineered” from a research-established example of “best practice”, delivering demonstrable values and behaviour change in a significant number and proportion of participants, replicated across over 100 countries and diverse social and institutional contexts.

***Title of the symposium: Valuing and Evaluating Leadership that Matter***

**Javier Gonzales Iwanciw, Onno Vinkhuyzen -, Sylvia Karlsson-Vinkhuyzen, Fabiana Mendez Raya**

**Abstract:**

Transforming society towards SCP requires more from leadership than what current leadership models provide due to the complexity of the enterprise and the value dimensions involved. Concepts and frameworks such as complexity, collaborative, ecological, and sustainability leadership have been proposed at the level of theory. In parallel many institutions provide leadership training aiming to both motivate and enable students to become leaders for sustainability. Many of them are however not sufficiently comprehensive and often do not cover the ‘inner’ value dimensions essential to generate the necessary vision, understanding and motivation, or they lack tools to evaluate the impact on the value dimensions.

In this paper we seek to bridge this gap by adapting the indicator framework developed within the We Value project (Brighton University) to fit the training in the Moral Leadership Framework (MLF) developed at Nur University in Bolivia. This leadership model has the potential to support individual and collective transformational change amongst others because it addresses the value dimensions comprehensively. We first briefly describe the MLF and the We Value approach to indicators and then proceed to describe how the We Value indicators can be adapted to the MLF – and where they need to be expanded. This is followed by analyzing a first pilot test of the indicators on students (midcareer professionals) who receive 80 (semester hours) training in the MLF at Nur University. A

concluding section discusses the learnings from the application and directions for further work.

Keywords: transformation, values, leadership, indicators

***Title of the symposium: Responsible Institutions – Responsible Individuals?***

**Author: Sylvia I. Karlsson-Vinkhuyzen**

**Abstract:**

The importance of personal choice and commitment for responsible living in order to transform societies towards more just and sustainable ones is undeniable. It is as undeniable that unless individuals bring those responsible choices with them into their institutional setting the possibilities for individuals to live responsibly will be severely constrained; the physical, social, educational etc. infrastructure required will not be created.

In this paper I focus on the role of institutions in enabling responsible living by proposing the way institutions relate to international norms. The international community of states have a good track record of agreeing on setting goals for what a 'Future We Want' should be like and formulating obligations, albeit often vague, for what states should do to contribute to such a future. Currently only states are formally obliged to comply with international law in its different forms. In a situation when states do not take their responsibility for achieving these visions sufficiently seriously and when states are not able to achieve them without serious commitment from other institutional actors and individual citizens, it is time to reconsider what responsibility institutions beyond states have towards international norms, including in the domain of sustainability and justice. I will do three things in the paper: firstly in more detail outline the rationale for non-state institutional actors to take on responsibility towards implementing international norms; secondly review relevant normative theories for allocating responsibility in a governance system; and thirdly identify some practical strategies for how to facilitate such responsibility.

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Key words: responsibility, institutions, international norms, normative theories, governance

**Wednesday 11<sup>th</sup> March 12:30 – 13:00**

**Session 2.1 Advancing Policy**

***Title of the paper: Rethinking How We Measure Corporate Social Responsibility: A Comparative Analysis of Four Consumer-Oriented CSR Ranking Systems***

**Ellis Jones**

**Abstract:**

In an attempt to find a more valid and reliable source of corporate social responsibility (CSR) data on companies, this research compares four CSR measurement systems produced specifically for consumers in the US, UK and Australia. Of particular interest is the level of consensus and diversity in: 1) definitions of CSR, 2) methodologies for measuring CSR, and 3) the consistency of outcomes [i.e. how company CSR rankings compare across ranking systems]. Content analysis is utilized to examine definitions and methodologies (including books, websites, and smart phone apps for each system), and statistical analysis (means, standard deviations, ANOVA tests) is used to compare the CSR rankings of the 106 companies common to all four systems from best to worst CSR performers. The findings demonstrate that while each system's CSR definitions are closely aligned, measurement methodologies vary significantly, and outcomes are considerably divergent with consensus on only 18% of company rankings. Recommendations include a call for more empirical measurement focused specifically on overall CSR behavior (with an emphasis on indicator validity) rather than generating additional research on CSR self-reporting, correlations with corporate reputations, or relying on investment-based research agencies. A final assessment concludes that without the accurate measurement of CSR, ethical consumers cannot effectively translate their spending into an efficient system of economic rewards and punishments for companies in order to facilitate the social change that CSR and ethical consumerism promise to deliver.

Keywords: corporate social responsibility, CSR measurement, ethical consumerism, ethical consumption, political consumerism.

College of the Holy Cross, Assistant Professor, Department of Sociology & Anthropology, 1 College Street, Worcester, MA 01610.

***Title of the paper: Strengthening the Implementation and Practice of the Global Action Programme on ESD: Outlining the Features of Effective Educational Assessment of ESD.***

**Paul Ofei-Manu and Robert J. Didham**

**Abstract:**

In order for future implementation and practice of education for sustainable development beyond DESD and particularly the Global Action Programme on Education for Sustainable Development (ESDGAP) to have real impact, its primary goal(s) must be clearly defined and assessable, and the learning targets and performance assessment criteria need to be well-formed. Conducting such assessments in formal educational settings is challenging due to the already established and predominant approaches to assessment. To be able to establish an effective assessment framework requires due attention to the features of the existing forms of educational assessment systems that have inherently narrow foci and are reliant on test results. This is in direct contrast to ESD's complex nature of assessing educational content and learning processes in addition to educational outcomes, its pedagogies and learning objectives and methods that incorporate and encourage a holistic view of qualitative performance in education.

The paper compares the features of effective ESD assessment with those of existing forms of education namely Traditional Education and 21st Century Skills Education in the context of aspects including 1) content and scope of assessment in relation to the learner, 2) assessment tools, frameworks or guidelines, 3) elements for assessment/to be assessed with special reference to the Learning Performance Framework developed by the authors, 4) assessment feedback and 5) characteristics of the assessors. The paper further describes educational assessment across scale from the classroom to international levels and attempts to discuss the implications of particularly international assessments to effective ESD implementation, practice and assessment.

**Keywords:** Education for Sustainable Development, Global Action Programme, assessment, educational, implementation

## **Session 2.2 Transforming Learning and training environments**

### ***Title of the paper: The Role of Education for Consumers' Food Choice After the Accident at Fukushima First Nuclear Plant***

**Yoshiaki Takahashi**

#### **Abstract:**

After the Great East Japan Earthquake in March 2011, radioactive contamination was found around Japan due to the explosion of the Fukushima First Nuclear Power Plant. Radioactive cesium for general food is now regulated in 100Bq/kg or less. Therefore, foods with 100Bq/kg or less come to markets. On the other hand, prices of agricultural products were falling, in particular ones made in Fukushima. Media called it "harmful rumor". Traditionally "rumor" is not based on the "fact". However, Arai (2014) pointed out that current situation showed what consumers were awakened by the "fact" of radioactive contamination. Therefore, the role of education is worthy of consideration.

An online panel survey of young people in Japan was used (n=6157). The result of multi-level regression analysis shows the effects of consumer education. Experience of consumer education has positive effects on prices. However, when they looked at a result of radioactive substances in food carefully. Moreover, if they have a child, they tend to give lower prices to agricultural products made in Fukushima. When consumers took high score of consumers' test, they tend not to buy them.

"Reputational damage" is a word to position not for consumers but for perpetrator. Consumer education is not directed consumers to be "rational." The result shows that educated consumer carefully checked the radioactive substance in food and give lower prices to products in Fukushima. Therefore, when we evaluate "rational", we should explore the meaning of "rational".

Key words: Consumer Education, Nuclear Disaster, Food, Japan

### ***Title of the paper: Fundisana Online - content, methods and competences for a changing world***

***Sepherd Urenja***

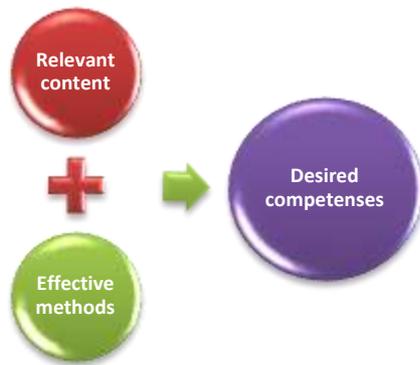
#### **Abstract:**

SWEDES is involved in a multi-year collaborative Education for Sustainable Development (ESD) partnership with universities and teacher education institutions in southern Africa. In addition to developing a teacher education course, Fundisana Online, this ESD partnership has led to a number of stimulating findings that we have found to be extremely useful in communicating sustainability.

We will describe Fundisana Online and engage participants in investigating an EDS Navigator that demonstrates the interconnected and mutually dependent dimensions of ESD, representing relevant

content, effective methods and desired competences. The workshop participants will have the opportunity to interact with the navigator and develop a deeper understanding of:

- Key concepts that represent relevant content for ESD,
- Methods that help to create effective pedagogy, and
- Competences resulting from a pedagogical process combining content and methods.



We will also present examples on how we used this navigator in designing classroom examples and workshop programmes for teacher education.

NB: Fundisana is an African term that means learning from and with each other.

## **Session 2.3 Building the capacities of educators and trainers**

***Title of the paper: Initial Teacher Education - Pedagogies and Practices for Sustainable and Responsible Living.***

**Maguire Helen & Mc Cloat Amanda,**

**Abstract:**

The transformative nature of education, as required to address current global challenges, has become widely recognised as facilitating increased critical engagement among students and enabling them to construct personal meaning and understanding within new frames of reference in order that the relativity of curriculum content within a global context is apparent. Teacher education, particularly, can fulfil an essential function in shaping the knowledge, skills and attitudes of future generations thus having the capacity to influence a more sustainable and responsible future.

This action research project aimed to enable participants to construct meaning and understanding of education for sustainability from the experiences, cognitive and effective, presented to them in their teacher education setting. The intervention was undertaken on the Bachelor of Education, Home Economics degree programme in St. Angela's College, Sligo, Ireland and the approach involved the utilisation of interdisciplinary and multidisciplinary transformative pedagogies with a focus on sustainable and responsible living. Through a highly experiential process pre service teachers were afforded the opportunity to consider their values and attitudes towards sustainable and responsible living in the completion of personal reflections.

The transformative pedagogies, adapted curriculum and resources employed in this study engaged the pre service teachers in a process of learning with a sustainable and future-oriented focus, which fostered higher order thinking and participatory action.

Keywords: Initial Teacher Education, Transformative Pedagogies, Sustainable and Responsible Living,

***Title of the paper: Curriculum Reform in the Early Years: the Case for an Education for Sustainability Agenda***

**Robert Barratt, Elisabeth Barratt Hacking and Pat Black**

**Abstract:**

This paper draws on our recently published chapter in 'Research in Early Childhood Education for Sustainability: International Perspectives and Provocations' (Routledge, 2015). We argue that a curriculum concerned with responsible living and the environment should begin in the early years and focus on sustainability.

Although there are innovative local examples of projects and programmes associated with ECEfS in England there has been no sustained policy commitment to this important aspect of young children's educational experience. The authors argue that natural play, that is, free play in natural environments, provides the foundations for ECEfS using the metaphor, *nature as teacher*. Despite England's rich heritage of providing outdoor nature experience for young children, current early years policy negates opportunities to develop natural play and children's engagement with nature. This combined with reduced experience of the natural world denies children essential developmental experiences and the underpinnings of EFS.

Four case studies of early years settings are used to illustrate ECEfS approaches in England. An analysis of documentation and external inspection reports from the settings found four distinctive approaches to EFS including: i] sustained authentic outdoor play; ii] place-based learning; iii] free play and risk-taking in the outdoors; and iv] participation in developing a sustainable school curriculum. It is suggested that staff interest and enthusiasm, children's needs, the local context and external agencies influence the approach to ECEfS adopted by some settings. For each case study there is evidence of positive impact of EFS on children's learning. The authors propose that future ECEfS curricular should incorporate natural play, familiar and unfamiliar environments, participation and models of sustainable living.

Keywords: early years curriculum, education for sustainability, responsible living and the, environment, natural play, nature as teacher

**Conference Themes**

Multidimensional

1. Responding

2. Learning

## Session 2.4 Empowering and mobilizing youth

***Title of the paper: Budget Circles. Case study of the design, implementation and organisation of a non-formal transformative learning initiative in the Netherlands.***

**Jeanine Schreurs**

**Abstract:**

Budget Circles are working groups where people are stimulated to carefully and consciously handling their money and improving life quality. The main purpose is to support each other in changing practices and behaviours in daily life. The programme addresses the three related core items of sustainable living: finances, ecofriendliness and health/well-being. The scope of the Budget Circles thus is broader than the common approach of personal finances. Other characteristics are the focus on concrete changes, development of life skills and personal empowerment. Moreover, attitudes and competences are trained that are relevant for successful change such as constructive problem solving strategies; positive communication skills; personal resilience and empowerment.

The Budget Circles, launched in the Netherlands in 2012, exemplify an active learning methodology for lifestyle change and personal empowerment. Its approach and content are based on the dissertation *Living with Less: Prospects for Sustainability* (Schreurs 2010). Results and experiences are constantly monitored.

The initiative is rewarded as an important social innovation by the Oranje Fonds, the largest Dutch endowment foundation in the area of social welfare. .

The main goal of the paper presentation will be to discuss the Budget Circles approach in the light of transformative learning for sustainable living. Specific attention will be given to the development of new skills for sustainable living and the special value that voluntary tutors in non-formal education may have for social innovations.

Key words: active learning \* sustainable living \* social innovation \* personal empowerment

***Title of the paper: Behavior and values & responsibility***

**Dana Vokounova**

**Abstract:**

The University of Economics in Bratislava has taken several qualitative and quantitative surveys focused on consumer behavior. The purpose of this paper is to present the results of quantitative survey focused on values, attitudes and behavior.

Value research based on using Schwartz's value system showed that students are young flexible people who do not strongly cling to stereotypes but are more likely to change old matters and accept new ideas. Their own perception of themselves as individuals and as a part of society is balanced. They are personalities trying to grow but at the same time they realize they need to be tolerant, fair and kind to the people around.

Application of cluster analysis formed four segments describing young people by values, opinions and behavior. The names of these segments consist of two words. The first is coming from the values and the second from attitudes and behavior: (1) technicolor and responsible, (2) harsh and selfish, (3) adrenalin and undefined and (4) cute and soft.

## Session 2.5 Accelerating sustainable solutions at the local level

*Title of the paper: Does focusing on education for responsible living actually increase understanding and change attitudes towards sustainable consumption*

**Mariana Calheiros Lobo & Luis Miguel Cunha & Declan Doyle**

### **Abstract:**

This work focused on the mapping of changes in attitudes and behaviours regarding responsible living, inserted in the Workgroup 3 – Mapping changes in attitudes and behaviour – of the **Partnership for Education and Research about Responsible Living 2 (PERL2)**, an ERASMUS lifelong learning network ongoing between 2012 and 2015.

Its primary objective was “does focusing on education for responsible living actually increase understanding and change attitudes towards sustainable consumption?” A survey was constructed and applied to the participants of the PERL Network and Consumer Citizenship Network (CCN) and their colleagues, non members, from the same Institutions, in order to be able to evaluate if there was a difference between them. Through the application of a Principle Component Analysis, latent factors were drawn from the original items, for each of the dimensions and their evaluation: General Attitudes, Attitudes towards the Environment, Self Identity, Perceived Behaviour, Perceived Behavioural change, Barriers and Emotions. Analysing the responses to the different factors, it was possible to conclude that the PERL/CCN members, when compared to non members, perceive themselves to have a greater knowledge on environmental issues. They also have a more positive behaviour towards a sustainable living, namely in a reduction of polluting transports, a lower impact of consumption and a greater social engagement. Their behavioural change is also positive for the reduction of polluting transports. They also present a low level of perceived personal barriers for an environmentally friendly behaviour.

Being part of the PERL Network has shown to have significant differences for at least 6 different dimensions, which means that being a part of the Network makes the individual have more positives behaviours towards Responsible Living. Although the members of the Network have a very positive attitude towards Responsible Living, it is possible to conclude that focusing on education for responsible living actually increases understanding and changes attitudes.

Key-words: PERL, Attitudes, Behaviour, Environment, Responsible Living, Sustainable consumption.

***Title of the paper: Shortening Food chains by knowledge and trust***

**Elena Battaglini**

**Abstract:**

Risk society (Beck, 1986) does not influence eating styles as much as it does the relationship between consumers and the food-system. As debate moves away, from the scientific fray into the day-to-day lives of common people, the consequence has been that consumers have become more competent and selective. So much so that consumers are now in a position to influence the choices made by the food processing industry as a whole, almost elevating them to the role of the system's referees (Fabris, 2003). In order to establish a relationship founded on trust, it becomes crucial to understand how they actually perceive food quality.

Perception of food risks and the reflexivity of food could be then considered crucial analytical lenses for understanding the complex interdependencies among norms, values, meanings, and the contextual variables structuring food systems. My contribution attempts to discuss if and how consumers' reflexive behaviour can interact bidirectionally with the structure, thus bridging consumption and production (and vice versa). Building on the results of a survey conducted on 800 Italian consumers, I will then identify which policies are required to implement food quality governance and which are its stakeholders.

**Wednesday 11<sup>th</sup> March 15:15 – 16:15**

**Session 3.1 Advancing Policy**

***Title of the paper: UN Global Action Programme and Education for Sustainable Consumption: A Critical Appraisal of the Evidence Base***

**Daniel Fischer**

**Abstract:**

In the debate about education for sustainable consumption (ESC), the knowledge base resulting from educational theorizing, empirical research and practical experimentation has grown significantly over the last decade. Much of the work in the field focused on advancing models of learners' capacity as consumers to act responsibly in face of the sustainability challenges, conceptualized under such terms as competency, skills or literacy. These advancements have indubitably broadened the scope of a (too) narrow focus on behavioral change in ESC and provided a more refined and sophisticated understanding of what educational outcomes should legitimately be pursued. However, they are also facing criticism. In particular, they are criticized for overemphasizing the cognitive domain of consumer capabilities and for widely neglecting the question how these capabilities translate into action and behavior.

The research presented in this paper addresses this research gap. It draws on the work in the context of an interdisciplinary research and development project. In the project, educational scholars, psychologists and mindfulness trainers collaborate to design a training program focused on promoting mindfulness in consumption and to test its effectiveness. The concept of mindfulness encompasses the reflection of individual values and actions in each given moment, thus potentially aligning values and behavior sustainably. The paper presents a multidimensional approach to the conference theme: it explores the role of mindfulness for changing consumption practices (*learning*), sketches the conceptual contours of a mindfulness training course tailored to promote sustainable consumption (*responding*) and discusses implications for educational research and capacity building (*preparing and engaging*).

Keywords: mindfulness, education for sustainable consumption, competency, attitude-behavior-gap

***Title of the paper: A critical reflection on child's consumerism. Regulations of children's advertising in Brazil.***

**Pedro Hartung**

**Abstract:**

To recognize that children have rights and need to be assured of complete care and protection of their best interests poses a huge step towards furthering human development and guaranteeing human rights. However, this advancement greatly contrasts with our current hyper-consumption society which engages in marketing communications practices that disregard this protective status and reduces the child to a miniature adult, directly targeting it with a view to transforming it into a consumer and sales promoter in both the family and the community. This presentation attempts to show how important and urgent it is to implement regulatory policies about marketing communications targeting children, so as to preserve their full development and rights, thereby mitigating the effects of this commercial practice in forming habits and building values that run counter to sustainable and responsible living. Such habits as consumerism and materialism, child obesity and violence are some of the consequences which can be traced to habits influenced by child target marketing. This presentation also describes actions organized under Alana Institute's Child and Consumerism Project designed to foster a critical reflection on child consumerism, regulation of children's advertising in Brazil and community actions to instigate conscious and sustainable consumption right from childhood.

Keywords: child, rights, advertising, hyper-consumption society.

## Session 3.2 Transforming Learning and training environments

*Title of the paper: Teaching Nature – A Concept for Developing Key Competences for Sustainable Development in 5-7 year old Austrians*

Christiana Glettler

### **Abstract:**

Children have always played outdoors and in doing so have learned important lessons about our natural environment as well as about themselves. In recent years though, the time children spend outdoors has decreased all over the world due to various reasons. This leads to a lower ability to concentrate, lack of social skills, limitations in their motoric skills and other physical problems. Furthermore children today do not get a chance to connect to their environment on an emotional level, so when they start learning about Biology and the environment in school, they cannot link this theoretical knowledge with real-life experience.

This project deals with possible ways to tackle the issues mentioned before. In two case studies of local elementary and primary education institutions existing concepts of reconnecting children with their environment will be analyzed. From the findings of these two cases as well as from existing literature, key competences that children can and should develop through environmental education projects in order to lead sustainable lifestyles will be identified. These key competences will then form the core of a concept for implementing new ways of environmental education in the curricula of Austrian Kindergartens and Primary Schools.

During a Delphi-Study-Process the gathered data and material will be condensed and further developed to finally achieve a well-rounded concept to increase and promote

- Environmental awareness
- Sustainable choices and practices
- Social Skills
- Motoric Skills and
- Concentration

in Austrian children.

Key words: Sustainable Development, Competences, Environmental Education, Kindergarten, Primary School

***Title of the paper: (LOLA):Some Creative Approaches to Education for Sustainable Development***

**Iveta Līce**

**Abstract:**

In the time when there is a rapid growth of human well-being, different environmental and development problems arise. It means that the development of human well-being must be solved in an integrated way, matching the environmental protection and preservation, promoting a nature friendly lifestyle.

Education for sustainable development includes restructuring education to sustainability, the encouragement of citizenship and promoting education in all society groups and levels. Therefore, the task of education sustainability is not only to provide knowledge about sustainable development, but also to develop skills, form values, and increase the motivation to participate actively in carrying out the sustainable development.

When carrying out the education for sustainable development the versatility of creative approaches is updated. The study process is oriented to a pupil's experience, promoting the critical thinking. Pupils are involved in finding and solving real problems, which are looked into holistically. The learning process includes the real life situations, examples which prove that sustainable development exists in reality. It can be very well seen in the lessons of home economics.

The research has been carried out within education for sustainable development. It develops the main aspects of LOLA Project. The aim of the research is to determine pupils' and students' attitude and preparedness for sustainable development. The used methods: questionnaires, observation, practical activities, interview. The place of the research: Jelgava, Latvia.

The obtained results reveal that the respondents understand the essence of the education for sustainable development. They understand their responsibility and the necessity to preserve the environment, but not always observe it. Positive changes in daily routines are recognized in the field of sustainable development.

**Keywords:** *creative approach, sustainable development, education, Home Economics*

## **Session 3.3 Building the capacities of educators and trainers**

***Title of the paper: Cultivate responsibility through mission-based learning***

**Bistra Vassileva**

**Abstract:**

The aim of this paper is to explore the implementation of a business-oriented and evidence-based learning environment and its effects on cultivating responsibility among students in the field of economics. The main proposition states that by providing students the opportunity to experience different professional skills as data collectors, researchers and decision-makers could establish a solid background for raising their responsibility. Our intention is to offer a coherent framework that is student oriented and makes use of active-based learning with research methods implementation to support academics in encouraging student active participation. To meet these goals, we conducted study which results helped us to identify the layers of the framework. We introduced Reference Framework for Applied Competences (REFRAC) and tested it for the background layer which correspondes to carrer-sustaining curriculum planning level.

**Key words:** *higher education, responsibility, applied competences, REFRAC*

## Session 3.4 Empowering and mobilizing youth

***Title of the paper: The Problem of Personality's Responsibility in the Context of Values System in Latvia***

**Marina Marchenoka**

**Abstract:**

The modern society can be characterised by the rapid process of social and moral differentiation. Destruction and reassessment of traditional values, orientation of the modern personality to achievement and attainment of material benefits as leading values in human life caused the spiritual and moral crisis in the society, especially amongst teenagers.

Responsibility as a value feature of a personality issues the challenge of the moral choice, which is expressed in the spheres of living, interests, needs and social relations, defining the meaning of life of every member of the society.

***The Aim of the research is:***

To consider the problem of responsibility as an value quality of teenager's personality and to define the grade of "responsibility" in the hierarchical system of value orientations of teenagers in Latvia.

***The Tasks of the research are:***

By means of the theoretical and empirical analysis to justify the urgency and significance of the problem of responsibility in the context of personality's value orientations in the modern society.

***The Methods of the research are:***

***The theoretical base of the research includes:*** philosophical ideas about the meaning of values, about the role of the person's spiritual value potential in his/her personal development (R.Perry, E.Fromm, V.Tugarinov, M.Kagan), the concept of moral responsibility (J.Piaget); the conception of the moral, spiritual value nature of the personality (K.Abulkhanova – Slavskaja, A.Leontyev, S.Rubinshtein).

***The empirical research includes:*** the complex of pshychodiagnostics methods: diagnostics of attitude to life values (M.Rokich); value questionnaire / Values scales (S.Schwartz); the method of evaluation of basic life values (M. Rogov), the questionnaire of values KVS-2 (Part 1) "Significance of life spheres" (D.Kashirsky), as well as the qualitative and quantitative analysis of the results using methods of mathematical statistics: Student's t-test, Kruskal-Wallis test and Chi-Square, correlational, cluster and factor analysis that was done with help of the software STATISTICA-6.

***The results of the research are as follows:*** the theoretical analysis of the problem of the research of philosophical, psychological and sociological literature was done; the empirical research was done

and, as a result, the author defined the grade of “responsibility” in the hierarchical system of value orientations among teenagers in Latvia.

*Keywords:* personality, values, responsibility, teenagers’, modern society

***Title of the paper: Portuguese Consumers’ Interest in Seafood Production and Consumption: Insights Considering Benefits, Risks and their Environmental Impact***

**Ana Pinto de Moura<sup>1</sup> • Luís Miguel Cunha<sup>2</sup>**

**Abstract:**

Considering food choice, individuals base their decisions on assessments of risks and benefits. For seafood products, consumers may balance between perceived benefits and risks from consuming fish in order to get the health benefits without exceeding tolerable intakes of chemical contaminants. Moreover, consumers may balance between the potential environmental impacts of farmed fish and the thought of fish farming as a way to help save the wild fish stocks from over exploration. The aim of this research was to explore Portuguese consumers’ perceptions about the benefits and risks of seafood consumption, while exploring differences on their views about wild and farmed fish. Focus group discussion was the method used. For the 23 participants enrolled in this study, seafood products are perceived as healthy foods and they like the taste of fish/seafood products. For them, farmed production is the image most associate with aquaculture, similar to the livestock production animals. Considering the sustainability, there is no significant discussion regarding this subject. For those who expressed their opinion, there was no consensus: some participants mentioned farmed fish production is more sustainable, whereas others considered wild fish capture as more sustainable.

*Keywords:* farmed fish; focus groups; qualitative study; wild fish

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## Session 3.5 Accelerating sustainable solutions at the local level

*Title of the paper: Low-carbon lifestyles and potential policies*

Jörgen Larsson

**Low-carbon lifestyles and potential policies**

**Abstract:**

When it comes to climate change, Gothenburg aims to be one of the world's most progressive cities and to reach sustainable emission levels by 2050. As a step in this direction there is a target that by 2035 the consumption based emissions for the residents of Gothenburg shall be less than 3.5 tonnes of greenhouse gas emissions per person.

In order to be able to answer the above questions and to incorporate greenhouse gas emissions from all areas, a wide range of different types of data has been combined: statistics, reports as well as our own and other people's research. A bottom-up method was used in which greenhouse gas emissions was calculated on the basis of average data on how much Gothenburg residents drive their cars, how much electricity they use etc. All the figures for emissions refer to carbon dioxide equivalents (CO<sub>2</sub>e), which means that the calculations include not only carbon dioxide but also other greenhouse gases, e.g. methane and nitrous oxide.

Three different scenarios have been analysed in order to get a picture of the possibilities to reach emission targets. These are built on a range of different assumptions.

The scenario *Business as usual (BAU)* aims to illustrate how the situation could be in 2050 if climate policy, technological advances and trends in consumption continue in the same way as they have done in recent decades. The scenario assumes continued improvements in efficiency in, among other things, cars (a total of 20%) and air travel (40%) up to 2050 but also an increase in electricity consumption (+25%), dwelling size (+58%), meat consumption (+50%) and air travel (+350%).

The scenario *Current climate policy scenario (CCP)* assumes that the objectives of current climate policy have been achieved, i.e. significant reductions in emissions from energy systems (-65%) and totally fossil-independent road transport by 2050.

The scenario *Low-carbon transition (LC)* includes enough changes in order to achieve emissions lower than two tonnes per person by 2050. In addition to the changes in CCP the following is assumed: a 50% reduction in residential energy consumption, a 50% reduction in the consumption of beef and pork, air travel at year 2000 levels, a greater proportion of service-based consumption and a 25% reduction in working hours.

These assumptions result in very large differences in emission levels by 2050.

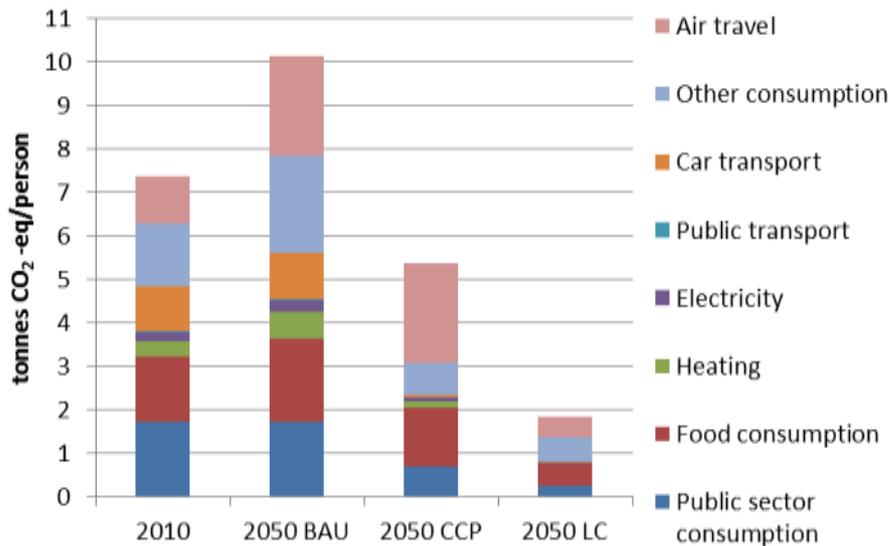


Figure. Emissions from the average resident in Gothenburg for the three different scenarios.

The emissions for the average resident in Gothenburg would, according to our calculations in *Business as usual (BAU)*, increase from about 7.4 tonnes today to 10 tonnes by 2050. The increases in volume are not offset by improvements in efficiency.

The scenario *Current climate policy scenario (CCP)* indicates that the emissions from the average resident in Gothenburg would be just less than 5.5 tonnes by 2050. Emissions from cars, electricity and heating will be virtually eliminated. We assume that no stringent control measures have been introduced in order to significantly reduce emissions from air travel and food.

The assumptions in the scenario *Low-carbon transition (LC)* leads to emissions lower than two tonnes by 2050 for the average Gothenburg resident and for the low-income family, while the high-income family causes emissions of over 2.5 tonnes.

Transitioning to a low-carbon society will necessitate major changes in our society, in technology and in our lifestyles. Private individuals, companies, associations, public bodies and politicians at local, regional, national and international level must all contribute in different ways to the development of environmentally sustainable technological and social innovations for everything from our day-to-day transport needs to our food and our holidays. Not least, politicians must be brave enough to introduce, and voters must be willing to accept, control measures which are sufficiently stringent to ensure that the technological and behavioural changes required actually

take place. The next step is to identify potential policies at the local, national and international level which can support low-carbon lifestyles. This work can be presented at the PEARL conference in 2015.

***Title of the paper: The EU LIFE program supporting learning for sustainable living, production and consumption.***

**Eveline Durieux**

**Abstract:**

The LIFE Programme is the EU's funding instrument for the environment. Since 1992 it has co-financed pilot and demonstration projects that contribute to the implementation and development of EU environment policy and legislation.

In more than 20 years, the program has gathered a huge experience and its communication tools (<http://ec.europa.eu/environment/life/index.htm>) aims at sharing results and facilitate the transfer of experience.

Of the 4 171 projects supported by LIFE to date, 207 have organised specific educative activities and developed material for environmental education, targeting schoolchildren, young people, teachers and/or families; many of them are Nature and Biodiversity projects.

The launch of the LIFE Information and Communication strand in 2007 has increased opportunities for awareness-raising campaigns and knowledge-sharing projects, with 82 projects financed to date in this area. They have targeted both the wider public and professional sectors with innovative campaigns and actions, and strongly contributed to increasing awareness and engagement in more responsible living and consumption. Projects have highlighted actions people can take in their everyday lives to save water and energy, prevent and reduce waste and help tackle biodiversity loss and climate change.

Many projects have also developed interesting and creative tools of pedagogic interest, in addition to targeting the wider public.

The paper and presentation would develop further on these elements and would present several concrete examples, their approaches and their achievements. Where appropriate, documents developed by the projects would also be made available to the participants.

Examples of some projects that we would highlight:

- The COM-U project (LIFE07 INF/S/000901) made an important contribution to improving teaching in Sweden about environmental issues and EU environmental policy. It promoted a more balanced and practical view of the challenges and possible actions to be taken to address them, focusing on how to integrate environmental issues into school curricula.
- The "Slovenia WEEE campaign" project (LIFE10 INF/SI/000139) organised awareness-raising campaigns about waste electrical and electronic equipment (WEEE) in schools, municipalities, and on the Internet. Open days were held. They organised events mainly in cooperation with local authorities, EEE producers, major retailers and public bodies responsible for WEEE management, where participants could dispose of such waste, assess the relevant recycling processes in real time and learn about proper management of WEEE after its collection.
- The **R.A.C.E.S.** project (LIFE07 INF/IT/000487) aimed to set up a multimedia campaign using a range of communication tools to raise awareness amongst teachers and students, families and stakeholders in five cities. One notable project action saw families take part in a voluntary scheme named Carbon budget, in which participants were asked to monitor and report their CO<sub>2</sub> emissions in terms of energy consumption and mobility habits. This experiment lasted one whole year and was supported by a tutoring scheme, workshops and meetings.
- The **European Week of Waste Reduction (LIFE07 INF/F/000185 & LIFE12 INF/BE/000459)** is a public awareness campaign, targetting five categories of people, which supported more than 11 000 local actions in three years time. The project has recently been awarded as a "Best" project and will be developed during a second phase in order to close gaps that could not yet be addressed. This include the need to strengthen the EWWR's ability to measure its positive impacts, as EWWR activists underlined the need to better understand how to accurately assess the role that information projects and communication campaigns can play in changing consumption patterns.

