Pedagogical Approaches on the Education for Environmental Citizenship

1st European Training School
Lisbon, Portugal
24-25 Oct 2018

Action Chair

Dr Andreas Hadjichambis, CYCERE, Cyprus

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B. ENEC IN GLANCE

B. OUR CONSORTIUM

- Kick of Meeting in Brussels, 27-10-2007
- Our Consortium today
- New Countries

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Kick of Meeting in Brussels

Kick Off Meeting

Brussels Belgium

27 October 2017

VIEW DETAILS

http://enec-cost.eu/events/kick-off-meeting-brussels/?preview=true

❑ 40 MC Members

❑ 26 Countries

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Our Consortium today

ENEC Countries

- ○ 36 Countries (4 new)
  - • 33 European Countries
  - • Israel (Cooperative Country)
  - • USA (IPC)
  - • AUSTRALIA (IPC)
- ○ 64 MC Members (10 new)
- ○ 50 MC Substitutes (11new)
- ○ 2 MC Observer (USA, AUSTRALIA)

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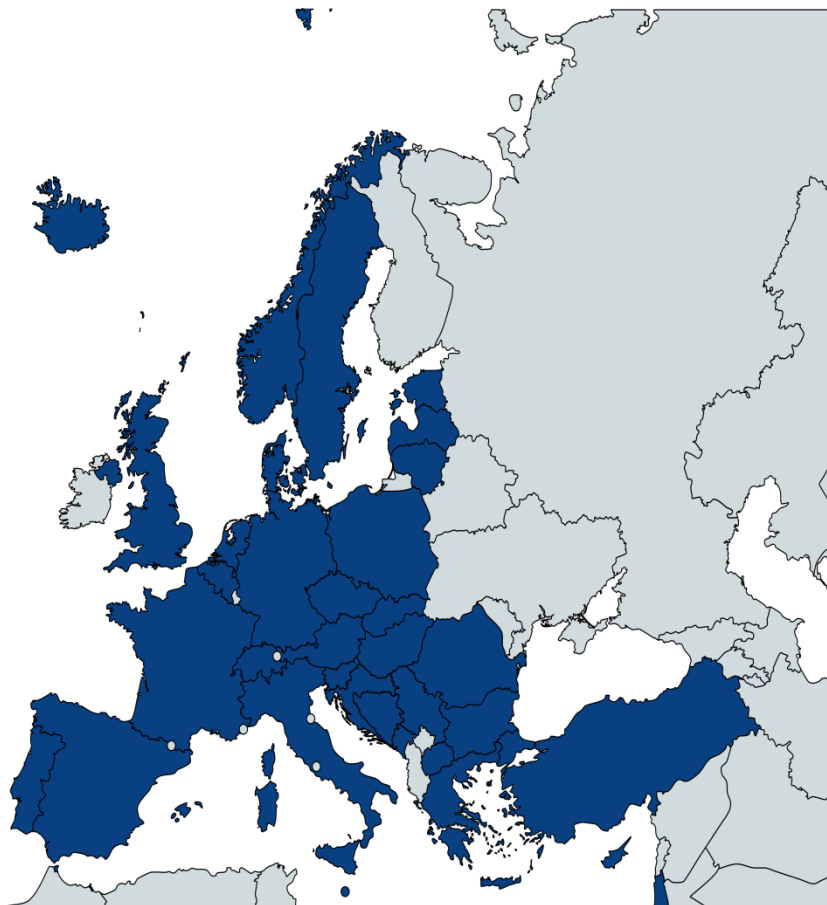
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New Countries

- **Turkey**
- **Slovenia**
- **Estonia**
- **AUSTRALIA (IPC)**

Near Neighbour Countries

- Ukraine (UA)

European Member Countries:

Austria		Greece		Spain	
Belgium		Iceland		Sweden	
Denmark		Italy		Switzerland	
Estonia		Netherlands		Turkey	
France		Norway		United Kingdom	
Germany		Slovenia			

European Member and Inclusiveness Target Countries (ITC):

Bosnia and Herzegovina		Hungary		Portugal	
Bulgaria		Latvia		Romania	
Croatia		Lithuania		Serbia	
Cyprus		Malta		Slovakia	
Czech Republic		Montenegro			
fYR Macedonia		Poland			

Associate Country:

Israel

International Partner Country (IPC):

Australia

United States of America

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Role and Structure of ENEC Committees and Boards

MANAGEMENT COMMITTEE (MC)	STEERING COMMITTEE (SC)	DISSEMINATION BOARD (DB)	GREEN BOARD (GB)

MANAGEMENT COMMITTEE (MC)

2 Representatives by each CNC

1. ACTION CHAIR (AC)

2. ACTION VICE C. (AVC)

7. GRANT HOLDER (GH)

COST Association Administration

STEERING COMMITTEE (SC)

1. ACTION CHAIR (AC)

2. ACTION VICE C. (AVC)

3-6 WG Leaders

7. GRANT HOLDER (GH)

8. ECI-GE Coordinator (ECI-GE C)

9. Dissemination Board Coordinator (DB C)

DISSEMINATION BOARD (DB)

9. Dissemination Board Coordinator (DB C)

A. Website Committee (WeC)

B. Intern. Conferences Committee (ICC)

C. ECI Events Committee (ECIEC)

D. Work/ops & Stake/ers Events Committee (WSEC)

GREEN BOARD (GB)

8. ECI-GE Coordinator (ECI-GE C)

Early Career Investigators

47

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Role and Structure of ENEC Working Groups
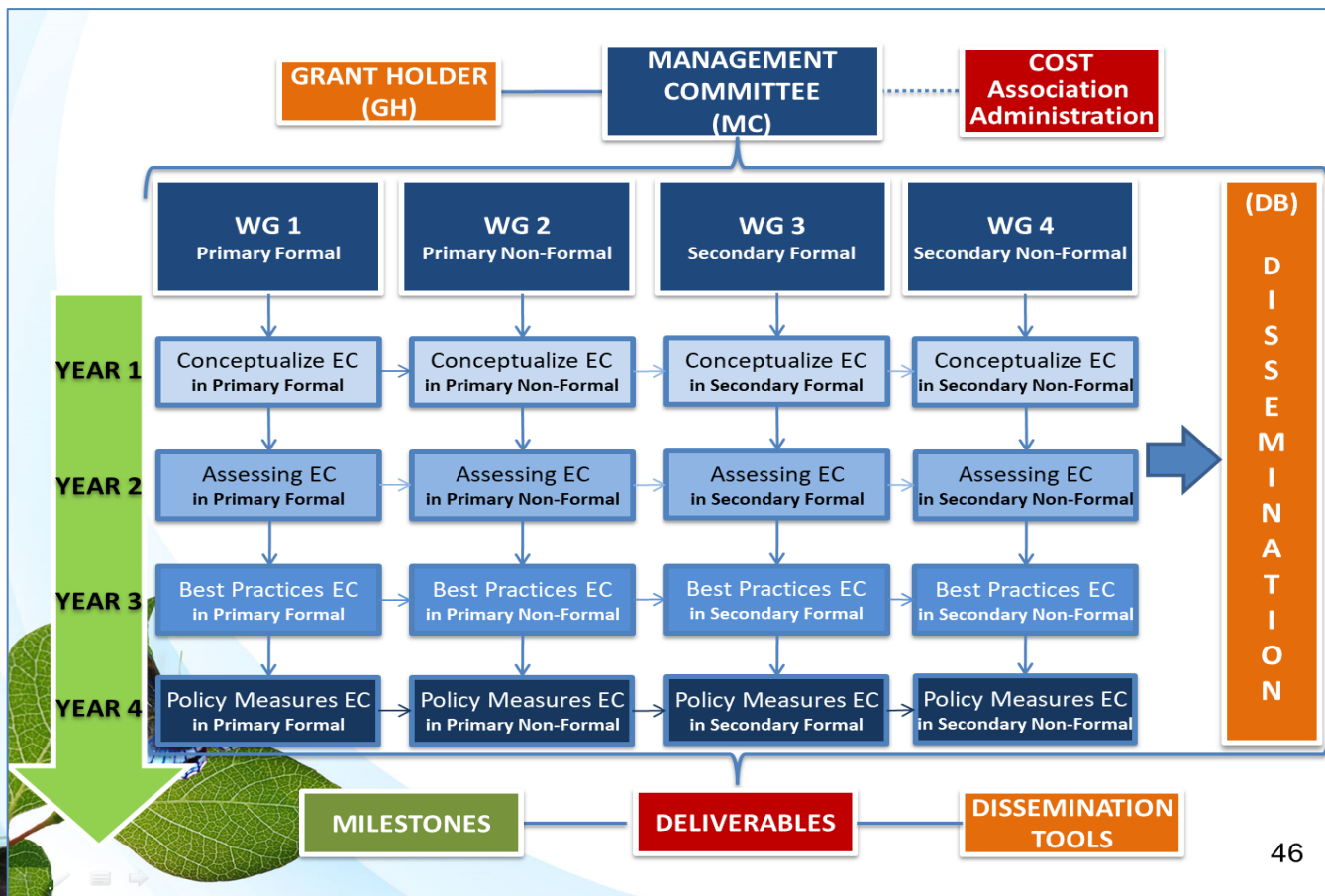
Work Flow of ENEC

Objectives

5 Research Coordination Objectives (RCO)

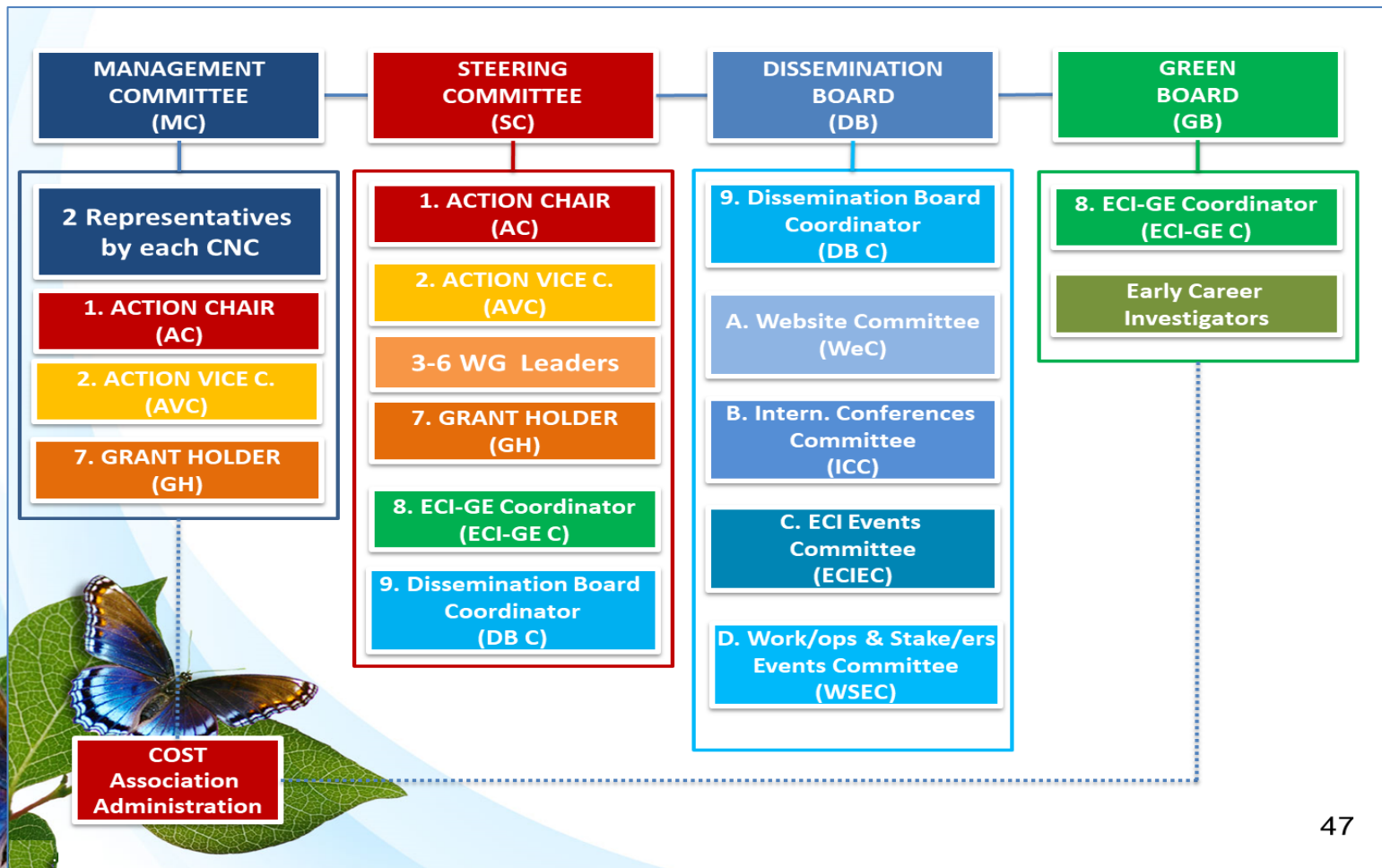4 Capacity-building objectives (CBO)

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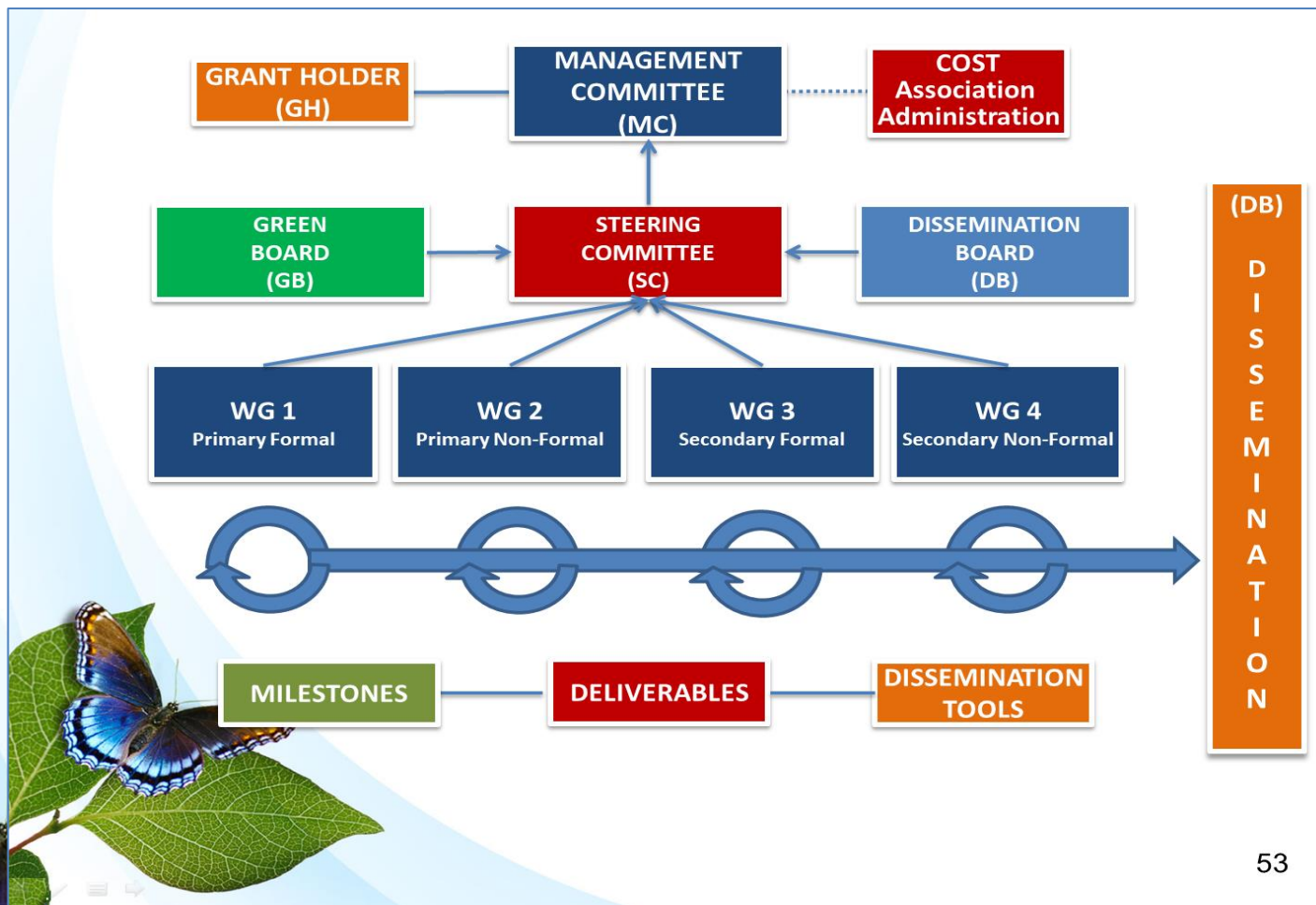of the European Union

RESEARCH COORDINATION OBJECTIVES

- Initiate **collaborations** and expand previously established collaborations on Environmental Citizenship across Europe. (RCO1)

- Development of common understanding/definition of Environmental Citizenship by **conceptualizing and framing Environmental Citizenship**. (RCO2)

  - Development of **new research paradigms and metrics** for assessing Environmental Citizenship. (RCO3)

    - Identify **research gaps and future research needs, priorities and perspectives** in Environmental Citizenship which require European/ international coordination and transnational collaborations. (RCO4)

      - **Propose policy measures and recommendations** needed for the promotion of Environmental Citizenship. (RCO5)

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Indices to measure the achievement of the Research Coordination Objectives

- The number of partners and professional diversity will indicate the achievement of the RCO1.

- The number of publications, reports and policy documents related to the concept and dimensions of Environmental Citizenship will measure the achievement of the RCO2.

- The number of publications, reports and policy documents related to the assessment of Environmental Citizenship will measure the achievement of the RCO3.

- The number of reviewed publications, reports and policy documents related to research needs, gaps and priorities in the field will measure the achievement of the RCO4.

- The number of dissemination documents regarding the policy measures and recommendations will serve as a measure of the achievement of the RCO5.

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CAPACITY-BUILDING OBJECTIVES

- **Bridging separate fields of science** to achieve breakthroughs in Environmental Citizenship that require multi-national and multi-disciplinary research. (CBO1)

- **Fostering knowledge exchange on different macro- and micro- level dimensions of formal and non-formal education** that could lead to Environmental Citizenship. (CBO2)

  - Acting as a **stakeholder platform** for knowledge exchange and mapping expertise and also developing a depository database of scientific measures and evidence based interventions that target Environmental Citizenship. (CBO3)

    - Involving specific target groups such as **Early Career Investigators (ECI)** and research teams from COST **Inclusiveness Target Country (ITC)**. (CBO4)

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Indices to measure the achievement of the Capacity-Building Objectives

- The number of multi-national and multi-disciplinary partners will indicate the achievement of the CBO1.

- The number of publications, reports and policy documents which referred to formal and non-formal dimensions leading to Environmental Citizenship will measure the achievement of the CBO2.

- The number of platform users database entries and best educational practices are a measure of the achievement of the objective CBO3.

- The number of Early Career Investigators (ECI) and the number of research teams from COST Inclusiveness Target Country (ITC) which will participate in the Action are a measure of the achievement of the CBO4.

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EEC and other other types of education (EE, ESD, SE, CE)

Education for Environmental Citizenship
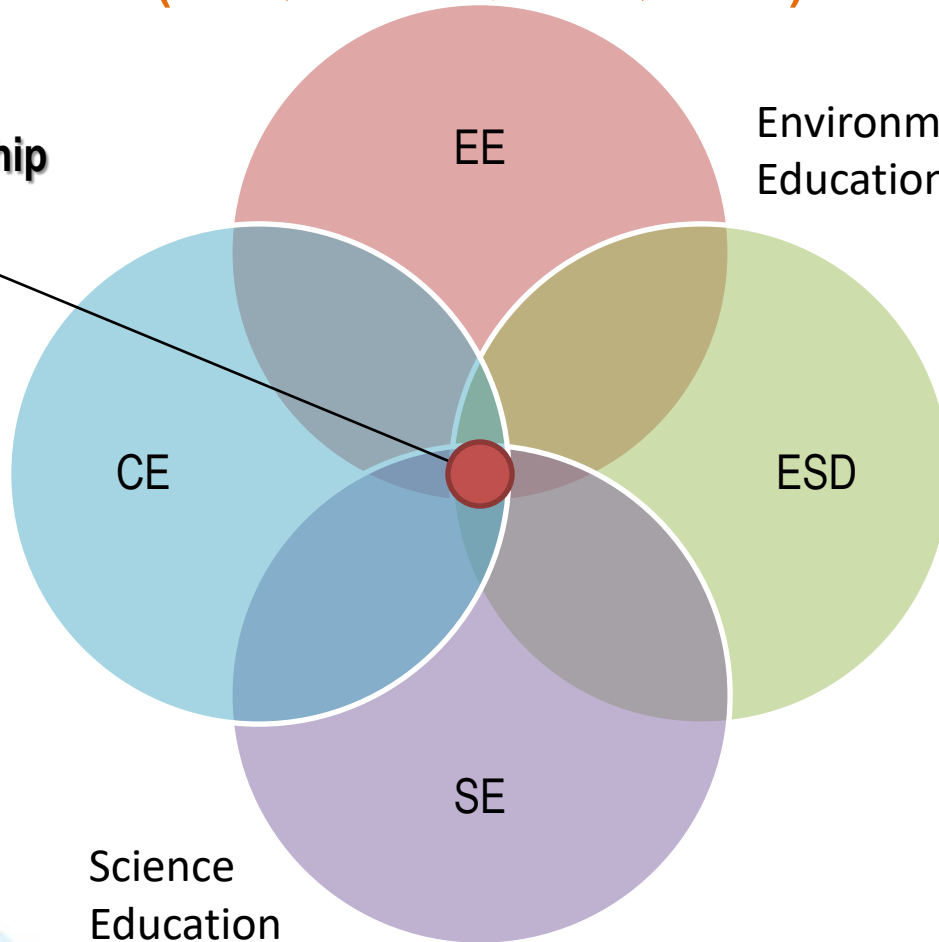
Environmental Education — EE

Education for Sustainable Development — ESD

Citizenship Education — CE

Science Education — SE

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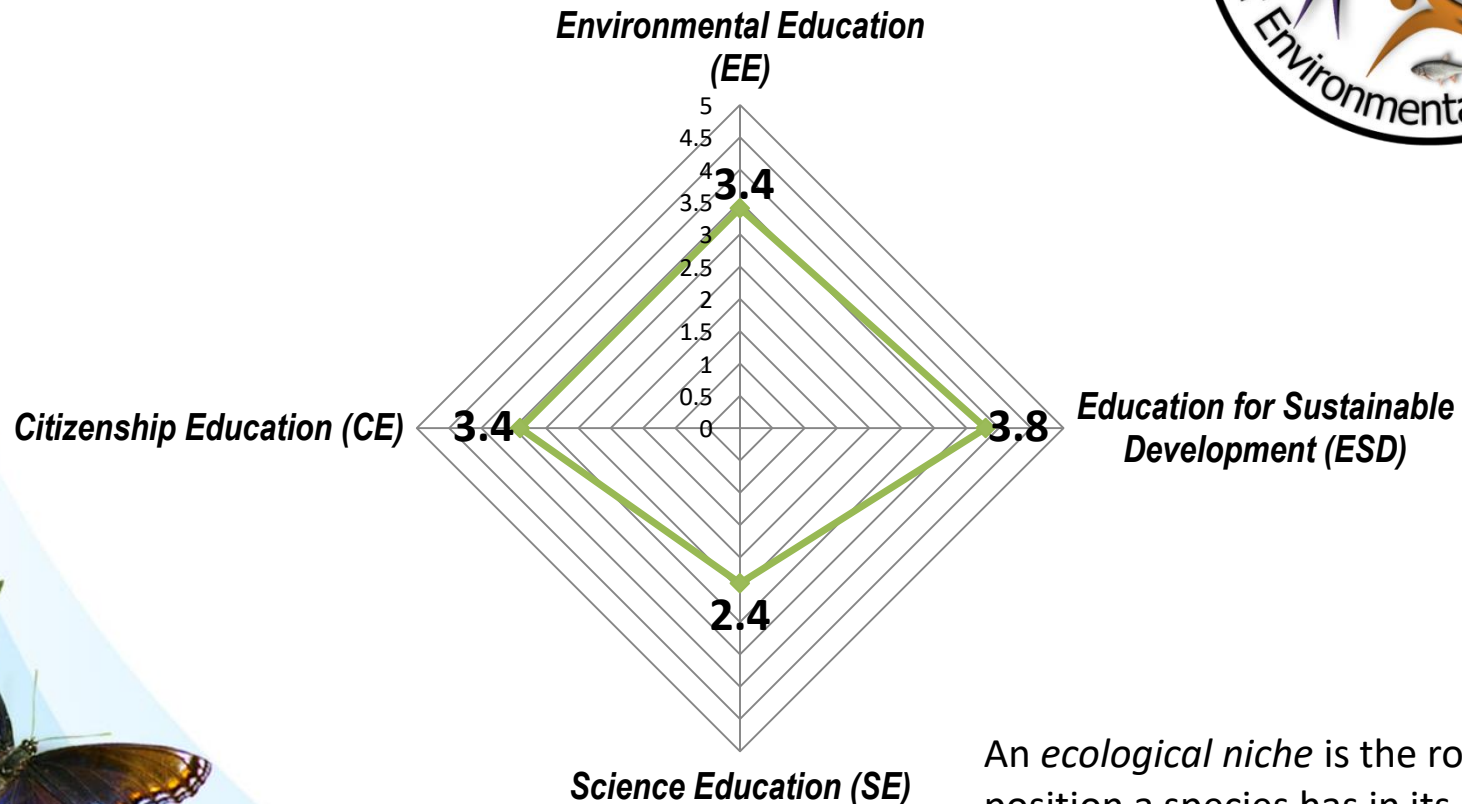
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Final Results on EU Level

167 Experts
28 European Countries

Ecological Niche of
Education for Environmental Citizenship

An *ecological niche* is the role and position a species has in its environment

Environmental Citizenship never was at the heart of our education

Still remains a lively disagreement about the aims of environmental education that may lead to conflicting goals and outcomes (Schild, 2016)

- Despite this clear charge to build a citizenry capable and motivated to work toward better environmental outcomes, both the definition of environmental education and its intended outcomes have been contested and debated for several decades Disinger, 1997; Fien, 2000; Fraser, Gupta, & Krasny, 2014; Huckle, 1993; Jickling & Spork, 1998).
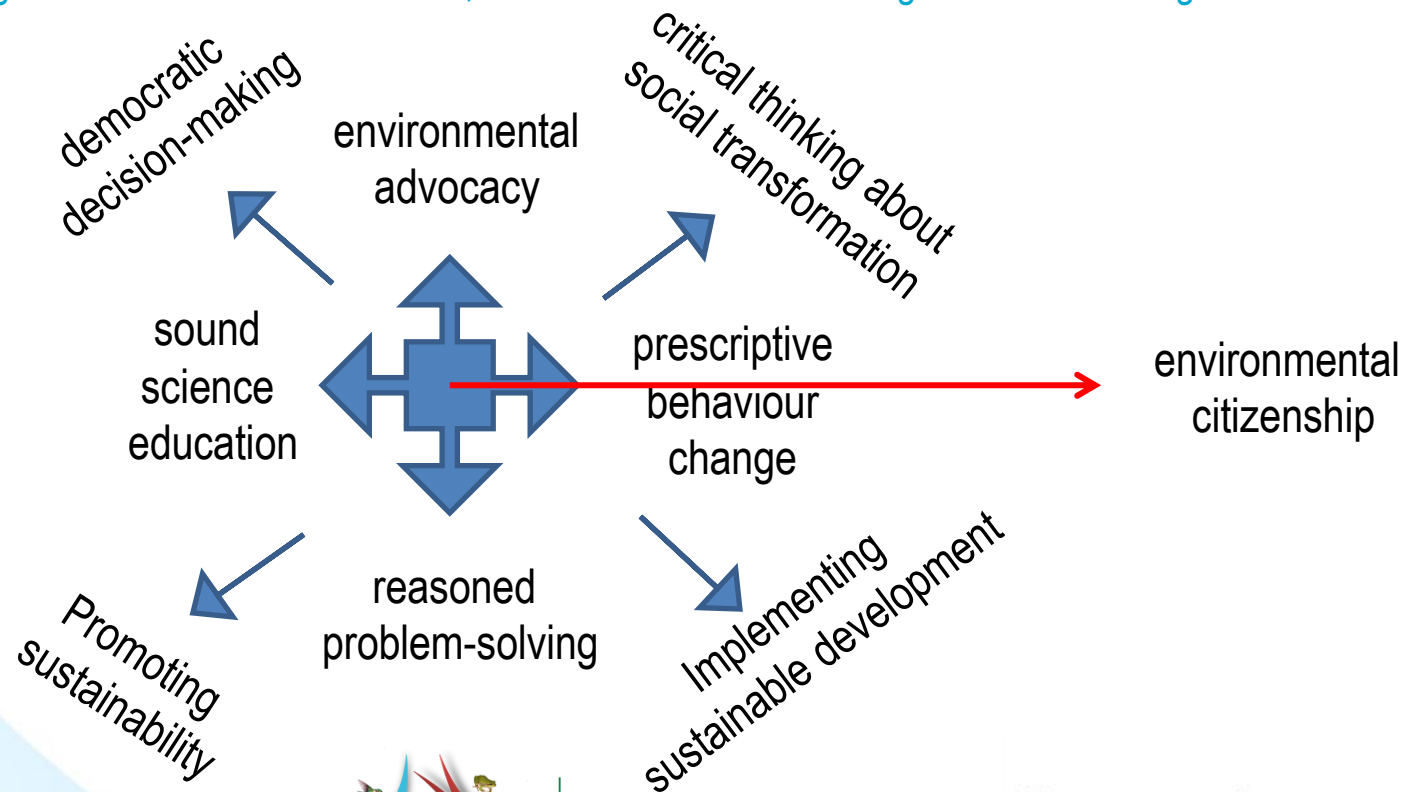
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Environmental Citizenship never was at the heart of our education

Fraser et al. (2014, p. 1) note, "Recently, highly charged critiques from those outside and within EE have fomented debate about EE, challenging whether the field is implicit environmental advocacy or reasoned problem-solving, prescriptive behaviour change or sound science education, democratic decision-making or critical thinking about social transformation."

democratic decision-making

environmental advocacy

critical thinking about social transformation

sound science education

prescriptive behaviour change

environmental citizenship

Promoting sustainability

reasoned problem-solving

Implementing sustainable development

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Debate between EE and Citizenship

- According to Jacobi (2005) EE **should be placed** in a broader context, namely education for citizenship and understood as a practice that is decisive in the consolidation of citizen-subjects (p. 243).

- According to Loureiro (2011) EE is a constituent part of social/environmental movement …and the process of constructing planetary citizenship or ecocitizenship is consider as **a new concept** .

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Debate between EE and Citizenship

- According to Scott (2011) citizenly engagement **should be a priority**.

- He concluded that "the priority must be to engage young people with ideas about sustainability through imaginative teaching strategies that provide stimulating opportunities for learning, including practice in **citizenly engagement** – and that everything else has to be secondary to this".

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Debate between EE and Citizenship

- According to Dimick (2015) environmental citizenship **should be an educational aim**.

- He stated that "developing students' civic capacities and dispositions to engage as participatory citizens in relation to environmental issues and concerns" (p. 390) **should be** an educational aim of EE.

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Environmental Citizenship

Influential concept in different arenas such as

- Economy
  - Policy
    - Development studies
      - Philosophy
        - Organisational Management and Marketing
          - Could be… exploited furthermore by Education

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ENEC APPROACH

Our Approach…

Education for Environmental Citizenship

- Has something new, innovative and unique to deliver

  - Could be the basis for a new Educational Theory which will be developed and promoted by our consortium

    - Each one of us here could take the opportunity to contribute to such inspiring initiative within the framework of our project.

      - Be part of the genesis of the Education for Environmental Citizenship.

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INTRODUCTION TO EDUCATION FOR ENVIRONMENTAL CITIZENSHIP (EEC)

Our Approach

Home / Our Approach

Environmental Citizenship

"Environmental Citizenship" is defined as the responsible pro-environmental behaviour of citizens who act and participate in society as **agents of change** in the **private** and **public sphere**, on a **local, national** and **global scale**, through **individual** and **collective actions...**

Education for Environmental Citizenship

"Education for Environmental Citizenship" (EEC) is defined as the type of education which cultivates a coherent and adequate body of **knowledge** as well as the necessary **skills, values, attitudes** and **competences** that

Environmental Citizen

"Environmental Citizen" is defined as the citizen who has a coherent and adequate body of **knowledge** as well as the necessary **skills, values, attitudes** and **competences** in order to be able to act and participate in society as an **agent of change...**

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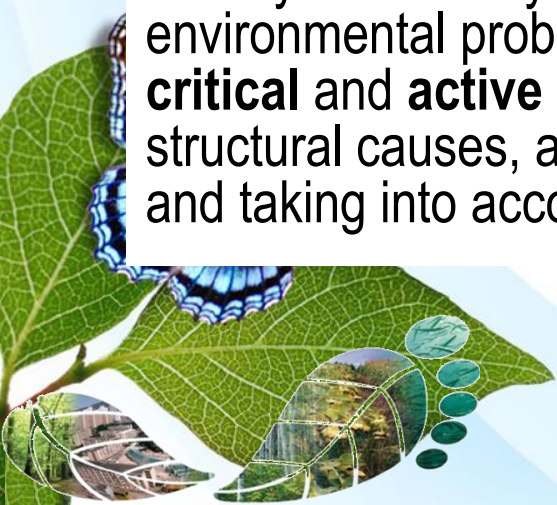Funded by the Horizon 2020 Framework Programme of the European Union

INTRODUCTION TO EEC

I. Defining "Education for Environmental Citizenship"

Education for Environmental Citizenship" (EEC) is defined as the type of education which cultivates a coherent and adequate body of **knowledge** as well as the necessary **skills**, **values**, **attitudes** and **competences** that an environmental citizen should be equipped with in order to be able to act and participate in society as an **agent of change** in the **private** and **public sphere**, on a **local, national** and **global scale**, through **individual** and **collective actions**, in the direction of **solving** contemporary **environmental problems**, **preventing** the creation of new environmental problems, in **achieving sustainability** as well as **developing a healthy relationship with nature**.

"Education for Environmental Citizenship" (EEC) is important to empower citizens to **exercise their environmental rights and duties**, as well as to identify the underlying **structural causes** of environmental degradation and environmental problems, develop the **willingness** and the **competences** for **critical** and **active engagement** and **civic participation** to address those structural causes, acting individually and collectively within democratic means and taking into account the **inter- and intra-generational justice (ENEC 2018)**.

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INTRODUCTION TO EEC

II. Defining "Environmental Citizenship"

"Environmental Citizenship" is defined as the responsible pro-environmental behaviour of citizens who act and participate in society as **agents of change** in the **private** and **public sphere**, on a **local, national** and **global scale**, through **individual** and **collective actions**, in the direction of **solving** contemporary **environmental problems**, **preventing** the creation of new environmental problems, **achieving sustainability** as well as **developing a healthy relationship with nature**. *"Environmental Citizenship"* includes the **exercise of environmental rights and duties**, as well as the identification of the underlying **structural causes** of environmental degradation and environmental problems, the development of the **willingness** and the **competences** for **critical** and **active engagement** and **civic participation** to address those structural causes, acting individually and collectively within democratic means, and taking into account **inter- and intra-generational justice (ENEC 2018)**.

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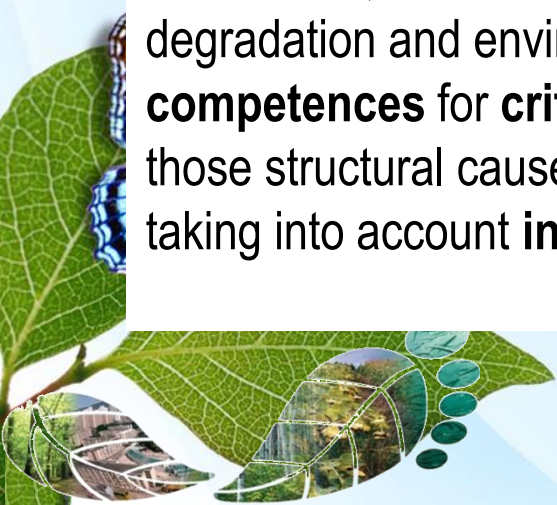of the European Union

INTRODUCTION TO EEC

III. Defining "Environmental Citizen"

"Environmental Citizen" is defined as the citizen who has a coherent and adequate body of **knowledge** as well as the necessary **skills**, **values**, **attitudes** and **competences** in order to be able to act and participate in society as an **agent of change** in the **private** and **public sphere**, on a **local**, **national** and **global scale**, through **individual** and **collective actions**, in the direction of **solving** contemporary **environmental problems**, **preventing** the creation of new environmental problems, in **achieving sustainability** as well as **developing a healthy relationship with nature**. *"Environmental Citizen"* is the citizen who **exercises his/her environmental rights and duties**, is able to identify the underlying **structural causes** of environmental degradation and environmental problems, and has the **willingness** and the **competences** for **critical** and **active engagement** and **civic participation** to address those structural causes, acting individually and collectively within democratic means and taking into account **inter- and intra-generational justice (ENEC 2018)**.
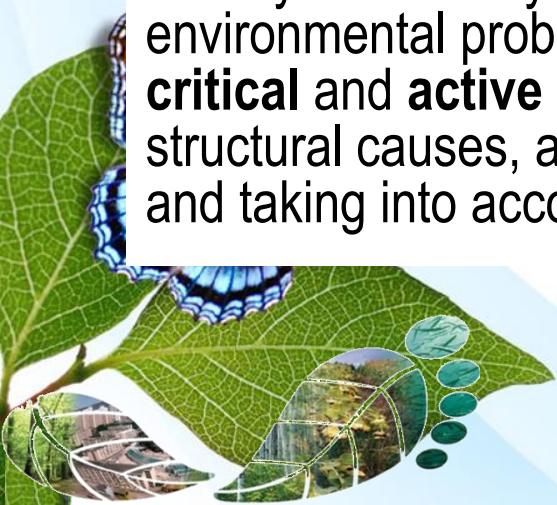
INTRODUCTION TO EEC

I. Defining "Education for Environmental Citizenship"

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"Education for Environmental Citizenship" (EEC) is important to empower citizens to **exercise their environmental rights and duties**, as well as to identify the underlying **structural causes** of environmental degradation and environmental problems, develop the **willingness** and the **competences** for **critical** and **active engagement** and **civic participation** to address those structural causes, acting individually and collectively within democratic means and taking into account the **inter- and intra-generational justice (ENEC 2018)**.

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The EEC Model

According to the definition of the Education for Environmental Citizenship (EEC defined by ENEC (2018) there are 8 main intended outputs of the EEC:

- Preventing environmental problems (new)
- Solving environmental problems (current)
- Exercising environmental rights and duties
- Identifying structural causes of environmental degradation and problems
- Achieving critical and active engagement and civic participation
- Promoting inter- & intra generational justice
- Developing healthy relationship with nature
- Achieving sustainability

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The EEC Model

According to the same definition of the Education for Environmental Citizenship (EEC) defined by ENEC (2018) the intended **individual** and **collective actions** should be applied in:

    a. **Private** and **public spheres**

    b. **Local**, **national** and **global scales**

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Environmental Actions' Classification

How the environmental actions of environmental citizens, can be classified;

Collective Actions

Participate in a protest or demonstration

Connect and influence decision makers

Involvement in local politics

Participation as a member of a union, organization, organization, community

Organizing a campaign - Lobbying

Head of a school of thought

Private sphere

Public sphere

Recycle

Become Volunteer

Choose as consumer

Composting

Support with my presence

Donate for a project

Vote

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Individual Actions

EEC's Scales

The EEC Model

Collective actions

achieving sustainability

preventing environmental problems

developing healthy relationship with nature

solving environmental problems

global scale
national scale
local scale

agents of change

Knowledge
Values
Attitudes
Skills
Competences
Behaviour

agents of change

Private sphere

Public sphere

promoting inter- & intra-generational justice

exercising environmental rights & duties

achieving critical & active engagement & civic participation

addressing structural causes of environmental degradation & problems

Individual actions
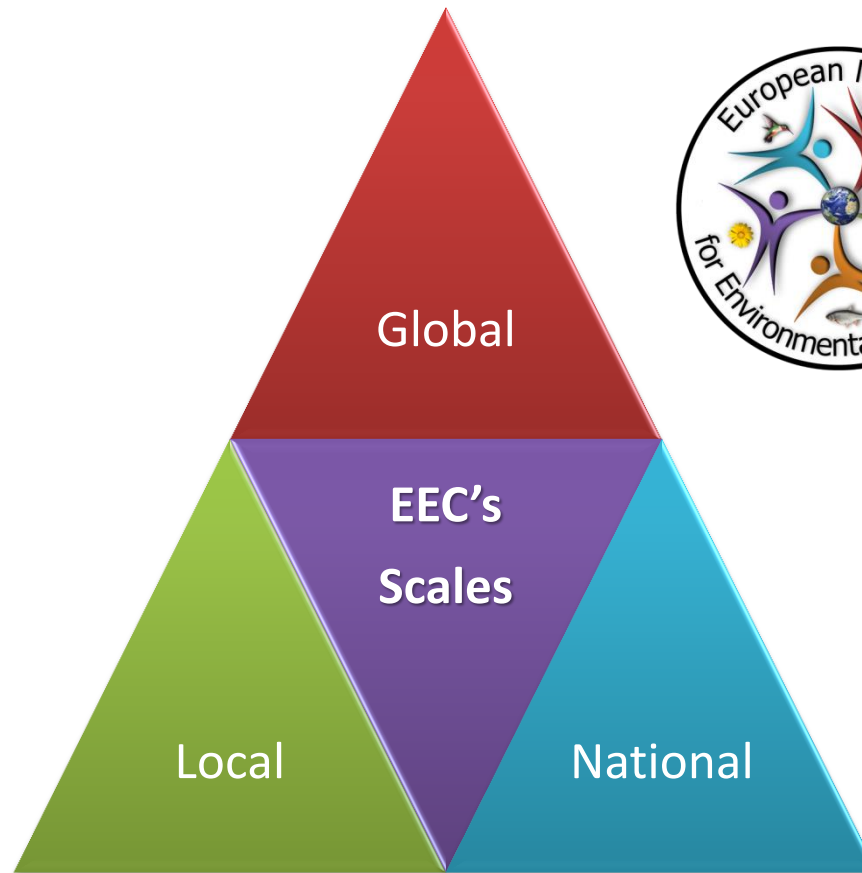
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THE NEED FOR PEDAGOGICAL APPROACH
for Education for Environmental Citizenship

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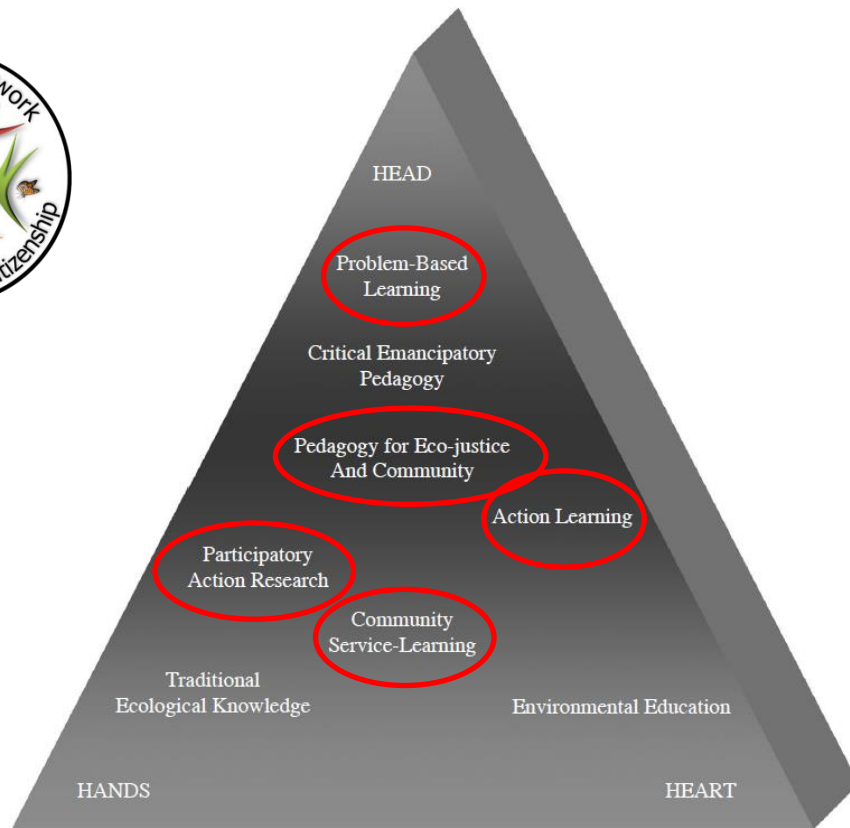Cost Action CA16229

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The pedagogical landscape of EEC
Sustainability and Transformative Sustainability Learning

Figure 2. A "pedagogical landscape" of sustainability and transformative learning models based on the organizing principle of head, hands and heart

Notes: This ternary diagram charts the relatedness amongst these pedagogies to each other and to the foci of Head, Hands and Heart. The pedagogies are not fixed in position; their relative positions will be influenced by their particular practice

Source: Sipos, Y.; Battisti, B.; Grimm, K. Achieving transformative sustainability learning: engaging head, hands and heart. *Int. J. Sustain. High. Educ.* **2008**, 9, 68–86.

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Source: Sipos, Y.; Battisti, B.; Grimm, K. Achieving transformative sustainability learning: engaging head, hands and heart. *Int. J. Sustain. High. Educ.* **2008**, 9, 68–86.

Pedagogical model	Overview of intended learning outcomes
Action learning	A form of experiential learning that enlists peers in helping learners question their assumptions and (optimally) experience a paradigm shift before applying their learning in new situations (McGill and Brockbank, 2004; Revans, 1998)
Community service-learning	An educational approach that integrates service in the community with intentional learning activities. Within effective CSL efforts, members of both educational institutions and community organizations work together toward outcomes that are mutually beneficial (Hayes, 2006, p. 2)
Critical emancipatory pedagogy	An ideology for learning facilitation that arises from an emancipatory tradition, focusing on equity amongst classes, races and genders (Mezirow, 1985; Freire, 1970)
Environmental education	An approach to teaching and learning that provides people with experience and knowledge to care for our environments (Gruenewald, 2004; Orr, 1994)
Participatory action research	A summary of terms in social science that refer to involvement of participants in the research process, commitment to social change, and that include aspects of social learning. There are many ways to define true participation, action and exactly what constitutes true research (Moore, 2005b; Coghlan and Brannick, 2001, Ch. 1; Stringer, 1999)
Pedagogy for eco-justice and community	An ideology for learning facilitation that acknowledges and finds tensions in "industrial mindset," works to replace attitudes with the metaphor of ecology (Bowers, 2001)
Problem-based learning	A framework for learning that is focused, experiential and organized around investigation of real-world problems. Authentic experiences foster active learning, support knowledge construction and integrate school learning and real life (Association for Supervision and Curriculum Development, 2005; Barrows, 1994)
Traditional ecological knowledge	Knowledge bases built by local or traditional resource users, as opposed to "experts"; argues for acknowledgement of more diverse forms of knowledge (as opposed to simply expert western science) (Berkes, 2004; Turner *et al.*, 2000)

Table I.
An overview of some established pedagogies that relate to sustainability and transformative education

Green annotations:
- Peers
- Community Organizations
- Emancipatory Equity
- Care for environment
- Social learning
- Social justice
- Authentic real-world problem
- Traditional resources of knowledge

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Pedagogical Approaches of EEC

The following pedagogies, teaching tools and learning schemes could promote EEC:

- Place based education
- Civic ecology education
- Ecojustice pedagogy
- Environmental Action Competence

What is Place-based education?

- Place-based education (PBE) immerses students in local environment, heritage, cultures, landscapes, opportunities and experiences. PBE emphasizes learning through participation in service projects for the local school and/or community.
    - Research has shown that well-designed initiatives can:
        - PBE boosts **students' engagement**, **academic achievement**, and sense of **personal efficacy as stewards** of their local environment and community. It also can re-energize teachers.
        - PBE forges strong ties between **local social and environmental organizations** and their constituencies in the schools and community, which helps to improve quality of life and economic vitality.
        - Through project-based learning, students make tangible contributions to **resolving local environmental issues** and conserving local environmental quality.

Enriching Lives Through
Place-Based Education

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Source: https://promiseofplace.org/what-is-pbe/what-is-place-based-education

Principles of Successful Place-Based Education

- Learning **takes place on-site** in the school yard, and in the local community and environment.

- Learning focuses on **local themes**, **systems, and content**.

- Learning is **personally relevant** to the learner.

- Learning experiences contribute to the **community's vitality and environmental quality** and **support the community's** role in fostering global environmental quality.

- Learning is supported by strong and varied **partnerships** with local organizations, agencies, businesses, and government.

- Learning is **interdisciplinary**.

- Learning experiences are tailored to the **local audience**.

- Learning is grounded in and supports the development of a **love for one's place**.

- Local learning serves as the foundation for **understanding and participating appropriately in regional and global issues**.

- Place-based education programs are integral to achieving **other institutional goals**.

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Source: https://promiseofplace.org/what-is-pbe/principles-of-place-based-education

Positive interactive cycle of accessibility, mobility and engagement with environment leading to environmental change agency (Malone 2012 p. 30, adapted from Chawla 2007, p. 155)
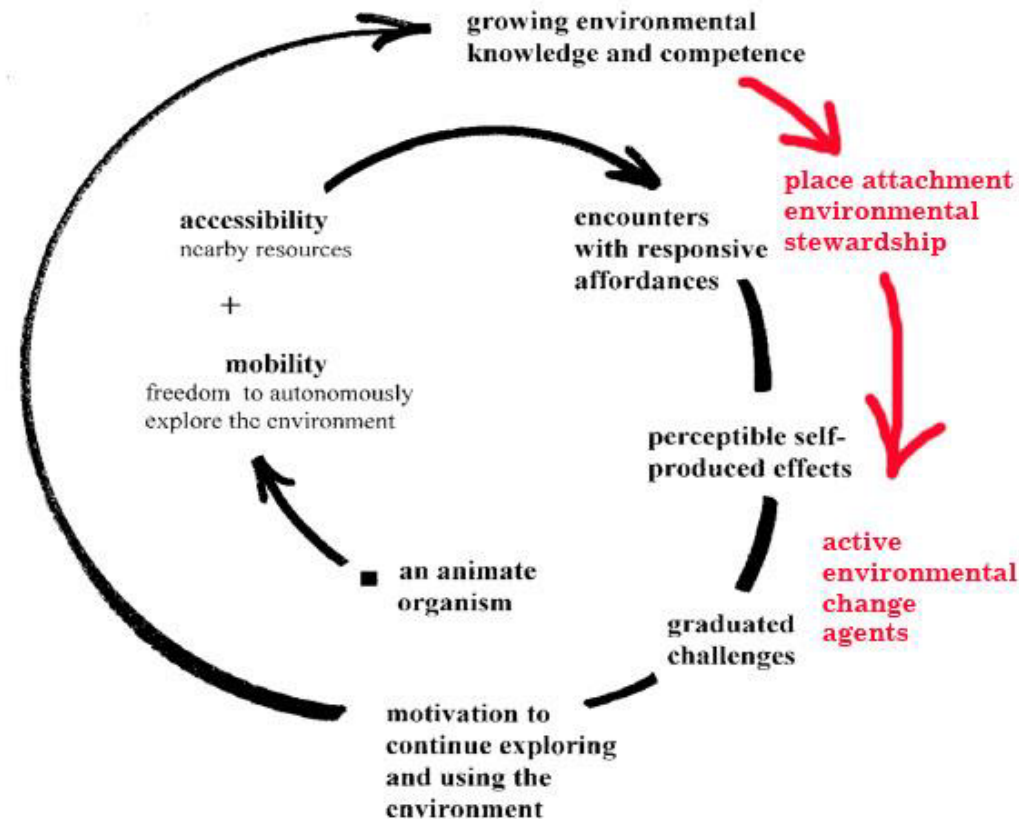
Civic ecology education

- Civic ecology pedagogy (Tidball & Krasny, 2010), can provide another one example of how environmental citizenship could be promoted.

- Civic ecology is defined as "**stewardship practices** that integrate social and environmental values within a social—ecological systems framework … where participants act as **stewards of their environment** through such practices as community gardening, community forestry, and watershed restoration" (Tidball & Krasny, 2010, p. 466).

Civic Ecology Education

Example from Friends of the Gorge Student Organization
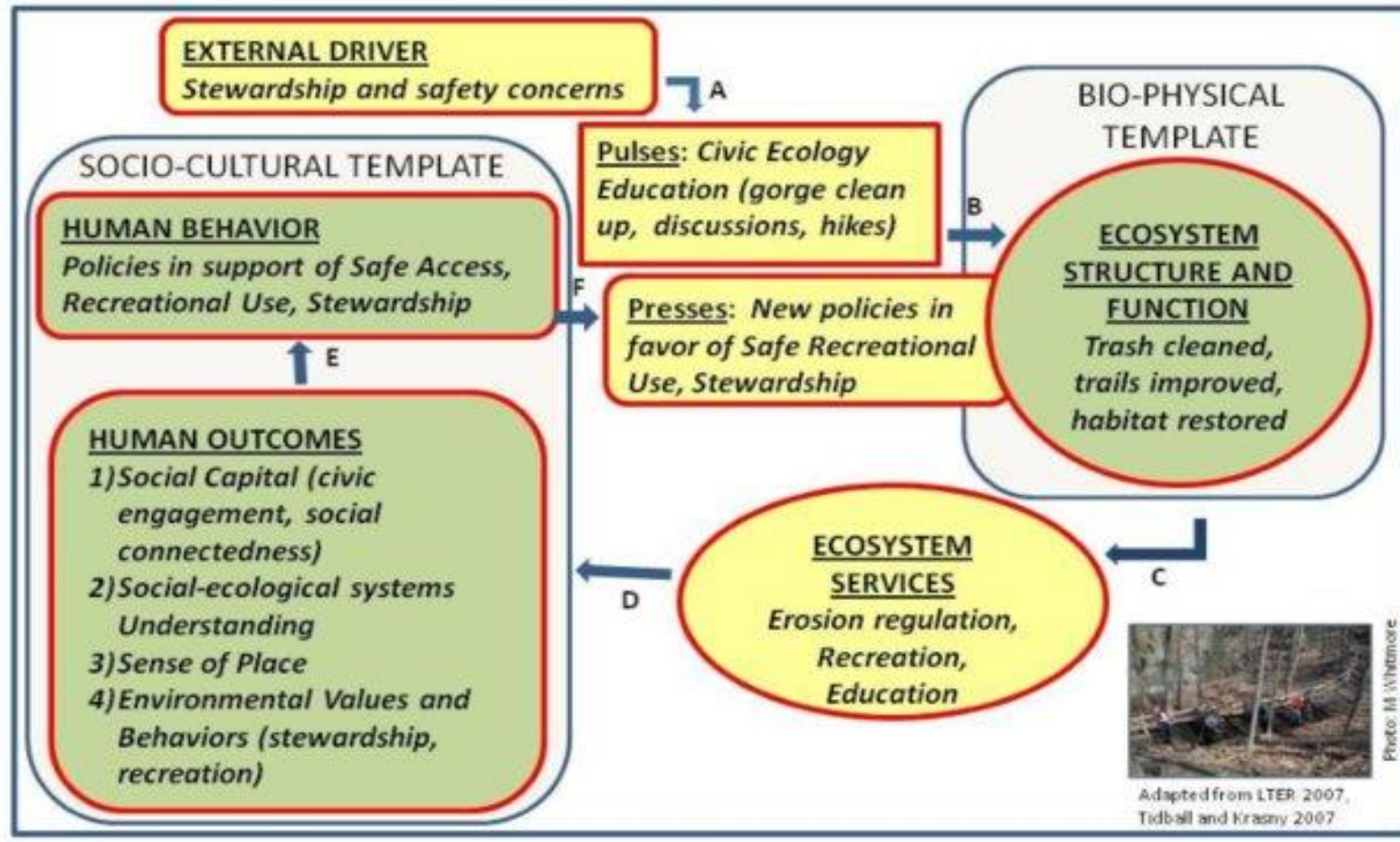
EXTERNAL DRIVER
Stewardship and safety concerns

A

SOCIO-CULTURAL TEMPLATE

HUMAN BEHAVIOR
Policies in support of Safe Access, Recreational Use, Stewardship

F

E

HUMAN OUTCOMES
1) *Social Capital (civic engagement, social connectedness)*
2) *Social-ecological systems Understanding*
3) *Sense of Place*
4) *Environmental Values and Behaviors (stewardship, recreation)*

Pulses: *Civic Ecology Education (gorge clean up, discussions, hikes)*

Presses: *New policies in favor of Safe Recreational Use, Stewardship*

B

BIO-PHYSICAL TEMPLATE

ECOSYSTEM STRUCTURE AND FUNCTION
Trash cleaned, trails improved, habitat restored

ECOSYSTEM SERVICES
Erosion regulation, Recreation, Education

D

C

Photo: M Whitmore

Adapted from LTER 2007, Tidball and Krasny 2007

Ecojustice pedagogy

- Calls for time spent in "**out-of- classroom spaces and places**; **experiencing the knowledge of different cultures** and cultural relationships to place; gaining a diversity of natural history knowledge; and **developing community relationships and actions**" (McKenzie, 2008, p. 366).

  - Ecojustice pedagogy, **bridges western scientific knowledge with traditional ecological knowledge (TEK)** through **critical** and relational discourse, coupled with an **interdisciplinary** approach to learning, helps us move beyond the binary and disconnect.

    - It adds an ecological lens on **social justice**. In other words, it extends values of justice to include the environment and 'environmental racism' (Bowers, 2002).

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Action Competence Learning

- As an educational approach, environmental action aims not to modify specific behaviours like recycling or saving water, but rather **engages youth in planning and taking action** on environmental issues they find relevant.

- It involves **shared decision making**, which occurs when adults and youth collaborate in planning, implementing, and evaluating a project, whether the project is initiated by youth or adults.

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Environmental action occurs at the intersection of youth civic engagement and inquiry-based education
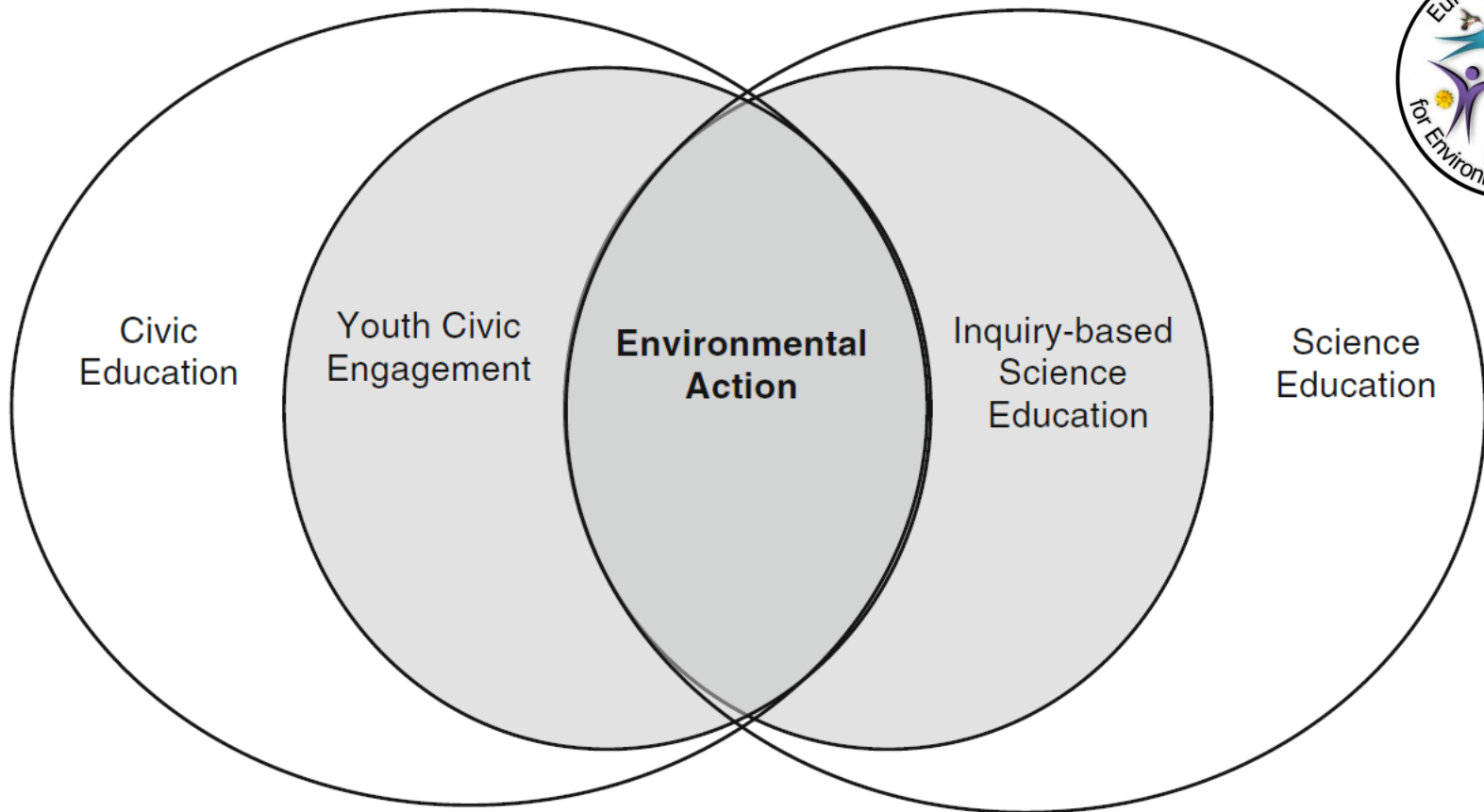
Civic Education — Youth Civic Engagement — **Environmental Action** — Inquiry-based Science Education — Science Education

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Several examples of youth environmental action have been documented in educational practice:

- **Physical environmental improvements** (e.g., planting trees to stabilize streambanks; transforming vacant lots into community gardens);

- **Community education** (e.g., organizing community information fairs; producing educational media like newsletters or videos);

  - **Inquiry** (e.g., community assessments, surveys, and mapping; scientific experiments designed to inform or evaluate action);

  - **Public issue analysis and advocacy for policy change** (e.g., researching and analyzing the environmental impacts of on-site wastewater treatment regulations and presenting policy recommendations to a state legislative committee); and

    - **Products or services contributing to community development** (e.g., sustainably growing food for sale at a neighbourhood farmers market).
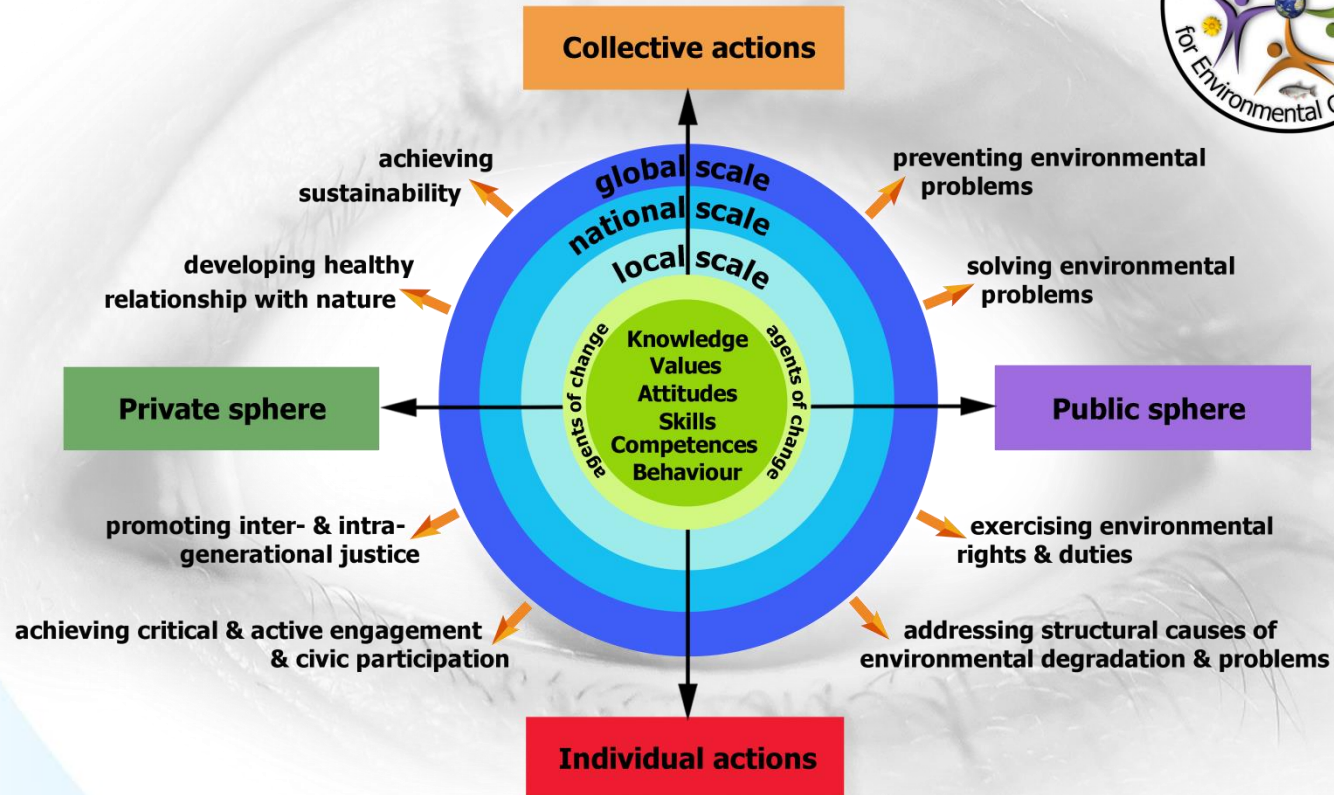
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The EEC Model

Collective actions

achieving sustainability

preventing environmental problems

developing healthy relationship with nature

solving environmental problems

global scale
national scale
local scale

agents of change

Knowledge
Values
Attitudes
Skills
Competences
Behaviour

agents of change

Private sphere

Public sphere

promoting inter- & intra-generational justice

exercising environmental rights & duties

achieving critical & active engagement & civic participation

addressing structural causes of environmental degradation & problems

Individual actions

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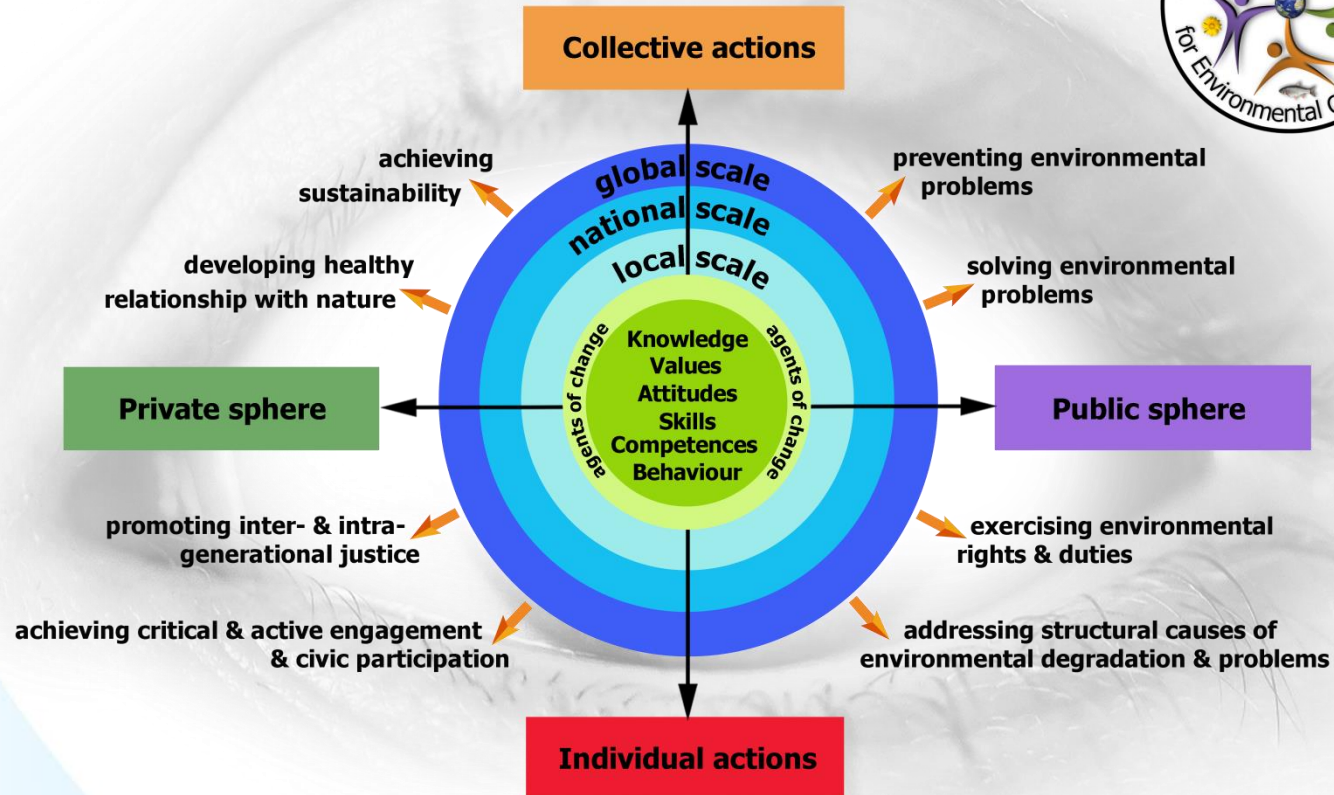# Education for Environmental Citizenship Pedagogical Approach

The EEC Model

Collective actions

achieving sustainability

preventing environmental problems

developing healthy relationship with nature

solving environmental problems

global scale
national scale
local scale

agents of change

Knowledge
Values
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Private sphere

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Conclusion

- Productive and fruitful Training School

- Be familiar with the pedagogical approaches proposed

- Examine the possibility of introducing some aspects of the Education for Environmental Citizenship in your research.

Thanks for your attention

Dr Andreas Hadjichambis
ENEC, Action Chair

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References

- Schild, R. (2016) Environmental citizenship: What can political theory contribute to environmental education practice?, The Journal of Environmental Education, 47:1, 19-34, DOI: 10.1080/00958964.2015.1092417
- Disinger, J. F. (1997). Environmental education's definitional problem. In H. Hungerford, W. Bluhm, T. Volk, & J. Ramsey (Eds.), Essential readings in environmental education (pp. 17–32). Champaign, IL: Stipes.
- Fien, J. (2000). "Education for the environment: A critique"—an analysis. Environmental Education Research, 6(2), 179–192.
- Fraser, J., Gupta, R., & Krasny, M. E. (2014). Practitioners' perspectives on the purpose of environmental education. Environmental Education Research, http://dx.doi.org/10.1080/13504622.2014.933777
- Huckle, J. (1993). Environmental education and sustainability: A view from critical theory. In J. Fien (Ed.), Environmental education: A pathway to sustainability (pp. 43–68). Melbourne, Australia: Deakin University.
- Jickling, B., & Spork, H. (1998). Education for the environment: A critique. Environmental Education Research, 4(3), 309–327.
- Jacobi, P. R. (2005). Educação Ambiental: o desafio da construção de um pensamento crítico, complexo e reflexivo. Educação e Pesquisa, 31(2), 233–250.
- Loureiro, C. F. B. (2011). Educação Ambiental e movimentos sociais na construção da cidadania ecológica e planetária. In C. F. B. Loureiro, P. P. Layrargues, & R. S. Castro (Eds.), Educação ambiental: Repensando o espaço da cidadania (5th ed., pp. 73–104). São Paulo: Cortez.
- Scott, W. (2011). Sustainable schools and the exercising of responsible citizenship – A review essay. Environmental Education Research, 17(3), 409–423. https://doi.org/10.1080/13504622.2010.535724.
- Dimick, A. S. (2015). Supporting youth to develop environmental citizenship within/against a neoliberal context. Environmental Education Research, 21(3), 390–402. https://doi.org/10.1080/13504622.2014.994164.
- Carvalho, L.M. de and de Souza, H.A.L. (2018) Environmental Education Research and the Political Dimension of Education for Citizenship: The Brazilian Context. In Gi. Reis and J. Scott (Eds.), International Perspectives on the Theory and Practice of Environmental Education: A Reader, Environmental Discourses in Science Education (pp. 209–220). Cham, Switzerland: Springer.
- United Nations Economic Commission for Europe (UNECE). 2005. Vilnius UNECE Strategy for Education for Sustainable Development. https://www.unece.org/fileadmin/DAM/env/documents/2005/cep/ac.13/cep.ac.13.2005.3.rev.1.e.pdf (accessed February 2018).
- Schusler, T.M. & Kransy, M.E. (2015) Science and Democracy in Youth Environmental Action – Learning "Good" Thinking. In M. P. Mueller and D. J. Tippins, EcoJustice, (Eds.), Citizen Science and Youth Activism Situated Tensions for Science Education (pp. 363–384). Cham, Switzerland: Springer.
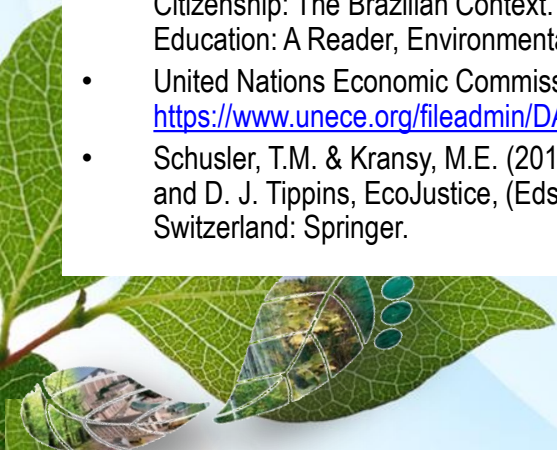
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References

- Malone, K. (2012). The future lies in our hands: children as researchers and environmental change agents in designing a child-friendly neighbourhood, Local Environment: The International Journal of Justice and Sustainability, DOI:10.1080/13549839.2012.719020
- Chawla, L. (2007). Childhood Experiences Associated with Care for the Natural World: A Theoretical Framework for Empirical Results. Children, Youth and Environments 17(4): 144-170. Retrieved 1 from http://www.colorado.edu/journals/cye.
- Tidball, K.G. and M.E. Krasny. 2010. Urban environmental education from a social-ecological perspective: conceptual framework for civic ecology education. Cities and the Environment. 3(1):article 11. http://escholarship.bc.edu/cate/vol3/iss1/11. 20 pp.
- Bowers, C. (2002). Toward an eco-justice pedagogy. Environmental Education Research, 8 , 21–34.
- McKenzie, M. (2008). The places of pedagogy: Or, what we can do with culture through intersubjective experiences. Environmental Education Research, 14 , 361–373.

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