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**REGIONAL IMPLEMENTATION MEETING ON
SUSTAINABLE DEVELOPMENT**

Fourth meeting
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Item 9 of the provisional agenda

**THE 10 YEAR FRAMEWORK OF PROGRAMMES ON SUSTAINABLE CONSUMPTION
AND PRODUCTION PATTERNS**

**ADDRESSING SUSTAINABLE CONSUMPTION, PRODUCTION AND
TRANSPORTATION THROUGH EDUCATION FOR SUSTAINABLE
DEVELOPMENT: GOOD PRACTICES¹**

Note by the secretariat

Summary

This document was compiled by the secretariat based on selected good practices provided by the Member States and other stakeholders for the collection of good practices under the UNECE Strategy for Education for Sustainable Development. It is prepared pursuant to the request of the UNECE Steering Committee on Education for Sustainable Development (ECE/CEP/AC.13/2009/2, para. 30) and aims to foster discussions on the effective use of education for sustainable development in addressing sustainable consumption, production and transportation. An analysis of these good practices is available in document ECE/AC.25/2009/4.

¹ This document was submitted on the above date due to the timing required for consultations on the information provided in the good practices

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I. RATIONAL USE AND CONSERVATION OF WATER RESOURCES IN THE SPHERE OF SECONDARY EDUCATION (ARMENIA)

A. Main objectives

1. The project aims to provide learners with knowledge of issues related to use and conservation of water resources, to form their abilities, skills and values, and to promote continuity.

B. Methods/approaches

2. Specialists and technical and pedagogical materials served as resources. Specialists in education and nature protection, scientific workers of the State Museum of Nature of Armenia, science education experts, experts in educational methods, teachers and learners participated. Exhibits by the specialists of the Museum were also used. These were used for the manual and in the trainings.

3. As part of the informal education, a course for students, using active teaching methods, was developed in the project. Social education techniques such as cooperation, consultation and communication enhanced critical thinking and the democratic nature of the process. Participants took away syllabi, questionnaires, sample lesson plans, and possible measures and recommendations to use in their educational institutions. Proposals by teachers were further developed and incorporated into the teaching manual.

C. Evaluation

4. The Ministry of Education, the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the project participants rated the project highly.

D. Results

5. Among the main results were the education on rational use and conservation of water resources in Armenia and capacity-building through training courses, the course website, and other methods that contributed to changing behaviors.

6. The project also resulted in two publications (Ways of Education for Sustainable Development and the Manual on The Basic Issues of Rational Use and Conservation of Water Resources of the Republic of Armenia) and the project website.

E. Strengths

7. Final evaluation showed that participants appreciated the professionalism of lecturers, the diversity of teaching methods and the selection of course themes.

F. Weaknesses and risks

8. The length of the training was not sufficient and the sessions were not continuous.

G. Problems encountered

9. While a good number of candidates participated, not everyone completed the training, as the project did not cover the expenses of participants from other regions. Also, too many themes were included and there was not enough time to cover them all.

H. Advantages

10. Specialized teaching course; different social groups participating in the teaching; introduction of new methods as part of the Education for Sustainable Development (ESD) programme.

I. Partners/stakeholders involved

11. The Ministry of Education and Science, Education Department of the Yerevan City Council, the Educational National Institute and educational institutions (60 secondary schools, 7 colleges, 4 universities).

J. Learners

12. Teachers, learners, students and research workers of the State Museum of Nature. A total of 160 people participated.

K. Timing and funding

13. The project was implemented over five months in 2007 with the budget of US\$ 15,000. The project was sponsored by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the State Museum of Nature of Armenia provided conference facilities.

L. Contact information

14. Ms. Gayane Surenovna Poghosyan, State Committee of Science of the Ministry of Education and Science²

II. ECOLOGIZATION OF SCHOOLS – EDUCATION FOR SUSTAINABLE DEVELOPMENT (AUSTRIA)

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A. Main objectives

15. ÖKOLOG³ is the first and main Austrian programme for schools at the interface of environmental education (EE) and school development. It is based on the Environment and School Initiative (ENSI) approach⁴ to EE and ESD and takes into account the challenges and opportunities of school autonomy and school programme development.

16. Schools define the ecological, technical and social conditions of their environment, and accordingly the objectives, targets and/or concrete activities and quality criteria to be implemented and evaluated.

17. Students as others at school are encouraged to participate and work together with authorities, businesses and other interested parties.

B. Methods/approaches

18. Schools apply for membership in the ÖKOLOG school network. The application must be signed by the school team coordinator and the head of the school, based on an internal decision. Network schools agree to submit a yearly report covering at least one activity based on a standardized framework and documenting both process and results. The following 10 steps are recommended to interested schools:

- (a) Reaching an agreement between all partners ;
- (b) Establishing a school team and selecting a coordinator;
- (c) Assessing baseline sustainability performance in the school;
- (d) Defining priorities;
- (e) Formulating goals and objectives;
- (f) Developing an action plan and defining projects;
- (g) Implementing the plan and documenting the steps of development;
- (h) Monitoring achievements and reflecting on processes implemented;
- (i) Celebrating successes and strengthening team spirit;
- (j) Organizing the transfer of results and experiences into every day routines.

19. These steps are at the core of innovation requiring school consensus. Building and maintaining a school team should be a step towards a middle management structure in schools in order to sustain developments, and further steps should facilitate development of a school programme. Schools are encouraged to become active in “hard topics” (e.g. energy consumption), as well as in “soft topics” (school climate).

³ www.oekolog.at

⁴ www.ensi.org

20. The yearly reports of ÖKOLOG network schools show a whole range of activities, from single EE projects to whole school initiatives, including school programme formulation and efforts towards the National Environmental Award.

21. Schools define the actual ecological, technical and social conditions of their environment (first analysis) and then define objectives, targets and/or concrete measures for changes. These concern areas such as conservation of resources (energy, water), reduction of emissions (waste, traffic), spatial arrangements (from the classroom to the campus); learning culture (communication culture, organizational structure), health promotion and outreach (e.g. to the community).

22. These activities should include as many pupils as possible, as well as authorities, business and other interested stakeholders. Schools thus set a good example to the public and the local administration.

C. Evaluation

23. An extensive set of evaluation criteria were developed for the pilot phase. Data sources included two interim reports and the final report, visits to all schools and interviews with teachers, principals, school coordinators, students and non-teaching personnel. Out of 6,100 questionnaires, sent to all Austrian schools, 2,300 were returned and analysed. A survey of 370 Upper Austrian secondary schools (138 returns) and case studies of five schools were done. A survey of 300 schools in Salzburg focused on possibilities for future school development. A series of in-depth interviews with different partners of the ÖKOLOG network were conducted. A gender approach in information media was developed. A survey was also made of 246 Eco-Schools (135 returns), focusing on motivation, approaches, fostering and hindering factors, and recommendations developed based on school coordinators' experience.

D. Results

24. The network had 300 schools (with some 70,000 students); many others were reached through the website, teacher in-service training seminars and newsletters.

E. Strengths

25. The schools involved are highly committed, some of them participating for more the five years. Twenty per cent of the ECO-schools received the National Environmental Performance Award for Schools and Educational Institutions⁵.

F. Weaknesses and risks

26. One of the issues was involving many new schools while maintaining the quality of the network. Reported weaknesses at school level were the lack of time, funding, local support, advice, and know-how about the project, network management and team-building. Schools had to sign a kind of contract to join the network.

⁵ www.umweltzeichen.at/schulen

G. Problems encountered

27. Policy changes with respect to school programme development

H. Unresolved issues

28. Future issues to address include:

- (a) Ensuring continuity, including for funding;
- (b) Developing local advisory support;
- (c) Optimizing networking (communication, support, innovation, involvement);
- (d) Identifying structural links to quality assessment and educational standards development.

I. Advantages

29. ÖKOLOG is part of the international movement of ECO-schools and/or ESD-schools, with whole school development as the basis to implement and develop ESD.

J. Partners/stakeholders involved

30. Provincial school administration, provincial governments (environment departments), regional non-governmental organizations (NGOs), teacher in-service training institutions.

K. Learners

31. Target groups are schools, the whole school community (teachers, students, head teachers, non-teaching personnel).

L. Timing and funding:

32. The pilot phase started in 1996; the network of schools was established in 2001.

33. Ministry of Education, Science and Culture and the Forum Umweltbildung⁶ annually provides €100,000 to support coordination of regional support teams, including two annual meetings for exchange purposes, website maintenance, organization of events, publication of a monthly electronic newsletter and a quarterly ÖKOLOG newspaper, the handbook of teaching methods, an information and checklist file, a scheme for extracurricular certification of student achievement, an annual summer academy and regional in-service training workshops (two per year and province).

34. A standard framework is provided for reporting, and writing workshops are offered to assist teachers in writing reports.

⁶ www.umweltbildung.at

35. Regional level support is provided by ÖKOLOG regional teams, which organize in-service education and training as well as promote the exchange of experience between schools. Team members are nominated by regional school boards, regional teacher in-service training institutes and the ENSI teacher team⁷. Some regional teams cooperate with provincial environment departments and NGOs, and get some financial support as ECOLOG network schools.

36. Since 2003, the Environment and Health Education Fund has tripled project funding to ECO-schools.

M. Contact information

37. Dr. Günther Franz Pfaffenwimmer, Austrian Federal Ministry of Education, Arts and Culture⁸.

III. ENVIRONMENTAL COACH (CANADA)

A. Description

38. The environmental coach is a science teacher working in collaboration with school administrators and teaching staff to develop environmental initiatives that involve many students and courses within the school and outreach to other schools. This initially involved teaching half-time (five months) and later, with the principal's support, a full-time position with one extra prep period to carry out the programme's mandates.

39. In the past two years, the school was allocated four grants of CAD 10,000 each for environmental projects. One involved installation of motion sensors in washrooms and replacing water-cooled compressors with air-cooled ones, enabling the conservation of 374 m³ of water per month. In another, Science 10 students built small biogas generators and toured coal-bed methane and natural gas plants to learn about fossil fuels and alternative energy technology. The goal of a third project is to retrofit a school garage for installation of a large biogas generator, solar modules and a wind turbine (creating an alternative energy teaching learning site as well as storage of hardwood for the carpentry classes). The fourth project is about students designing and building the biogas generator to heat the garage. The school is also working with Clean Calgary in a pilot compost programme and is currently the only high school composting.

B. Main objectives

40. These include:

- (a) Bringing EE to all courses taught at the school;
- (b) Increasing student involvement in environmental issues;
- (c) Building an environmental resource library;

⁷ ensi.bmukk.gv.at

⁸ e-mail: guenther.pfaffenwimmer@bmukk.gv.at

- (d) Outreach to feeder school, other schools in city, province and globally.

C. Methods/approaches

41. The coach works closely with the teaching staff to coordinate integration of environmental issues into courses. Such integration is developed by the coach because no ready-made lesson plans or classroom materials are available at the high school level. This involves numerous professional development courses, networking with industry, business and the Calgary Board of Education Eco-Team. Numerous grant proposals have been written to raise funds for projects.

42. The main objective is to involve as many students as possible, including through numerous out-of-school hours. Students also attended several conferences on the environment and toured alternative and traditional energy facilities in the province. The Coach arranges the tours, fills out the paperwork and provides the opportunities for classes. Enmax funds materials for the resource library, available to staff and students. The school is also the only one providing an Environmental Studies 25/35 course.

D. Evaluation

43. The Calgary Board of Education (CBE) is piloting an evaluation process (ECOSITE) for environmental initiatives. The school is the only high school involved and is aiming to be in the Leading Green category. As the programme is still in the pilot stage, full evaluation is not available.

E. Results

44. Lord Beaverbrook High School (LBHS) is an environmental leader within the Calgary Board of Education. It conserved 374 m³ of water per month last year and is implementing further water conservation initiatives. It is the only high school in Alberta offering Environmental Studies 25/35, the only one in Calgary involved in composting and the only one involved with ECOSITE. The students are building a large biogas generator. The school also mentors an elementary school on electricity conservation.

F. Strengths

45. Project strengths include the above results (see para. 44) as well as interdisciplinary approach; student-led initiatives; student awards at the local, provisional and national levels, participation in System Environmental Strategic Planning, presentations at provincial and national conferences; positive community feedback and requests for templates; and resources and implementation within school and other schools.

G. Weaknesses and risks

46. Lack of time to implement current initiatives and the fact that positive publicity creates even more requests and initiatives.

H. Problems encountered

47. Lack of funding from CBE and the negative impact on other schools not fortunate enough to have an environmental coach are among the problems

I. Unresolved issues

48. There is a need for increased eco-coach time to implement the programme.

J. Conditions for successful replication

49. There is a need for more environmental coaches in CBE.

K. Advantages

50. Allows environmental perspective to be brought to the school by freeing up an educator to focus on integrating environmental issues into all the courses. Teachers become more receptive to adding environmental aspects to their classes if they do not have to put any more of their already scarce time into it. More students and adults can get involved.

L. Partners/stakeholders involved:

51. Schools, community organizations and private sector have been involved.

M. Learners

52. School staff and students, parents and feeder schools.

N. Timing and funding

53. The programme began in February 2007 and is ongoing thanks to support by the principal. After five months' funding by Enmax, the school generously found ways to provide for a daily preparation period for the coach to continue work. This costs the school approximately CAD 15,000 per year. To date, the school has not been able to obtain other funding. The number of environmental requests has increased tremendously, and it is hoped that funding can ensure a half-time position for the Environmental Coach. For projects that have been developed the school has received grants from BP A+ for Energy, Alberta Government YES grant, CAD Jack Leslie Youth Environmental Grant and Petro Canada seed money for water projects. In addition, the students fund-raise for their own projects

O. Contact information

54. Maureen Pettigrew, Environmental Coach, Lord Beaverbrook High School⁹.

⁹ e-mail: mjpettigrew@cbe.ab.ca

IV. MEL JOHNSON SCHOOL GARDENING PROJECT (CANADA)

A. Description

55. Mel Johnson School in Wabowden, Manitoba, is literally growing a healthier community through an ever-expanding school gardening project supporting students in placing gardens at their homes. Students gain valuable skills in sustainable food production, healthy eating and food preparation, as well as a sense of pride from their experience of accomplishment and success.

56. Following the example set by their children, many parents in this northern and mainly Aboriginal community have shown an interest in edible gardening and more varieties of fresh vegetables in their families' diets. This relates to the issue of food security and healthy nutrition, of particular concern in remote Northern Communities.

57. A documentary DVD on the project is being produced.

B. Main objectives

- (a) Sustainable greenhouse technology for a northern climate;
- (b) Experiential outdoor education for Aboriginal students and parents;
- (c) Sustainable local agriculture;
- (d) Sustainable local community development, encouraging local practice and inspiring other northern Aboriginal communities;
- (e) Eco-system conservation through sustainable agriculture;
- (f) Eco-tourism through the distribution of the DVD;
- (g) Food security and sovereignty;
- (h) Disease prevention through healthy foods.

C. Evaluation

58. The increase in the number of gardens and gardeners demonstrated the projects' value. Skill in preparing vegetables is increasing. Greater interest on the part of other northern communities in growing their own gardens can be attributed to the initiative. It is expected that the DVD will further increase awareness and interest, and help to build capacity in other communities. This will be evaluated at the time of distribution.

D. Strengths

59. This project is a sustainable and innovative partnership with tremendous health benefits for the community.

E. Weaknesses, risks and problems encountered

60. Although the community is engaged and enthusiastic, one person is the driving force behind the project. It could become too big to manage if the demand for gardens outstrips of project capacity (i.e. individual assistance for each garden). Problems include the heavy workload for one teacher and programme expansion requiring additional support for planting.

F. Unresolved issues

61. It is unclear whether this project has systemic long-term support, including long-term funding and/or a mechanism for self-funding.

G. Conditions for successful replication

62. Shared leadership and proficiency with planting and harvesting the gardens is being developed among the students, parents and community members, which could then assist with replication in another community. This approach is successful in small communities where personal relationships with the families are possible. Requires a champion at the school level and also financial support, at least during initial stages.

H. Advantages

63. The project goal was to show students how to sustainably plant and harvest vegetables that they had never eaten before. The inclusion of healthy foods in the diet was important for this northern community, and the project generated tremendous interest and support. More gardens are being created and gardening practices are improving. Other northern communities are now following suit and creating gardens.

I. Partners/stakeholders involved

64. Mel Johnson School; Frontier School Division; Bayline Regional Round Table (BRRT); Manitoba Sustainable Development Innovation Fund; Manitoba Health and Healthy Living; Manitoba School Nutrition Support Team Aboriginal; Northern Affairs through The Northern Healthy Food Initiative; Manitoba Education, Citizenship & Youth; Buffalo Gals Pictures; Dieticians of Canada; Manitoba Hydro.

J. Learners

65. The students at Mel Johnson School, their parents and teachers and the local community.

K. Timing and funding

66. The project began in 2006, with gardens at 14 student homes grown without synthetic fertilizers or pesticides. Students were guided in tending and harvesting the gardens, and parents introduced their children to new foods with harvested vegetables. Students brought their vegetables to school to show and shared their experience at the Food Forum in Thompson. They were interviewed by the local paper and the Aboriginal Peoples Television Network.

67. In 2007, the number of gardens grew to 25 as more students asked to participate. Seeds were started in the classroom to accommodate the new gardens. In fall 2007, an abandoned greenhouse near the school was refurbished with the help of the community and the Bayline Regional Round Table.
68. In 2008, flowers were grown to sell, providing funds to cover project costs. The school's business class was responsible for advertising, watering and fertilizing, and helped with sales. The leadership class also contributed. The fall harvest was a feast of soups and baking using the vegetables.
69. In 2009, the number of gardens had grown to 45 with the help of seven elders, engaging 45 students and their families. The aim is to expand to 60 gardens by the end of 2009. There are approximately 100 students in the school, with close to 600 people in the community. Parents now want to grow own gardens, as well as help their children with theirs. At the request of the Manitoba Food Charter, the project was presented at Growing Local Food Security conference.
70. BRRT Manitoba Métis Federation and the sale of flowers grown by the children fund greenhouse upgrades, seeds and fertilizer.
71. The 45-minute DVD will be made publicly available in 2010 through various government agencies and community libraries across Canada and beyond. A 22-minute documentary will be promoted to broadcasters and at film festivals. A website will be created. DVD production was funded by SDIF (\$25,000), Manitoba Health and Healthy Living (\$10,000), Frontier School Division (\$5,000) and Aboriginal and Northern Affairs (\$24,900), and had significant in-kind support from project stakeholders.

L. Contact information

72. Don McCaskill, Frontier School Division¹⁰; Mel Johnson School, Wabowden, Manitoba¹¹.

V. ONE-TON CARBON DIOXIDE CHALLENGE (CROATIA)

A. Main objectives

73. This booklet was designed as a citizens' guide action to combat climate change. It contains specific but simple instructions about why and how to use less energy and to recycle, and how to protect environment and save money at the same time. There is a section for children and tips on what they can do.

B. Methods/approaches

74. For World Environment Day, booklets were inserted in daily newspapers and additional copies were distributed at information points in participating cities and counties. The booklets are now available from the websites of, inter alia, the United Nations Development Programme

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(UNDP), the Energy Efficiency and Environmental Protection Fund, the Ministry of Environmental Protection, Physical Planning and Construction, and the Ministry of Economy, Labour and Entrepreneurship.

C. Evaluation

75. The initiative is a part of the EE promotion campaign, “Energy in Our Home: Live Better, Pay Less”, which aims to raise citizens’ awareness about energy efficiency, actively improve it, and reduce greenhouse gas (GHG) emissions. The campaign is complemented by advertising, public lectures, seminars and other events, and the dissemination of information-educational posters and brochures.

D. Results

76. According to information received from the project's partner companies (the EE Pool voluntary coalition), sales of some energy efficient technologies have significantly increased from 2005 (the year before the campaign):

Type of technology	2006 sales increase (%)	2007 sales increase (%)	2008 sales increase (%)
CFLs	30	56	40
Heat regulation valves	15	15	15
Windows with low-energy glass	30	25	25
Gas boilers, conventional	1	36	5
Gas boilers, condensating	20	65	22
Wall insulation	12	24	-9

77. The market penetration of CFLs and EE appliances has shown marked improvement.

- (a) 19.5 per cent more citizens recognise information on EE subjects in media (32.4→51.9 per cent);
- (b) 15.1 per cent increase on energy-saving light bulbs usage (48→63.1 per cent);
- (c) 7.8 per cent increase on usage of A-category home-appliances (22→29.8 per cent);
- (d) 10.9 per cent increase on usage of windows with low-e glass (14.8→25.7 per cent).

E. Strengths

78. The campaign is strategically designed (for an initial three-year period) with a good mix of creative tools (leaflets, brochure like this one, 30-second video clips screened on national (and local) TV; radio clips, billboards) and public relations activities across the media. It is nationwide, visible and recognizable, and reaches a large number of peoples. Distribution of the brochure via insertion in all national daily newspaper is a powerful way of reaching a large number of people.

F. Weaknesses and risks

79. It is difficult to measure how many of distributed brochures were actually read or studied and if the recommendations are being implemented. However, it is possible to measure the effects of the campaign indirectly, e.g. through market surveys where trends and changes in behaviour can be observed.

G. Conditions for successful replication

80. The replication should not be an isolated publication, but part of a strategically planned campaign.

H. Advantages

81. The initiative provides people with information and educates them on concrete actions they can take to reduce emissions.

I. Partners/stakeholders involved

82. The One-Ton CO₂ Challenge booklet was jointly developed by UNDP, the Energy Efficiency and Environmental Protection Fund, the Ministry of Environmental Protection, Physical Planning and Construction and the Ministry of Economy, Labour and Entrepreneurship.

J. Learners

83. Everyone who saw the booklet, newspapers, the website, etc. The booklet is available online at: www.ee.undp.hr/images/stories/brosure/1ton.pdf.

K. Timing, budget and funding sources

84. Implemented in 2007, the project budget (\$90,000) was co-financed by the Energy Efficiency and Environmental Protection Fund, the Ministry of Environmental Protection, Physical Planning and Construction, the Ministry of Economy, Labour and Entrepreneurship, and UNDP-GEF EE Project Croatia.

L. Contact information

85. Sandra Magajne, Sandra Vlastic, UNDP Croatia¹².

VI. DANISH CLIMATE CAMPAIGN: ONE TON LESS (DENMARK)

A. Main objectives

¹² e-mail: energetska.efikasnost@undp.org

86. The aim is for many people to make an emission reduction pledge at the website, telling how much CO₂ they will save by changing everyday habits. This is achieved by informing people at work or when shopping, in school, watching television or at home. The message is supported by the partners, who in return get to use information materials, knowledge and ideas of the Danish Energy Agency and its affiliates.

B. Methods/approaches

87. Standard campaign approach; website, outreach activities, partnerships with companies, NGOs, local authorities, campaign toolbox for partners (information folders and roll ups, balloons, posters, photo exhibition, ready made articles for local media), focus on local media due to small media budget, funding for NGO activities, distinct campaign landmark (an 11-m-high globe).

C. Evaluation

88. Midpoint evaluation after six months in October 2007. Will be evaluated again in winter 2009/2010.

D. Results

89. Thirty-one per cent of the population recognized the campaign logo and could explain the campaign message.

E. Strengths

90. The diverse and engaged partners who bring out the message of the campaign. The timing of the campaign just as climate change became a public concern. The CO₂ calculator and reduction pledge concept, which makes CO₂ and emission reductions easily comprehensible for everyday people. The very visible campaign landmark (an 11-m-high globe, illustrating 1 ton of CO₂) enabled people to relate to the campaign's message.

F. Weaknesses and risks

91. The campaign passed on very little new knowledge to people. A cornerstone of the campaign is a collection of concrete good advice to help people lower energy consumption and CO₂ emissions. This advice was mostly well-known and low key. The campaign was therefore strengthened in 2009 with a focus on more advanced technologies to reduce household energy consumption (e.g. solar power, heat pumps, insulation)

G. Problems encountered

92. More effective engagement of partners is needed.

H. Conditions for successful replication

93. An extensive and active list of partners is important, as are interesting campaign activities targeted to different groups and a good toolbox for partners to be inspired by and to relate their own activities to.

I. Advantages

94. The campaign has now run for 2-and-a-half years and has managed to renew its area of focus and attracts new partners and media attention to its activities. The campaign has managed to address a variety of target groups. By means of partnerships and good communication strategies the campaign message has been spread at a very low cost to the campaign budget.

J. Partners/stakeholders involved

95. Dong Energy A/S (a Danish energy company) was engaged through the Colleague Initiative in the summer 2008 and established goals of emissions reduction pledges for their employees. They made an internal campaign using One Ton Less (OTL) material and website as a communication platform and inspiration. Will reach potentially 7,000 people.

96. Coca Cola: Through 25 million bottle labels and a Facebook application, Coca Cola helped reach teenagers, normally a hard-to-reach audience. On labels and on Facebook, teenagers are encouraged to calculate their personal CO₂ emissions and to make pledges to reduce them.

97. Danish Radio: Advice and inspiration for families to live more CO₂-friendly was presented on national television in winter 2008. The TV series devoted much attention to the campaign and message, during prime time.

98. Roskilde Festival: the world-renowned music festival has had climate as its theme from 2007 on. In 2008 it used low-energy bulbs, and in 2007 OTL material was used to teach the festivalgoers about climate change and the personal responsibility.

99. COOP (a Danish retail chain): Relayed campaign messages to 1 million households through advertising and via in-store brochures and posters, inspiring everyday people to shop in a more climate-friendly way.

100. Danish public transportation Agency, Peugeot, Danish Scouts Organization and several Danish municipalities.

101. Freeze campaign: pupils from secondary and primary schools were involved in a four hour SMS text-message competition. Idea launched by the campaign staff, but developed by Danish Science Corporation as a partner. Pupils in teams competed using their mobile phone in search of answers to climate knowledge questions, made from the OTL material. The interactive campaign was regarded as the "best attempt so far at applying mobile phones for learning" by the Danish e-learning center.

102. **Climates:** students in 45 Danish upper secondary school classes were asked to check background knowledge on climate change, calculate their personal emissions and create teaching materials for use by students from other schools. The idea also launched by the campaign staff, but developed by Danish Science Corporation as a partner. The competition was developed by Danish Science Corporation for the OTL campaign.

K. Learners

103. **The Danish people.** At a midpoint evaluation, more than 30 per cent of the Danish population recognized the campaign logo and could retell the message of the campaign.

L. Timing and funding

104. **Funded by the Danish Government as well as one major business sponsor,** the campaign started in March 2007, originally for two years, but was subsequently prolonged to the end of 2009 due to COP-15 of UNFCCC, in Copenhagen in December 2009.

M. Contact information:

105. **Mette Vingaard, Danish Energy Agency**

VII. BOUSSOLE: CORPORATE TRAVEL PLAN (FRANCE)

A. Main objectives

106. **To reduce polluting emissions from Air France staff commuting to and from work**

B. Methods/approaches

107. **Participatory method involving company personnel in programme take-up.** The programme was cascaded and communicated by on-site coordinators to deploy the programme to staff as closely as possible. The company participated in meetings with stakeholders for updates on progress and feedback.

C. Evaluation

108. **The travel plan is currently being deployed and will be evaluated both by the company and agencies responsible for regulating the plan in the greater Paris area.**

D. Results

109. **Average reduction in CO2 emissions following attendance at Sustainable Driving course is 0.4 tons of CO2.** Some 1,400 people have signed up to the car-pooling website. A plan to build “hot-desking” offices is currently being implemented. An intranet site is available for staff (around 1,600 visits per month) with 12 forums.

E. Strengths

110. Staff expectations are high.

F. Weaknesses and risks

111. Without regular communication, the project could rapidly go into hibernation.

G. Problems encountered

112. Staff find it difficult to leave their cars at home and switch to other means of transport, notably staff on staggered working hours.

H. Advantages

113. The initiative:

- (a) Provides staff with viable alternatives to traveling alone to work by car;
- (b) Promotes thinking differently about local public transport, and working differently;
- (c) Empowers staff and boosts workforce solidarity;
- (d) Ensures compliance with the law;
- (e) In the context of corporate social responsibility, helps the company set an example in terms of sustainable development.

I. Partners/stakeholders involved

114. The French Environment and Energy Management Agency (ADEME) helps companies and government departments to implement their corporate travel plans. The French Regional Department for Industry, Research and the Environment (DRIRE) is responsible for ensuring compliance with the Air Quality Act. French regional planning agencies act with respect to their public transport and planning policies. Public transport authorities (SNCF, RATP, Veolia, Keolis.) are involved through their transport initiatives. Companies are involved in implementing corporate travel plans (feedback), as are employees, due to their ability to reduce personal vehicle use for commuting

J. Learners

115. Air France employees.

K. Timing

116. December 2007 onwards.

L. Contact information

117. Thierry Gaultier, Air France, Paris¹³.

VIII. “CARBON DIOXIDE LIGHT”: CALCULATING AND COMMUNICATING THE IMPACT OF INDIVIDUAL URBAN TRAVEL (FRANCE)

A. Main objectives

118. To help local authorities develop an understanding of the environmental footprint and analyse the best sustainable urban development course for transport and public transport using the Eco-Efficient TravelTM indicator (EETI).

119. Since 2006, Veolia Transport has been employing EETI. This method of calculation endorsed by Ernst & Young entails assessing (per passenger) the public transportation compared with use of private cars. The parameters are the avoided CO₂, atmospheric pollution, private car use, litres of fuel not consumed, financial advantages to the passenger, etc.

120. To educate the greatest number of persons about climate change and the environmental impacts of different forms of mobility, Veolia Transport proposed deploying EETI on its networks. An educational communications kit, Keep CO₂ Light, launched on the World Environment Day (5 June, 2008), facilitates the diffusion of results, especially locally.

121. This initiative was recognized by the United Nations Environment Programme (UNEP) Sustainable Mobility programme. UNEP makes reference to it in the Climate Neutral Portal for diffusing best practices. By making the impact of each journey transparent using the Eco-Efficient Travel indicator, Veolia aligns public transport with respect for the environment, economic impact, quality of life and public health. Veolia Transport is the first private operator to make this information available in such detail and scale.

122. The tram network in Dublin (LUAS) was the first to employ the Stay CO₂ Light campaign.

B. Methods/approaches

123. The results from EETI allow a deeper understanding of the environmental footprint, the best options for sustainable urban development and the central role public transport can provide.

124. The educational communications kit enables published results of calculations using various media: an eco-calculator on the transportation system website, eco-calculations on the system's display screens, posters in vehicles and stations, and eco-calculations on tickets and schedules. The aim is to build passenger awareness of the impacts of their travel habits and the benefits of public transportation.

¹³ email: thgaultier@airfrance.fr

C. Evaluation

125. EETI provides results and information used by the Veolia Environment group. Evaluation follows defined methodological principles. The communications campaign continues to be evaluated, and transfer to other cities continues.

D. Results

126. In 2008, independent analysis was carried out on 96.3 per cent of all journeys made and 77 per cent of network km operated by Veolia Transport globally. With the equivalent of 4.1 million tons of CO₂ avoided, an average of 2.01 M tonnes less CO₂ than private car journeys is gained across all calculations. The public communications campaign is measured indirectly through passenger numbers; although this is not the only factor to influence these figures.

E. Strengths

127. Independently certified by Ernst & Young. Recognized by UNEP.

F. Weaknesses and risks

128. Evaluation of communications campaign and transfer to multiple cities

G. Advantages

129. Visibility of the EETI calculations helps to advance transport, with local authorities, by demonstrating the transport network's respect for the environment its economic contribution, and its positive effects on quality of life and public health.

H. Partners/stakeholders involved

130. Veolia Environment, local authorities.

I. Learners

131. Public transport users, but also citizens of the city concerned, regardless of their current mobility patterns, are the targets of the CO₂ Light.

J. Timing and funding

132. EETI was created in 2006. CO₂ Light was launched on 5 June 2008, as was deployment of the Dublin tram network..

K. Contact information

133. Alec Walker-Love, Veolia Environment¹⁴.

¹⁴ email: Alec.Walkerlove@veolia.com

IX. WEB PORTAL ON CONSUMER EDUCATION (GERMANY)

A. Description

134. The German UNESCO Commission's National Committee for the United Nations Decade of ESD awards the title of "Official German Projects of the UN Decade" to high-quality and innovative educational activities. An outstanding example is the Web portal on consumer education¹⁵. The portal provides teaching and learning materials and background information for schools and adult education on sustainability themes, consumer issues such as climate change, water, organic food, media privacy and security issues, and financial competence such as debt prevention. The platform offers teaching units for promoting consumer competency and more sustainable lifestyles, in particular to educators and adult learning institutions. The concept is based on responsible consumers willing and able to consider the social, economic and ecological consequences of their behaviours and to assume responsibility. The website is continuously being expanded. It also features articles by experts, online courses, short tests, news, dates of interest and a section called Brennpunkte (Hot spots) covering topical and more complex issues. To establish even closer connections with the Decade, articles and teaching units related to its annual Decade themes are published

135. Teaching units on the annual focus topic are developed. The selection of topics specifically for those learning German as a second language is new. Some teaching materials dealing with sustainable consumption already exist for this target group (e.g. procurement of healthy children's gear, or healthy organic food). Furthermore, teaching material on "Climate Change" and "Saving Energy in Your Home" will be posted for those working with migrants.

B. Main objectives

136. The portal's main objective is to provide teachers with materials on issues like sustainable development, sustainable consumption, media and financial competence, health and nutrition.

C. Methods/approaches

137. The portal is an accessible, thematically structured collection of existing and newly developed teaching and learning materials. It provides a broad range of methods for all formal and non-formal learning settings. Handouts with different teaching methods are provided for small and large groups.

D. Evaluation

138. As one of Germany's Official Decade Projects, the portal is evaluated in the terms of official German contribution to the Decade.

¹⁵ www.verbraucherbildung.de

E. Strengths

139. The portal gives background information and teaching material on subjects that cannot be found elsewhere. It is an important tool to measure the public awareness on sustainable consumption and production issues, especially in the context of climate change.

F. Weaknesses and risks

140. Scarce resources make it difficult to present materials accessibly.

G. Conditions for successful replication

141. Specific quality teaching and learning materials must be available.

H. Advantages

142. The portal supplies some niche material unavailable elsewhere. It reacts quickly to needs whereas the educational system tends to change very slowly. It works independently from industry or commercial companies.

I. Learners

143. School and adult education teachers, as well as at teachers of migrant adults. Learners taught by these teachers: student and adult.

J. Timing and funding

144. Launched in 2003, re-launched in 2004/05, undergoing extension. The Federation of German Consumer Organizations is funded by the Federal Ministry of Food, Agriculture and Consumer Protection, with an annual budget of €40,000 .for the portal.

K. Contact information

145. Irina Mareske, Federation of German Consumer Organizations¹⁶

X. THE SILK NETWORK (GREECE)

A. Description

146. The Silk Network, “founded in 2008, aims to promote good practices for sustainable development to change attitudes and behaviours that link sustainable development with environmental protection. The Environmental Education Centre of Soufli is a centre of sericulture in Greece. The needs to preserve cultural heritage, to tap local history led to the foundation of the network.

¹⁶ e-mail: info@vzbv.de

147. The network is seeking evidence of the historic Silk Route by creating a “silk project” that encompass the Greek mainland, Europe and Asia, involving national and international institutions, schools and organizations.

B. Main objectives

148. The main objectives include:

- (a) Understanding silk as a sustainable development model;
- (b) Developing positive behaviours and attitudes, to conserve the traditional techniques that do not harm the environment;
- (c) Discovering ways to recycle by breeding silkworms;
- (d) Learning about the history of silk;
- (e) Appreciating the industrial heritage of silk;
- (f) Giving new perspectives to sericulture;
- (g) Promoting competences through the network;
- (h) Raising local awareness of sericulture and ESD;
- (i) Providing a platform for students, teachers and silkworm breeders;
- (j) Promoting new technologies such as web applications and distance learning;
- (k) Emphasizing the economic and environmental value of silk.

C. Methods/approaches

149. The project methodology includes:

- (a) Educational programmes on the environment (3–4 days), to raise awareness and train the students. This includes a Silkworm Festival (10 days) involving primary schools;
- (b) Student conferences on silk;
- (c) Training seminars for student teachers;
- (d) Printed and audiovisual materials in Greek and in English;
- (e) Projects by the participating schools and their presentation during a student conference;
- (f) Publications and communication through Web platforms and discussion forums;
- (g) Downloadable material on sericulture and teaching sustainable development;
- (h) Genetic material for participating schools to practice sericulture;
- (i) Photo exhibitions and exhibitions on sericulture;
- (j) Communication and feedback, with evaluation sheets and questionnaires.

D. Evaluation

150. "Silk" was evaluated by the 300 students and the 34 teachers who participated, using a questionnaire.

E. Results

151. Results have been encouraging. Most students and teachers wish the programme to continue, particularly the architectural and cultural elements. Specific interest was shown for the possible professional applications through European programmes of innovation. Students appreciated the excellent recycling system, as well as silk's aesthetic and artistic dimensions.

F. Strengths

152. The network developed considerable momentum. The potential double increase from 40 initially participating schools would have occurred if not for the strict participation criteria set by the Soufli Environmental Education Centre. The network provided much quality audiovisual, electronic and online materials to participating schools.

G. Weaknesses and risks

153. The biggest challenge is that many regions in Greece do not have sericulture. People are also not well informed, and the authorities lack appropriate strategies.

H. Problems encountered

154. Cooperation with foreign schools and institutions has been problematic..

I. Advantages

155. The network can:

- (a) Take advantage of regional cultural and industrial heritage;;
- (b) Improve the social and economic place of women;
- (c) Inspire young people to appreciate culture and find economic alternatives
- (d) Change attitudes and behaviours to sustainable development and the environment;
- (e) Empower students to take up initiatives, develop critical thinking and confront economic and social problems;
- (f) Improve teachers' knowledge of sericulture and their contribution to sustainable development;
- (g) Make teachers capable of taking up a leading role in ESD.

J. Partners/stakeholders involved

156. The Environmental Education Centres of Acrata, Pella, Calamata, Kissavos-Mavrovounio, Omiroupoli. The Ministry of National Education and Religious Affairs. The prefectures of Evros, Trikala, west Salonica, east Attica and Pella. The Lyceum in Soufli. Democritus University of Thrace and Agricultural University of Athens. National Agricultural Research Foundation. Sericulture Experiment Station in Bulgaria. Silk Museum in Soufli. Silk Art Museum in Soufli. The Embassies of China, India and Japan, the Consulate of France. Municipal Enterprise of Sericulture of Soufli. Silkworm Breeders Union Baltic. Caspian Silk Organization. Scientific partners from Denmark, the United Kingdom, Malta, Estonia and United States of America.

K. Learners

157. 1,250 primary and secondary students and 79 teachers.

L. Timing and funding

158. Funded by national resources and European funds (4th Community Support Framework and National Strategic Reference Framework (NSRF) (2008–2011).

M. Contact information

159. Mariza Kouvelou, Ministry of National Education and Religious Affairs¹⁷.

XI. SUMMER SCHOOL ON ENVIRONMENT AND SUSTAINABLE DEVELOPMENT (GREECE)

A. Description

160. European Centre for Environmental Research and training of Panteion University (EKePEK) Summer Schools promote sustainable development and increase awareness by providing eco-knowledge and eco-training exploring local needs, culture and diversity. The programme's four stages were the following:

(a) In October 2004, EKePEK organized the first Inter-university Postgraduate Summer Training Programme entitled "Environment and Sustainable Development - International and European Politics and Economy, Law and Institutions", funded by the General Secretariat for Youth, held in the Evaggelistris Congress Hall in Aliartos.

(b) July 2007(13-22) EKePEK organized the second Inter-university Postgraduate Summer Training Programme entitled: "Environment and Sustainable Development, International and European Politics and Economy, Law and Institutions" in the Island of Kythira, sponsored by Athenian Brewery S.A.

(c) July 2008 (28 June-6July) EKePEK organized the third Inter-university Postgraduate Summer Training Programme entitled: "Climate Change. Natural Resources and

¹⁷ e-mail: to5sde1@ypepth.gr

Energy, emphasizing the Management of Coastal areas” held in the Evaggelistria Congress Hall in Aliartos, sponsored by the Institute for Youth of the General Secretariat for Youth.

(d) July 2008 (11-20) EKePEK organized the fourth Interdisciplinary Postgraduate Summer Training Programme entitled: “Environment and Sustainable Development. Climate Change and Energy Management of Insular Areas”, held in the island of Kythira and financed by the Analysis and Planning Centre of the Hellenic Ministry of Foreign Affairs.

B. Main objectives

161. The main objective of our Summer Schools is to increase the participants’ awareness, understanding and commitment on sustainable development by providing up to date knowledge and training on the principles of the three pillars development approach that is, environmental protection, social development and economic growth. Thus, participants gain insights and enrich their background in the areas of climate change, water management, energy and biodiversity, getting closer to the concept of equilibrium between the needs of present and future generations.

C. Methods/approaches

162. Lectures by Greek academics on International Law, International Law of Development, Law of the Sea, Climate Change Policy, European Policies on Environmental Protection etc., workshops headed by researchers from the Hellenic Center for Marine Research and European Union Officers.

163. Multimedia: Video and documentary projections on natural resources management, natural disasters caused by climate change, destruction of biodiversity.

164. Field Visits: Sites of great historic, architectural and environmental value such as the Holy Sanctuary of Delphi and the Monastery of Hosios Loukas in the Prefecture of Viotia, listed as UNESCO World Heritage Monuments.

D. Evaluation

165. The initiative has been evaluated via questionnaires answered by the participants of the summer schools and included in the evaluation report sent to our stakeholders and funders.

E. Results

166. According to the evaluation results and the feedback from the stakeholders involved, EKePEK’s Summer Schools are well accepted by the Greek scientific community and the Local communities as well. Thus, every year there are more and more interested applicants.

F. Strengths

167. Decentralization; interaction between young and inexperienced scientists and recognized academics, local community involvement and support.

G. Weaknesses and risks

168. Given the summer school's poor financial status and low budget, there is no regional or international character to the school. Therefore, only a limited number of participants can be trained and educated on issues of sustainable development.

H. Unresolved issues

169. The facilities in the island of Kythira, where two of the four Postgraduate Summer Training Programmes were held, restrain the organizers to keep the number of participants limited.

I. Conditions for successful replication

170. Ensure the necessary funding resources in order to diffuse the initiative, so that the local communities benefit from the knowledge and the added value stemming from the combination of science, experience and practice.

J. Advantages

171. Blending of academics with young professionals as well as interacting with local societies for the spread of knowledge and the latest scientific developments on sustainability.

K. Partners/stakeholders involved

172. The European Parliament Information Office for Greece, the European Commission Representation in Greece, the Analysis and Planning Center of the Hellenic Ministry of Foreign Affairs, the General Secretariat for Youth/ Ministry of National Education and Religious Affairs, the Holy Metropolis of Thebes and Levadia, the Center for Cytherean Foundation for Culture and Environment, the Municipality of Kythira, the Holy Metropolis of Kythira and Antikythira and Sivitanidios School.

L. Learners

173. The learners are undergraduate and postgraduate students from Universities all over Greece, young scientists, young and experienced researchers, local groups and local communities (before the closure of each summer school a one day Conference is organized inviting all local groups and local people to attend and gain exposure to focused solutions on local environmental issues). Since 2004, approximately 350 persons have been trained/attended the summer schools and the Conferences.

M. Timing and funding

174. The project is running since 2004 with approximately 15,000€ per seminar, funded by Central Administration, Local Government, Private Sector and European Funds.

N. Contact information

175. Professor Grigoris Tsaltas, European Centre for Environmental Research and Training, Panteion University¹⁸.

XII. YOUTH FOR SUSTAINABLE DEVELOPMENT PEER EDUCATION PROGRAMME (IRELAND)

A. Description

176. Youth Peer-Education Programme of ECO-UNESCO seeks to engage and empower young people between the ages of 15 and 18.

177. The Peer Education Programme is a youth-led ESD programme that encourages young people to explore development, what it is, how it relates to them, how it relates to people in the developing world. They examine the links between their lives and those of people in the developing world.

178. The programme encourages the Youth Peer Educators to think more holistically, critically, both globally and locally about sustainable development and developing countries. The peer education programme also encourages young people to develop links their local community and groups in the developing world using the UNESCO clubs network. The programme's 10–12-week series of workshops includes: peer training, action projects, developing skills through dramatic arts, developing communications skills

B. Main objectives

- (a) To raise awareness of local and global issues in relation to sustainability (e.g. the Millennium Development Goals, global justice, development, fair trade, increased environmental awareness);
- (b) To improve communication skills of young people;
- (c) To encourage young people to think critically and holistically about their role in global and local issues;
- (d) To inspire young people to engage with their peers regarding sustainable issues;
- (e) To prompt young people to complete an environmental action project

179. Through peer education, the project gives young people with the opportunity to become peer educators. They are encouraged to carry out an action project with their peers on any environmental or sustainability theme.

180. A Youth for Sustainable Development Peer Education Resource Pack is being developed to document experience of ECO-UNESCO with the programme and to reference other good

¹⁸ e-mail: ekepek@panteion.gr

practices in peer education and ESD. It will act as a toolkit and source of reference for other organizations to implement their own peer ESD programmes.

C. Methods/approaches

181. The Youth for Sustainable Development Peer Education Programme has three distinct phases: (1) participants get involved and learn about sustainability and peer education; (2) they get involved in the delivery of successive programmes; (3) suitable candidates become involved in a “graduates’ programme”, where their skills as peer educators are further enhanced and put to use in additional community projects.

182. The five key areas of ESD are knowledge, skills, perspectives, values and risks. Participants consider different aspects of SD and its key principles. This is facilitated through simulation games, group work, issue tracking, photographs, artwork and images, surveys/questionnaires, working with texts, discussions, brainstorming and activities like Urban Safaris, Drum Facilitation and Outdoor Excursions.

D. Evaluation

183. The initiative is evaluated once each peer education programme is complete. This consists of evaluation focus groups with participants, and of assessing the programme using questionnaires. The programme is also assessed internally by the Programme Coordinator and National Director. These evaluations are then fed back to our primary funder, Irish Aid.

E. Results

184. The impacts of the initiative have been largely positive based on feedback from the participants during focus group sessions and through written evaluations in the form of questionnaires. From these focus groups and questionnaires, adjustments and amendments are made to better provide for participants’ needs.

F. Strengths

185. One of the main strengths of the programme is its uniqueness, and the methodologies used during facilitation. The programme is unique in Ireland as a peer education programme on SD.

G. Weaknesses and risks

186. The programme engages a number of different young people from a broad demographic base in Dublin, ensuring involvement of a diverse group. Accordingly, retention rates were initially low. SD can be a difficult concept for youths to grasp; there can be an initial reluctance to get involved.

H. Problems encountered

187. E.g. how do you relate many of the complex issues of SD to young people in an interactive and exciting way?

I. Conditions for successful replication

- (a) Adequate resources including funding;
- (b) Ensuring the correct level of engagement, appropriate content;
- (c) Having sufficient scope for the project (e.g. being able to accommodate young people's development once they have completed the programme);
- (d) Providing for a multiplier effect in the participants peer group(s) and local community?
- (e) Having facilitators who understand the complexities inherent in sustainability, and who are skilled enough to motivate young people.

J. Advantages

188. Many studies have shown the benefits of peer education models. Young people develop a more holistic mindset and discover how to think more critically about SD. They learn about links between their lives and those of young people in the developing world. The methods used are practical and encourage sensitivity towards nature and the environment. The programme also encourages the use of local action projects.

K. Partners/stakeholders involved

Government, schools, community organizations, the media, intergovernmental and international institutions, individuals, participants (any young person aged 15 to 18). Community stakeholders include local community groups, youth organizations, and community schools.

L. Learners

189. The number of participants was 49 (15–18-year-olds). There is also an emphasis on ensuring that there is a diverse ethnic and cultural mix.

M. Timing and funding

190. September 2007–September 2010, with each programme lasting 10–12 weeks. Action projects can then take up to an additional ten months.

191. €210,000 from Irish Aid (Department of Foreign Affairs) over three years, in addition to match funding and €10,000 from Youth in Action EU funding. Additional funding is provided by Leargas (Department of Education and Science).

N. Contact information

192. Elaine Nevin, ECO-UNESCO¹⁹.

¹⁹ e-mail: info@ecounesco.ie

XIII. THE NEW ITALIAN NATIONAL PROGRAMME ON ENVIRONMENTAL EDUCATION, INFORMATION AND TRAINING (ITALY)

A. Main objectives

193. The new Italian National Programme on Environmental Education, Information and Training (INPEEIT) identifies priority actions for the three learning processes: formal, non-formal and informal. The strategic document (“Orientations and objectives for a new reference framework programme on environmental education and education for sustainable development”) provides guidance for programme. It promotes SCP patterns through education by emphasizing individual behaviours and choices. To accomplish this, it is essential to tap the growing demand for an improved quality of life and for the good practices and experiences in the field that proven to be successful.

194. The document highlights the challenges of achieving SCP not by imposing mechanisms, but through a gradual work of individual persuasion, using the tools of participative democracy..

195. Among the initiatives, regions and autonomous provinces aim to define legally the figure of the professional operator for EE and ESD, and to organize training courses for teachers and educational authorities, and also vocational training initiatives also in SCP.

B. Methods/approaches

196. The action at national level is focused on the coordination of different ESD actors and initiatives to ensure the process’ effectiveness. The aim is to promote ESD and to include its principles in sectoral policies by reflecting the multisectoral and cross-cutting nature of ESD.

197. Te new INPEEIT is built on good cooperation between the Italian Ministry for the Environment and the Ministry of Education, the regions and other local institutions. In March 2007, the State and Regions Permanent Conference adopted the above-mentioned strategic document. The document defines objectives and scenarios to reinforce cooperation between central and local institutions. It also shares and defines the roles and responsibilities of everyone in addressing formal, non formal and informal learning processes in a lifelong life perspective. In particular, it calls for action to support implementation of the UNECE Strategy as a contribution to the Decade on ESD.

198. The document separates the priority actions on three levels (national, interregional, regional), taking into account the three learning processes (formal, non formal and informal) and defining specific actions for each one of them.

C. Evaluation

199. The evaluation process is ongoing, and will be available at the end of the three-year framework programme.

D. Results

200. Evaluation will be available at the end of 2009.

E. Conditions for successful replication

201. The most relevant condition for a successful replication of the new INPEEIT programme is the establishment of an institutional mechanism capable of ensuring inter-institutional cooperation and dialogue. To ensure coherence to the process and valuable results, it is essential to create the appropriate conditions for developing synergies between the different actors; these should be built on a common understanding and shared a vision of the national ESD process and objectives. It is crucial to involve a wide range of stakeholders, including in particular the private sector, NGOs and the media.

F. Advantages

202. The new INPEEIT is a method of State intervention in ESD that supports a participative process and promotes a strong consistency between real environmental-social needs and contexts of local territories. The new INPEEIT is an innovative model of governance and a replicable, multilevel instrument, which ensures coordinated interventions and focused action in different areas, ranging from the promotion of sustainable consumption to citizenship education.

G. Educational/learning setting and level

203. For formal education:

- (a) Training teachers, schools and educational authorities in ESD and sustainability;
- (b) Research-action of students to increase awareness and training;
- (c) Managing schools according to sustainability criteria;
- (d) Promotion of a cross-cutting curricula for ESD
- (e) Defining higher level educational and promoting research in sustainability
- (f) Defining vocational training linked to skills and competences in SD

204. Non-formal education

The new INPEEIT strengthens the relationship with local authorities and other actors (e.g. environmental organizations, museums, agencies and national parks, and sports and recreational organizations) who operate non formal education through a network of structures and educational offers targeted both at youth and adults.

205. Informal education

- (a) The new INPEEIT supports initiatives and actions aimed at increasing awareness and access to information on aspects linked to SD and more generally to the quality of life, by e.g. communication campaigns and creating information toolkits.

(b) The aim is to set up actions/initiatives involving different sectors (e.g. consumer organizations and Third Sector Forums, the organization of small- and medium-sized enterprises, the National Electric Company, CONAI National Packaging Consortium, etc.) that are directly involved SCP and ESD.

H. Partners/stakeholders involved

206. The Italian Ministry for the Environment, Land and Sea, 19 Italian regions and two autonomous Provinces.

207. Implementing authorities are municipalities, EE centres, national and regional parks, universities, and regional agencies for environmental protection.

I. Learners

208. The nationwide target groups are public administrators, students, teachers, educators and citizens.

J. Timing and funding

209. INPEEIT is co-financed by the National SD Fund for 2007–2009. The allocation of funds from the National SD Fund for 2007 totaled €6 million. The allocation of funds from the regions can be estimated at the end of the three-year period of the framework programme.

K. Contact information:

210. Paolo Soprano, Italian Ministry for the Environment, Land and Sea²⁰.

XIV. THE CARGOHOPPER (NETHERLANDS)

A. Description

211. The Cargohopper is an initiative of the company Hoek Transport in Utrecht. The municipality of Utrecht uses the Cargohopper in its existing transport system for inner-city Utrecht.

B. Main objectives

212. The inner city of Utrecht has the same problem as many other city centres in the world: how to provide shops, pubs and restaurants with cargo without blocking roads, causing traffic jams, adding exhaust fumes and bothering the customers and tourists with big ugly trucks.

213. The Cargohopper is an electrically/solar powered, silent, narrow build “road train” that distributes shop cargo more effectively and efficiently than any other inner city system. It is

²⁰ email: soprano.paolo@minambiente.it

designed for delivering packages (not pallets) and is able to do the work of 5–8 regular (European sized) vans. Once empty, it collects dry cartons, paper and empty packaging from shops for recycling, so it never runs empty. In this way, Cargohopper removes up to 100,000 van km from the inner-city streets and saves approximately 30 tons of CO₂ on an annual basis.

C. Evaluation

214. The initiative has not as yet been evaluated, but the pilots are being closely monitored.

D. Results

215. There is a lot of demand of information about the Cargohopper from other cities, in the Netherlands as well as abroad.

E. Strengths

216. Cargohopper is practical and sustainable, has zero emissions and is allowed in the inner city at any time and any place.

F. Weaknesses and risks

217. A little more logistic planning is necessary

G. Advantages

218. It is a practical innovation with benefits for a lot of different sectors: shop owners, the tourist sector and people who live and work in the inner city.

H. Educational/learning setting and level

219. Formal education: Universities and research institutes are consulted about the use of solar-panels. Students take part in the pilots. The Cargohopper requires a license for a moped or scooter, meaning 16-year-olds drive them. (to drive a car in the Netherlands, you have to be 18 years old). For 16-18 year olds, it is a great way to learn (by doing).

220. Non-formal education: Learners are in the transport and logistics courses of the cities that use the Cargohopper.

221. Informal education: Hoek transport, the company that designed the Cargohopper, has an impressive range of visitors, national as well as from abroad who come for an excursion to learn about it. At the international conference, Global Challenge 2009 (held in July 2009 in Utrecht), the Cargohopper was used to demonstrate climate-neutral inner-city transport. Tourists that visit the city as well as inhabitants come in contact with the Cargohopper and see its benefits. This learning could be intensified by educational materials. At the moment, this is not the case.

I. Partners/stakeholders involved

Technische Unie and other research institutes are involved in developing the solar panels. The Province of Utrecht financed the development of the Cargohopper, especially the aspect of making the Cargohopper independent of fossil fuels. The Province sponsored the study of and pilots with solar-driven Cargohoppers.

J. Learners

222. The transport and logistics community in the Netherlands and abroad, and the engineers working on making solar technology more practical and workable. The shop and restaurant owners, as they use the services of the Cargohopper rather traditional suppliers.

K. Timing

223. The first Cargohopper was launched on 22 April 2009, with a pilot with a solar-driven Cargohopper planned for August 2009.

L. Contact information:

224. Machtelijn Brummel, SenterNovem, Learning for Sustainable Development²¹.

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