ENVIRONMENTAL EDUCATION
IN SCHOOLS IN TURKEY

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PREFACE

This project is prepared by 10th semester student Neşe Yıldız in the MSc program in Environmental Management in the Department of Development and Planning at Aalborg University.

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ABBREVIATIONS

ARIES	Australian Research Institute for Education and Sustainability.
CEEDEEA	Council for Environmental Education, Development Education Association
ÇEP	Environmental Education and Implementation Project for Schools
CVU	Center for Videregoende
DESD	Decade of Education for Sustainable Development
EE	Environmental Education
ESD	Education for Sustainable Development
EU	European Union
FEE	Foundation for Environmental Education
GOI	Governorship of Istanbul
MOEF	Turkish Ministry of Environment and Forestry
MONE	Ministry of National Education
NAAEE	North American Association for Environmental Education
NEETF	National Environmental Education and Training Foundation
TURCEV	Turkish Environmental Education Foundation
UN	United Nations
UNECE	United Nations Economic Commission for Europe
UNESCO	United Nations Educational Scientific and Cultural Organization
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
WEEC	World Environmental education Congress

1. INTRODUCTION

1.1. Background

From environmental movements to international commitment

During the late 1960s, early 1970s, environmental issues entered in the agenda of western societies. The main driving forces for the environmental movements were; environmental disasters such as deaths due to air pollution in London in 1952; scientific research on the subject; and the influence of other social movements in the period (Atalay, 2003; Jamison, 2001; Jones, 2004). What drew global attention to the issue was the report 'Limits to Growth' which was prepared in 1972 (Atalay, 2003). The report claimed that if the present growth trends in population, industrialization, pollution, food production and resource depletion continued, the 'limits to growth' would be reached in the next 100 years, which would result in decline in population and industrial capacity (Meadows, et.al, 1972). Although the report was heavily criticized, and considered to be exaggerated, its influence in increasing public interest in environmental issues and in strengthening environmental movements can not be denied (Atalay, 2003). The same year, United Nations held a Conference in Stockholm on the Human Environment, which led to the entry of environmental protection in the political agenda, as well as the establishment of United Nations Environment Program (UNEP) (Jamison, 2001; Palmer, 1998).

The World Commission on Environment and Development, which was founded by the UN in 1982, prepared the report "Our Common Future" (also known as the Brundtland Report) in 1987, where the term 'sustainable development' was first defined as:

"*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*" (UNECE, 2005).

From then on, environmental policies evolved around this concept (Atalay, 2003). Environmental movements continued and became stronger in the following years, several other conferences were held by governments, NGOs, and international organizations on environment related subjects, environmental awareness raising and other activities of NGOs increased, and in the political arena, Green Parties were founded in several countries, especially in the West[1] (Atalay, 2003). Now, many countries and companies have their own environmental policies. Recently most countries in the world decided to take action together against one of the most important environmental threats, climate change, by signing a Protocol, namely the Kyoto Protocol, and setting global targets to greenhouse gases (UNFCCC, 2005).

[1] In the first half of 1970s, Green's parties were founded in France, England, New Zealand and Switzerland, followed by Sweden and Germany in late 1970s, Australia, Austria, Belgium, Canada, Denmark, Spain, Finland, Japan, Luxemburg, Netherlands, Portugal in the first half of 1980s, and finally Argentina, Brazil, Chile, Egypt, Greece, Turkey, Bulgaria, Hungary, Poland, Yugoslavia in late 1980s (Atalay, 2003).

The importance of knowledge and awareness

The main aim of the attempts to protect and improve the environment is to have a healthier and safer environment for living things. Actually, it is the people who can change, improve, protect, or damage the environment, unlike other creatures that have to adapt to the environment without being able to change it. (Atalay, 2003; MOEF, 2005a)

Thus, environmental awareness of every single member of the society plays a role in environmental protection. The significance of public awareness for environmental protection was already acknowledged in the first environmental conference held in Stockholm. One of the recommendations from the Conference to the Secretary-General of UN was:

"*To establish an information program designed to create the awareness which individuals should have of environmental issues and to associate the public with environmental management and control*" (UNEP, 2005a).

According to Jänicke (2002), public environmental knowledge and awareness is an important factor influencing countries' environmental policy and management capacities. In order to analyze the success of environmental policies in different countries; Jänicke has defined a set of categories that influence environmental policies, and developed a framework by reformulating these categories. He indicated that, the capacities for the environment are constituted by the strength, competence, and configuration of governmental and non governmental proponents of environmental protection, and the cognitive-informational, political-institutional, and economic technological framework conditions. Having applied his framework to 36 countries and analyzed their environmental policy and management capacities, he emphasized the importance of environmental knowledge, public awareness, and participative capacities for successful environmental policies, which will lead to successful environmental protection. (Jänicke, 2002)

Environmental knowledge and awareness is essential for personal behavior change in favor of environment (Worldbank, 2003). The Turkish Ministry of Environment and Forestry (2005b) gives an example of environmental-friendly behaviors, which environmental consciousness could lead to: an environmentally aware person would consider that massive production leads to the depletion of natural resources, and production of huge amounts of wastes to be disposed to the environment during production, consumption and after consumption. This consciousness could make him/her change his/her consumption patterns in several ways according to MOEF (2005b);

- decreasing use of resources such as water, oil or energy
- choosing recyclable and reusable materials such as rechargeable batteries instead of disposable ones, reusing bags for shopping instead of using a new one for each time
- separating wastes to ease recycle and reuse

One could argue that, if there is enough knowledge and awareness, the people would ideally be motivated to avoid using environmentally damaging substances, and the goods produced using these. People can be a source of pressure on companies to use cleaner technologies, by choosing the products they purchase. Similarly, companies can be a source of pressure to their suppliers, by choosing the raw materials they purchase, taking into account e.g. the ways the raw materials are extracted.

It can also be argued that, environmental awareness of the public can lead to a change at the political level. Being more conscious of the consequences of environmental damage, and the importance of environmental protection, the public would be more likely to force the government to have more commitment towards environmental protection. At the same time, as for choosing goods, they could choose their politicians by electing the more environmentally committed parties during elections. On the other hand, politicians who give priority to environment would make their decisions taking into account environmental aspects.

Environmental education for environmental awareness

As today's young people are the decision makers, workforce and voters of tomorrows, increasing their environmental awareness is particularly relevant. If they grow up with the consciousness towards environment, when they become company managers, or politicians, environmental issues will be more likely to be taken seriously.

According to Jones (2004), recent surveys show that young people are becoming more environmentally concerned in recent years[2]. Jones links this to the major improvements in environmental education that have occurred in the last years.

There can be several ways to apply environmental education, such as educating children at schools from primary school till university, educating people by using the press and media, and giving educations to the personnel in public and private sectors.

Awareness in Turkey

My previous research on 'capacity building for environmental policy and management in Turkey' showed that environmental awareness is lacking in every level of society in Turkey (Ceylan, Yıldız, 2004). The research aimed at analyzing the current environmental policy and management capacity of Turkey, and the shortcomings and obstacles faced in the environmental field on the way to European Union Accession, by using the framework developed by Jänicke. One of the findings was that public awareness and participation in Turkey remained low in all levels of society; namely, from

[2] Jones does not specify where the surveys took place, however it can be considered that he is talking about the developed world, as he is looking from a Western point of view, and giving examples of development from the developed world in his book.

governmental institutions, to businesses, media, and general public. This conclusion was made analyzing factors like priorities of state and public while making decisions, the participation of NGOs and public in decision making processes, the availability of environmental information, and the state of environmental movements in the country.

There are several ongoing efforts to increase environmental awareness in the country, especially, since the EU Accession process is going on. The government, national and international NGOs and other organizations are preparing and implementing environmental education projects to different target groups in national, regional and provincial level. One of the recent provincial projects is the one implemented in Istanbul by the Governorship and linked authorities, and named 'Environmental Education and Implementation Project for Schools' (ÇEP).

ÇEP, which has been running for 5 years in primary and secondary schools, focuses on increasing environmental awareness among young people, especially students (Provincial Environment and Forestry Directorate of Istanbul, 2005a).

1.2. Problem formulation

As stated earlier, public environmental awareness, which is a vital aspect for successful environmental protection, is lacking in Turkey, and one of the current attempts to increase public awareness is an ongoing project (ÇEP) for environmental education at school level.

The purpose of this report is to evaluate the effectiveness of implementation of ÇEP and answer broadly the research question of:

'What are the challenges for, and potentials of environmental education activities in Turkey, specifically the new project for schools, and how could the situation be improved?'

In order to answer this question ÇEP will be analyzed both individually and in comparison to another environmental education project: 'Eco Schools', which is an international program that is applied in 35 countries since 1994. Analyzing Eco Schools will provide a basis for comparison with ÇEP, in addition to providing suggestions from experiences, since there is more experience on Eco Schools.

Although special attention will be given to ÇEP and its implementation, the purpose of this study is to conclude broadly upon the potentials and challenges regarding environmental education in Turkey, and to come up with recommendations to improve the situation.

1.3. Research Design

1.3.1. Methodological and Theoretical Framework

The focus project, ÇEP, is considered a new public policy of the government, and in addition to analyzing it in comparison to an older and wider implemented project – Eco Schools, it will be evaluated by using an analytical framework developed by Michael Howlett and M. Ramesh, for analyzing public policies. The theory will be explained in Chapter 5, and applied in Chapters 5 and 6.

The research depends on mostly literature surveys for the first parts that explore the historical framework, scope of environmental education, and EU's approach towards the issue. In the latter parts on Turkish education system, presence of environmental issues and environmental activities in Turkey, research depends mostly on interviews with teachers, and people from the governing authorities, besides literature surveys.

1.3.2. Project Outline

In order to answer the research question, the following structure will be followed:
Chapter 1: The present chapter explains the purpose of this study, and methodological issues.
Chapter 2: This chapter will be an introduction to environmental education. The historical framework will be given. How environmental education entered the international agenda, how it is defined by international organizations, etc. will be explained. Then the scope of environmental education will be presented briefly.
Chapter 3: The European Union's approach to environmental education in schools will be explored. The purpose of this chapter is, to give a very general overview of the situation in Europe regarding environmental education in schools, before discussing the situation in Turkey.
Chapter 4: This chapter will explore the general situation regarding environmental education activities in Turkey, the general education system, the presence of environmental issues in education, and environmental education activities in schools.
Chapter 5: This chapter will first describe the theory of Howlett and Ramesh, and then describe and analyze the case project "ÇEP", according to this theory.
Chapter 6: This chapter will describe the Eco Schools program, present the findings regarding implementation of ÇEP and Eco Schools, and compare Eco Schools and ÇEP in theory and practice.
Chapter 7: This chapter will explore the future projects and other potentials for environmental education in Turkey.
Chapter 8: Reflecting on the issues discussed throughout the whole report, a general conclusion will be made with the purpose of answering the research question.

2. ENVIRONMENTAL EDUCATION

The following chapter gives an overview to environmental education (EE) by explaining how EE has entered the international agenda, how the definitions evolved in time and the ways of EE. The purpose of this chapter is to show the interest of the world to the subject, from a point of view of international meetings and documents.

2.1. Historical Aspects

This section intends to see the general evolving of environmental education in the international arena, looking from a point of view of international organizations, meetings, and documents. However, actions taken in national level are included, if they constitute an important landmark in the history of environmental education. A timeline of the milestones in environmental education is presented in the end of this section.

Environmental Education Entering the Agenda

The term 'Environmental Education' (EE) was first defined in 1969 by Professor William Stapp, from University of Michigan. According to Stapp; "*environmental education is aimed at producing a citizenry that is knowledgeable concerning the biophysical environment and its associated problems, aware of how to help solve these problems, and motivated to work toward their solution*". (NAAEE, 2005a)

In 1972, during the United Nations Conference on the Human Environment held in Stockholm, it was recommended that, the UN system organizations and other concerned international agencies should take necessary steps to establish an international framework for environmental education, with an interdisciplinary approach, including all levels of in-school and out of school education and directed towards the general public (UNEP, 2005a).

In the light of these recommendations a series of regional and sub-regional meetings were organized worldwide in the following years. In 1975, the International Workshop on Environmental Education was held in Belgrade, and the International Environmental Education Program (IEEP) was launched by UNEP and UNESCO (UNESCO, 2005a). The Workshop produced "The Belgrade Charter: A Global Framework for Environmental Education", which explained the need for educating youth for long term changes and improvements in the world environment, and defined the goal of EE as: "*To develop a world population that is aware of, and concerned about the environment and its associated problems, and which has the knowledge, skills, attitudes, motivations and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones*" (UNESCO, 1975).

Following the Workshop, as recommended, UNESCO and UNEP organized the Intergovernmental Conference on Environmental Education in Tbilisi, Georgia, in 1977 (UNESCO, 2005a). According to Skanavis and Sarri (2004), this Conference was a landmark in the history of EE; since everything was explicitly defined, issues in EE and the policy to be followed was discussed. The major aim of this Conference was "*to make recommendations to participating Member States to enable them individually adopt national policies promoting EE*" (UNESCO, 2005a). The final report from the conference, Tbilisi Declaration, stated the objectives of EE as, awareness, knowledge, attitude, skills, and participation as in the Belgrade Charter (UNESCO, 1977).

Changing Trends: Sustainable Development

In 1987, 'World Commission on Environment and Development' prepared the Brundtland Report, where 'sustainable development' was first defined. In the report, the importance of education and public participation in changing human attitudes towards environment was mentioned too. (Palmer, 1998) The same year, UNESCO and UNEP organized an International Congress on Environmental Education and Training in Moscow with the aim of reviewing what had been done in EE until that time and determining the "*international strategy for action in EE and training for the 1990s*" (UNESCO, 2005a).

In 1988, the European Community adopted a resolution that concluded, "*environmental education should be an integral and essential part of every European citizen's upbringing*". It was resolved that Member States would make every effort to implement certain measures to promote environmental education in all sectors of education. (Palmer, 1998)

In 1992, the United Nations Conference on Environment and Development (UNCED) – also called the Earth Summit – was organized in Rio de Janeiro, with delegates from over 1700 countries (UNESCO, 2005a; Palmers, 1998). One of the outcomes of the Summit was Agenda 21, the action plan setting out what nations should do to achieve sustainable development in the 21st century (UN, 2003a). Chapter 36 of Agenda 21, titled 'Promoting Education, Public Awareness and Training' established the basis for action in EE for Sustainable Development (UNESCO, 2005a).

In 1997, the International Conference on Environment and Society: Education and Public Awareness for Sustainability was organized by UNESCO, in Thessalonica. The "Declaration of Thessalonica", which was produced during the Conference, stated that the recommendations from the meetings in Belgrade, Tbilisi, and Moscow were still valid, and that the vision of education and public awareness was further enriched by other UN conferences on issues such as human rights, social development, human settlements, etc. Considering that environmental education is developed within the framework of Tbilisi recommendations and evolved addressing the entire range of global issues, it could also be referred as 'education for environment and sustainability'. The conference

recommended an international conference to be held in 2007 in order to assess the progress of the educational process compared to the recommendations. (EEEN, 2004a)

In 2002, the UN World Summit on Sustainable Development was organized in Johannesburg, as the 10-year follow up to the Rio Earth Summit, aiming to focus the world's attention on issues like improving people's lives and preserving natural resources, with the high population growth and increasing demands for resources (CEEDEEA, 2005; UN, 2005b). According to Skanavis and Sarri (2004), in the report of the World Summit, although the importance of participation was emphasized in achieving sustainability targets, and 'education and training' was emphasized many times as a means to increase public awareness on several issues and promote sustainable development, there was no specific emphasis on 'environmental education'. Skanavis and Sarri (2004) see this as a drawback (UN, 2002a; Skanavis and Sarri, 2004). However, the need to prioritize actions in education was recognized and the UN Declared the decade of 2005 – 2015 as the 'United Nations Decade of Education for Sustainable Development' (UN DESD) with the aim of promoting education as the basis for a sustainable society, integrating principles of sustainable development into education, and strengthening international cooperation towards these aims. (UNESCO, 2005c; UNESCO, 2005d)

Following the Earth Summit, World Environmental Education Congresses (WEEC) were held in Portugal in 2003, Brazil in 2004 and Italy in 2005, to create an international platform for educators, the media, scientists, students, politicians and other related parties, to discuss issues and exchange experiences related to EE, and to contribute to the success of the DESD (WEEC, 2003; WEEC, 2005a; UNESCO, 2005e).

Another recent event is the 'Education for Sustainable Development – Building Capacity and Empowerment' conference held in Esbjerg, Denmark in May 2005. The goal of the conference was "*to optimize the impact of UN DESD in national education systems, and to advance on educational approaches to ESD*". (CVU Vest, 2005)

To help educators meet the challenges of the UN DESD, The International Conference on Environmental Education was held in Helsinki, in June 2005. The conference is intended to be useful for professionals working in the fields of education, and help them find out how to promote sustainable development by education. (UNESCO, 2005f)

'The International Implementation Scheme for the UN Decade of Education for Sustainable Development' was established in September 2005 in order to provide a framework to partners on how to contribute to the Decade, by presenting the scope, aims and challenges of ESD, as well as listing the expected outcomes of the Decade. A timeline of actions (such as setting out a website for

the Decade and planning activities on regional levels) during the period 2005 till 2015 is also present in the Scheme. (UNESCO, 2005d)

Below, the summary of the important events shaping developments in environmental education is presented.

Year	Name of Event	Focus of Event Regarding EE
1972	International Conference on the Human Environment in Stockholm	Recommendation to international organizations to take steps for an international framework on EE with an interdisciplinary approach towards including EE in school and out of school education.
1975	Workshop on Environmental Education in Belgrade	Setting out the global framework of action and guiding principles for EE
1977	Intergovernmental Conference on Environmental Education in Tbilisi	Making recommendation to Member States to help them develop national policies including EE
1987	International Congress on Environmental Education and Training in Moscow Publication of the Brundtland Report	Determining the international strategy for action in EE for the 90s Defining sustainable development and the importance of education and public participation
1988	European Union's Resolution on Environmental Education adopted	Making recommendation to Member States to implement EE in all sectors of education
1992	Earth Summit on Environment and Development in Rio de Janeiro and Preparation of Agenda 21	Establishing the basis for action in EE for sustainable development
1997	International Conference on Environment and Society in Thessalonica	Highlighting the role of EE and public awareness in achieving sustainability, and referring to EE as education for environment and sustainability
2002	World Summit on Sustainable Development	No specific emphasis on EE in the conference, however declaration of UN Decade of Education for Sustainable Development
2003 2004 2005	1st, 2nd and 3rd World Environmental Education Congresses	Creating an international platform for interested parties for information exchange on the UN Decade for ESD
2005	Conference on Education for Sustainable Development in Esbjerg International Conference on Environmental Education in Helsinki	Optimizing impacts of Un Decade of ESD in national education systems Helping educators meeting challenge of UN Decade of ESD and promoting sustainable development by education

Figure 2.1. Timeline of Environmental Education

The importance of environmental awareness and education was acknowledged, ever since the first years that 'environment' entered the international agenda. Taking into account the historical aspects and events related to environmental education, one could argue that, approaches towards environment shaped the approaches towards environmental education. Looking at the definitions from the first meetings on the subject (Belgrade, Tbilisi, Moscow), EE's aims were defined generally as making the society gain the knowledge and awareness about environment and its problems, and have the attitude, skills and commitment to participate in the solution and prevention of these problems. As 'sustainable development' became the new pattern in approaching environmental

issues with the report 'Our Common Future', the approach to environmental education evolved in this way too, the term 'education for sustainable development' appeared In the agenda.

Although, Skanavis and Sarri (2004) argued that there was lack of emphasis on EE during the World Summit in Johannesburg in 2002 as it was not mentioned explicitly, the UN declared the decade of 2005 – 2015 as the 'United Nations Decade of Education for Sustainable Development'. The activities carried out recently such as the meetings organized in Denmark and Finland to discuss the Decade, and the gatherings of the 'World Environmental Education Congress' mentioned above show that interest in EE is not over.

Other than meetings and conferences, there have been several activities on EE and ESD carried out at national, regional and international level. The activities carried out in Turkey will be detailed in the next chapters. For the rest of the world, the North American Association for Environmental Education (NAAEE) lists the international environmental education organizations and projects on: http://eelink.net/pages/EE+Organizations+and+Projects+-+International

This section showed the evolving of terms from environmental education (EE) to education for sustainable development (ESD). Simply, ESD is more developed than EE, including social and economic aspects and interactions, in addition to basic environmental knowledge (UNECE, 2004). This study focuses on analyzing an environmental education project implemented in Turkey, so the terms and distinctions between terms are not going to be elaborated deeper. The term environmental education (EE) will be used throughout the study. Another reason for that is, after the collection of data on EE programs in Turkey implemented until now, it was seen that the activities in Turkey remained within the scope of increasing environmental knowledge, and, sustainability and sustainable development were slightly mentioned or were not mentioned at all.

2.2. Scope

Given in the previous section the definitions, the aim of EE can be summarized as, to make people understand environmental issues and to increase participation in environmental protection in every level of society. As the target group is the whole public, there can be many ways to carry out environmental education activities. This section will try to present a brief introduction to EE activities, classified according to the target group.

Different organizations and governments, which provide EE, have made different classifications according to the target group or the ways of implementing EE. However, a simple classification for EE activities, inspired by the Turkish Ministry of Environment and Forestry (MOEF, 2004), National Environmental Education and Training Foundation of USA (NEETF, 2001), and Australian Research Institute in Education for Sustainability (ARIES, 2004) would be:

1. Education in educational systems (schools, universities)
2. Community education
3. Education at work place

Below these categories will be analyzed briefly.

2.2.1. Education in Educational Systems

Education at school is targeted to students from pre-school to university, aiming to raise individuals that have knowledge, consciousness and good behaviors towards the environment (MOEF, 2004). Inclusion of environmental issues into the curriculum, or making students carry out environmental activities independent from the curriculum could be ways of giving environmental education. But, however education is provided; the objective should be behavioral changes, taking into account the definition of environmental education, instead of just giving knowledge.

According to NEETF (2002a) environmental education should be planned in a way that it provides critical thinking, problem solving and effective decision making skills to students, by making them work on real problems in context, instead of abstract problems out of context. Letting students be interactive, participatory and cooperative, and making use of teamwork in education will lead to the creation of independent thinkers, who can work together to solve common problems (NEETF, 2002a; Barraza, 1998). Barraza (1998) highlights the 'holistic approach' to education in EE, where students observe and analyze real world problems and participate in possible solutions, and parents and the whole community is involved in different projects. To develop critical thinking, environmental issues could be discussed in class; to make them understand environmental concepts effectively, filed trips or practical activities could be organized; and to increase their participative skills, environmental projects could be developed, wherein students could participate together with the community (Barraza, 1998).

To achieve effective environmental learning in students, the teachers' competences, i.e. their knowledge of and attitudes towards environment are also very important. Especially for younger students, the teacher is a model as well, who has great influence on children's behaviors. Teachers should have a decent knowledge of environmental issues, plus commitment towards environment, and the ability to find out what, how and when to teach on environmental matters, considering the age and capabilities of students. Thus, the education of the educator is also very important. (Tuncer, Erol, 1992; Barraza, 1998; MOEF, 2004)

If EE is broadly implemented, today's students will be "*high performance life-long learners, effective future workers and problem solvers, thoughtful community leaders, and people who care about the people, creatures, and places surrounding them*" in the future (NEETF, 2002a).

There are several online environmental education tools that are prepared by international or national organizations to help educators. Some of them are listed in Annex I.

2.2.2. Community education

The community, who has finished formal education, and who is either working or not working can be educated with the use of informal education, which is defined as: "*all education and guidance activities, carried out with the aim of having economic, social and cultural developments by providing knowledge, skills and behaviors to the individuals who have never had formal education, or who had finished their formal education*" (MOEF, 2004). Informal environmental education aims to develop environmental-friendly behaviors in individuals who are out of the formal education system, and create an environmentally literate adult public at home and at workplace. (MOEF, 2004; NEETF, 2001)

According to Filho (2000), environmental education should involve everyone, be life-long, holistic and practical. After leaving school, the information source on environmental issues for adults is mainly media and press; thus planning environmental education programs should involve the use of these (MOEF, 2004; NEETF, 2001; Tuncer, Erol, 1992). Local projects where the local public would participate could be carried out, in order to inform public and increase their awareness and participation in environmental issues (MOEF, 2004).

According to the Turkish Ministry of Environment and Forestry (MOEF, 2004), it is vital that a country has a decent environmental policy which encourages NGOs to work together with governmental authorities in environmental education activities to increase public participation.

2.2.3. Education at work place

It is important that the people at work place are educated, including all levels from bottom to top (workers to managers) in public and private sectors. Again the extent and amount of information should be identified according to the relationship of the job with environmental issues. For example, in sectors like tourism, which are directly dependent to environment, it is vital that all personnel have the awareness of importance of the environment, and plans are made considering environmental issues. (MOEF, 2004)

Especially important is the education of decision makers, i.e. managers in private and public sectors, and politicians. If they have the necessary knowledge and awareness, they would integrate environmental concerns in their decisions, and influence the public and their workers too. (MOEF, 2004) Employee training and participation is one of the aims of and prerequisites for successful implementation of environmental management systems as well (DS/ISO 14004, 2004; EC, 2001b).

Educations can be carried out in forms of seminars, or projects that require participation of the target group, and as MOEF (2004) mentions, should be practical as well as theoretical.

This chapter is meant to be an introduction to environmental education, by presenting the historical framework in the view of legal documents, and the scope according to different target groups. Since the focus of the study is EE in schools in Turkey, community education and education at work place will not be elaborated deeper. However, the importance of these two is acknowledged, especially for countries with rather low schooling ratios and low quality in education.

3. ENVIRONMENTAL EDUCATION AND THE EUROPEAN UNION

In this chapter, the approaches to environmental education in educational systems in Europe will be explored. Although in literature there are lots of programs and documents from international organizations and individual countries on environmental education; in this study only the situation in European Union (EU) will be taken into consideration. Since Turkey is currently a candidate country to the European Union, it is found relevant to see what the situation is in the EU.

3.1. European Union's Approach to EE – Policy Background

The European Union's environmental policy has evolved in time; with the recognition of social, economic, and cultural dimensions, and the focus on sustainable development (Stokes, Edge, and West, 2001). Education is considered to have an important role in environmental policy, and in 1988, the Council of Ministers adopted a resolution which defined the objective of environmental education as: "*To increase the public awareness of the problems in this field, as well as possible solutions, and to lay the foundations for a fully informed and active participation of the individual in the protection of the environment and the prudent and rational use of natural resources*" (EC, 1988).

Although the European Community does not interfere with Member States policies on environmental education, the resolution invited each state (EC, 1988),

- *"To promote environmental education in all sectors of education, and set out a paper on environmental education policy to present to educational institutions.*
- *To give consideration to the basic aims of environmental education when drawing up curricula and organizing interdisciplinary courses,*
- *To encourage extracurricular school activities by means of which theoretical knowledge of the environment acquired in school can be put into practice,*
- *To take appropriate measures to develop teachers' knowledge of environmental matters in the context of their initial and in-service training,*
- *To undertake specific action to provide teachers and pupils with appropriate teaching materials*."

In 1993 the European Parliament reinforced the policy on environmental education by adopting a resolution which called on Member States and the Commission (Hesselink and van Kempen, 1999),

- *"To include the environmental dimension in all aspects of education at all levels,*
- *To promote the on-going education of adults on environmental matters,*
- *To integrate regional and local authorities in the development and carrying out of environmental education"*

Stokes, Edge and West, (2001) and Hesselink and van Kepmen (1999), state that the Fifth Community Environment Program (1993 – 2000) has set out a new approach to Community

environmental policy, since it underlined that, behavioral changes are required for sustainability. Information, education and training are considered as important components to alter environmentally damaging behavior and move towards sustainability by the Program (Stokes, Edge and West, 2001). Following the evaluation of the initial program in 1995, the Community has decided to intensify its efforts in the area of education and training, together with other defined priority areas to achieve sustainability. Later in other decisions the role of integrating sustainable development in Community education and training programs for increasing public awareness was emphasized. Hesselink and van Kepmen (1999), mention that the EC has strong commitment towards environmental education. Between years 1993 and 1997, the EC funded 113 environmental education and training projects (EC, 2005a), which supports Hesselink and van Kepmen's statement.

In the Sixth EU Environment Action Program, which covers the period 2001 – 2010, the priority areas are listed as: climate change, nature and wildlife, environment and health issues and natural resources and waste management. Promotion of environmental education and raising environmental awareness are considered essential approaches to achieve improvements in these areas. The EC encourages Member States to ensure that environmental issues are included in school curricula. (EC, 2001a)

Evaluation of EU's approach

As stated before, the European Union leaves Member States free to decide on the content and organization of their educational system; unlike for example having a common environmental policy for the whole Community, there is no common educational policy. The European Union acts like an exchange forum for countries to exchange ideas and good practices of education, and helps Member States cooperate (EC, 2002). In countries, where environment is one of the primary concerns of the state and the general public, this approach would not be a problem. Since the citizens have enough commitment towards environment, environmental education has the potential to start in the family, and continue at school and at work place, as encouraged by the EU. But, in my opinion, in countries like Turkey, where general commitment towards environment is low and public is not participative enough, a pressure from the top is needed to change the situation. As mentioned in previous sections, in the study on 'capacity building for environmental policy and management in Turkey', one of the conclusions was that environmental awareness and public participation remained generally low in Turkey. It was argued that, environmental policy in Turkey is shaped principally by a top-down approach; where a pressure from the top is needed, such as the EU accession process, which has made improvements in adoption of new environmental laws, including mechanisms to make citizens participate in environmental decisions. In the case of environmental education as well, one could argue that a pressure from the EU may be needed, rather than recommendations, in order to achieve concrete results. Nevertheless, the situation in Turkey will be discussed in the next chapters.

3.2. Environmental Education in the EU Countries

In this section, the situation of environmental education in schools of EU countries will be presented from a general perspective.

In 1999, the EC commissioned the 'Centre for Educational Research' at the 'London School of Economics and Political Science' to make a research on environmental education in the educational systems of the European Union. The study was carried out by Stokes, Edge and West, during years 2000 and 2001. (Stokes, Edge, and West, 2001)

The following section will present the findings and will provide a general view of environmental education in 15 EU countries[3]. References will be given only where sources other that Stokes, Edge and West, (2001) are used.

Although educational systems differ in each country, the researchers divided education in three phases: primary (6-11 years), lower secondary (11-15 years), and upper secondary (15-18 years). A classification is made according to the ages of pupils, and each stage is analyzed. Here the general results will be presented.

Regarding global aims and values, EE is included in the general aims/values statement of most Member States, whereas in some countries the environmental element is emphasized particularly, and EE has achieved a relatively high profile in education.

Three main models are identified regarding the approaches in teaching environmental education in schools:

1. EE as a subject area in its own right
2. EE embedded in specific subjects of the curriculum (generally in geography, science, history, civic education, technology, citizenship courses)
3. EE addressed through topics or themes in the curriculum that are addressed in an interdisciplinary manner.

In all Member States, in all stages of education, issues associated with environment are addressed in the curriculum, either as a compulsory subject, embedded in other subjects, or as an interdisciplinary theme. In all States, environmental issues are covered in geography course, and science subjects, especially biology. There are also examples of EE covered in courses like social sciences, citizenship or civic education.

[3] 15 EU countries before the enlargement in 2004: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom (EC, 2005b)

In higher levels of education (upper secondary school), in all countries, besides a compulsory part, the curriculum divides into specialization programs. Way of specialization varies from country to country. For example in some countries students are required to choose a balanced range of subjects from prescribed subject groups while in another, they focus on a particular program. However in most of the countries, some science is compulsory in upper secondary education. This is regarded important since EE is frequently addressed through science subjects. In some countries, EE is provided through separate specialist courses, such as: Environmental Studies, Principles of Environmental Sciences, Managing Environmental Resources, etc.

The curriculum material is also examined for transversal themes that cut across the broad areas of knowledge, themes related to ethics, values, attitudes and behavior are observed. An example for such themes is, teaching students how social trends like consumption affect the environment. Another example for older students is, teaching about the political, economic, environmental and social implications of the world as a global community, the wider issues and challenges of global interdependence and responsibility, including sustainable development and Agenda 21.

Other than analyzing the curriculums with regard to inclusion of environmental issues, the study analyzed initiatives in environmental education too, in terms of, support, strategies, initiatives, and environment related project work activities. Examples are;

- providing governmental finance to environmentally-oriented projects,
- applying environmental management system (EMS) to schools, where pupils and staff are required to carry out audits and identify measures,
- granting awards and labels to schools which comply a specific sustainability criteria,
- carrying out projects where pupils take part in community based projects like recycling and energy saving, etc.

Evaluation

Although different approaches are used for EE throughout Member States, all countries address EE to some extent. According to Stokes, Edge and West (2001) the presence of themes that include values, ethics, attitudes and behaviors in the curriculum show that policy makers are concerned about environment and sustainability and aim to create environmentally responsible attitudes and values among young European citizens.

Stokes, Edge and West (2001) exemplify good practices regarding ways of providing EE from different countries. Examples of curriculum contents, different ways of including EE in the curriculum, specific programs and certain projects which aim to enhance EE are presented in their study. According to the conclusions of Stokes, Edge and West (2001), it is observable from the examples that some countries are more active than others. The main reason to conclude this is the strong

presence of environmental considerations in curriculum aims, and the extent of inclusion of environmental aspects in curriculums.

The sharing of curriculum information, initiatives, and projects among Member States as Stokes, Edge and West recommend, would be an opportunity to see good practices.

This chapter showed the general situation regarding EE in the 15 European Union countries before the last enlargement of the community. The situation in the new EU countries is not described due to time and material limitations. However, it would be appropriate to see what the new Member States are doing about the issue and how their attitudes have changed towards the issue with membership; and the information could be used for making recommendations to Turkey.

After giving an overview of the situation in EU countries, the next chapter will analyze the general situation regarding EE in Turkey.

4. ENVIRONMENTAL EDUCATION IN SCHOOLS IN TURKEY

The purpose of this chapter is to give a general overview of the role of environment in Turkish education system. With this purpose, first the education system in Turkey, competent authorities and other relevant information will be described briefly. Then, the extent of inclusion of environmental issues in the curriculum and current environmental education programs in schools will be presented.

Data collection

The data used in this chapter and the next two chapters is gathered mainly from interviews with teachers (Apa, 2005; Arusoğlu, 2005; Butun, 2005; Ceylan, 2005; Çavuşoğlu, 2005; Hatipoğlu[1], 2005; Hatipoğlu[2], 2005; Korkmaz, 2005). Besides interviews, comments from a Workshop attended provide the rest of the data (Kırsal Çevre, 2005). The Turkish NGO 'Research Association of Rural Environment and Forestry' arranged a 'Workshop on Nature Education for Children' in December 2005 in Ankara, with the aim of discussing the status of education on nature and environment in Turkey. Educators, NGOs, and other people working with or interested in the issue participated in the Workshop for exchanging ideas and experiences. The secondary data are from websites of Ministries (MONE, 2002; MOEF, 2004) or programs in question (GLOBE, 2006; UNESCO, 2004), and a recent situation report prepared on environmental education in Turkey (Tüysüzoğlu, 2005).

4.1. General Education in Turkey

In Turkey, formal education includes pre-primary, primary, secondary, and higher education. Primary education that takes place for 8 years between ages 6-14 is obligatory for all citizens in Turkey. (MONE, 2002)

EDUCATIONAL INSTITUTION	pre-primary education			primary education (obligatory)								secondary education			higher education							
AGES	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	.	.

Figure 4.1. Educational system in Turkey (MONE, 2002)

The central administration for education for both public and private schools[4] is the Ministry of National Education. It is represented in the provinces by the Provincial Directorates of National Education, which actually work under the direction of governorships. The main responsibilities of the Ministry of National Education are; planning and controlling of education services, drawing up the curriculum and ensuring that educational activities are in line with the Basic Law of National Education. According to the education principles defined by the government, education shall be national, republican, secular, functional and modern, having a scientific foundation and incorporating generality and equity. The Turkish National Education aims to raise constructive, creative and productive individuals who have the following qualities;

- committed to national principles,
- have a healthy personality and character,
- respect human rights,
- responsible towards society
- have a healthy personality and character
- have national moral and cultural values

(MONE, 2002)

There are also informal education programs, but since the focus of the study is environmental education in schools, these will not be mentioned in this study.

While analyzing the curriculum and EE programs, only the primary education (grades 1 till 8) is taken into account, to delimit the extent of the study.

4.2. Role of Environment in the Education System

Reflecting on the general aims of education stated by the Ministry of Education, we see that there is no special attribution to nature or environmental issues. However, one can argue that environmental awareness is actually embedded in some of the statements such as respecting human rights, being responsible towards society, having national moral and cultural values. In fact, according to the Turkish constitution, Article 56., "*Everyone has the right to live in a healthy, balanced environment. It is the duty of the state and citizens to improve the natural environment and to prevent environmental pollution*" (TBMM, 2005). Thus, being a good citizen who is responsible towards society includes protecting the environment, according to the constitution.

[4] In Turkey, private schools are paid and are in better conditions than public schools regarding materials, laboratories, computers, etc. The main difference in education is that private schools give extensive foreign language education.

4.2.1. Environmental Issues in the Curriculum

According to the Ministry of Environment of Forestry (2004), EE at school is especially important for Turkey. Because of the lack of general knowledge and awareness of parents, and lack of interest of media in the issues, for some children school is the only place to learn about environment. (MOEF, 2004)

In Turkey, the curriculum is defined by the Ministry of National Education, as well as the methods of teaching, and the books to be used (Butun, 2005). In 2002, within an agreement signed by the EU and Turkey, a new education program is developed with the help of NGOs and universities, according to which, curriculum contents are modified and approaches to education is aimed to be changed (Tüysüzoğlu, 2005). As stated in the Workshop on Nature Education, the new curriculum is first implemented in 120 schools in 9 cities as the pilot phase, and it was found successful. Since the beginning of year 2005-2006 it is implemented all over Turkey from grade 1 to 5. The next grades are still in pilot phase. (Kırsal Çevre, 2005)

The previous curriculum was based on a giving-receiving relationship between the teacher and the student, expecting the student to memorize loads of information given, whereas with the new curriculum the students play an active role in the education process through several activities, and teacher acts as a facilitator of learning (Kırsal Çevre, 2005; Tüysüzoğlu, 2005). Regarding environmental themes, the old system mentioned some environment related subjects as, seasons, living things around us, geography and our earth, etc. which were, according to Tüysüzoğlu (2005), mostly about informing students on the natural phenomena. The old system is also criticized for handling environment through separate subjects, although it should be considered as a whole, and be studied under interdisciplinary themes (Kırsal Çevre, 2005).

Tüysüzoğlu (2005) states that the new system brings a holistic approach where subjects from different disciplines are handled under defined themes. In addition to increasing the capacity of students to understand nature and natural events, the program aims to develop awareness and increase knowledge on environmental protection, prudent use of natural resources, recycling, protection against natural disasters, etc. Instead of memorizing a lot of useless information as in the previous system, the objective is that, students comprehend that they should protect the environment by perceiving it as a whole that they live in. Besides, environmental issues are mentioned in a broader range of courses (Turkish, music, math, arts, etc.), unlike the previous system which had environmental element mostly in science and geography courses. (Tüysüzoğlu, 2005)

Models in EE

Described in Chapter 3.2., the approaches to EE were defined by Stokes, Edge and West (2003) as:

1. EE as a subject area in its own right
2. EE embedded in specific subjects of the curriculum
3. EE addressed through topics or themes in the curriculum that are addressed in an interdisciplinary manner.

Since there is no separate course for environment, Model 1 does not exist in the Turkish education system. We could argue that in the old system the approach was model 2, whereas the new system has both models 2 and 3. As it was mentioned, the new approach set themes under which different disciplines are studied, and environment was integrated in the courses as well.

In the Workshop on Nature Education (Kırsal Çevre, 2005), the educators agreed that the new system is prepared well, however the teachers and schools are not ready to implement it successfully. There have been previous attempts to change education system in various ways, but changing the curriculum was never enough, when the materials, the knowledge of teachers and physical conditions of schools stayed the same (MONE, 2005a). For this new curriculum, only in the pilot schools, teachers had training in order to adapt, the materials and books were also renewed and physical conditions of schools (computers, etc.) were improved (Kırsal Çevre, 2005). This may be the reason the system worked well in pilot schools, and found ready to be implemented in the country scale. However, the improvement of conditions and training for teachers is not provided all over the country, so the teachers are confused on how to work with this entirely different system (Kırsal Çevre, 2005).

A science teacher, Hatipoğlu[1] (2005) mentions that, actually how ever the environmental issues are included in the curriculum; in every class it is possible to discuss these, depending on the teacher's interest and commitment towards the environment. An issue mentioned in the Workshop on Nature Education was the general lack of environmental interest in the country as well as in teachers. Teacher education in universities does not include environmental education – except science departments that deal with natural aspects of environment (Kırsal Çevre, 2005). So, in service training of teachers is vital to improve their environmental knowledge and awareness as well as their ability to educate students in these issues.

Gradually, training is provided to teachers for capacity building on several issues as computer literacy, EU education programs, erosion and environmental education, child friendly education, basic disaster awareness, etc. for adaptation with the new curriculum (Tüysüzoğlu, 2005). However, considering that there are 34.493 primary schools and 375.511 teachers involved with primary schools in Turkey (MONE, 2002), imposing the new system to all the country, increasing the quality

and quantity of EE, and improving other aspects of education will need extensive teacher training and capacity building. The improvements are expected to be achieved gradually, in a long time span (Kırsal Çevre, 2005).

Besides educating students, Tüysüzoğlu (2005) highlights the importance of EE for parents. This could be done by community education programs and local EE projects that would involve both students and parents. Community education will not be elaborated deeper, since it is not the focus of this study. Environmental programs applied in schools will be analyzed in the next section.

4.2.2. Environmental Education Programs in Turkey

In the previous section, the presence of environmental issues in the curriculum is analyzed. In this section, the environmental education programs being implemented in Turkey will be sketched.

Several NGOs in Turkey provide environmental education to schools in the form of individual seminars, on the specific subjects they work in such as erosion, forests, packaging waste (Gurler, 2005). In this study, only applied EE projects where students take part will be mentioned, EE activities in forms of lectures will not be mentioned deeply.

When examples of application of projects from the schools interviewed are presented, instead of giving school names, the schools will be referred as: School A, School B, etc. for simplicity. Only schools from Istanbul are interviewed and analyzed, since the case project that is the focus of this study is an Istanbul project.

An International Project: Global Learning and Observations to Benefit the Environment (GLOBE)

GLOBE is a USA originated, worldwide program implemented in 109 countries, where students from primary and secondary schools make measurements in the fields of atmosphere, hydrology, soil, and land cover in their surroundings, and report the data on the internet. GLOBE aims to raise a generation with scientific approach towards nature, and to increase the use of internet for information exchange. The project is funded by National Aeronautics Space Administration (NASA) and National Science Foundation. (GLOBE, 2006a)

Coordinating teachers in schools receive training from GLOBE, and manuals on how to conduct the measurements, which are supposed to be made using standard methods and equipment sent to schools from USA (Apa, 2005). Based on the GLOBE data, schools publish their research projects, and create interactive websites to analyze the data. Currently, 75 schools implement the project in Turkey (GLOBE, 2006b).

In School B, a small meteorology station is established, and they measure periodically the temperature, the amount of rainfall, and several parameters of rainwater such as pH, to comment on air pollution during different periods of the year (Ceylan, 2005). They also carry out measurements to characterize the water quality of a stream near by (Apa, 2005).

The science teacher from School B (Apa, 2005), mentions that, there is no auditing for the implementation of the project, neither communication with other schools in this program. She further remarks the difficulties regarding the measurements. For example, for soil measurements, the procedures state that the place to take samples should be a land without any forest and any human activity. This is almost impossible to find in Istanbul. Another problem is the requirement to use the standard equipment from USA. They can not always receive the chemicals due to security problems in the customs. (Apa, 2005)

Another problem of implementation of this project, according to Apa is that teachers need to spend extra time for this activity, besides their usual heavy load of work. Usually, there is one coordinator teacher in school, responsible for GLOBE (GLOBE, 2005a); where in School B, all environmental projects are coordinated by a group of teachers (Ceylan, 2005). This would facilitate the share of work and ease the carrying out of measurements, but still there are difficulties in implementation. However, in spite of the problems, Apa and Ceylan mention the project is useful for making students see how science can be used for environment (Apa, 2005; Ceylan; 2005).

A Regional Project: South Eastern Mediterranean Environmental Project (SEMEP)

SEMEP is a UNESCO project, which aims to "*foster knowledge, awareness and understanding of the common heritage – historical, social, cultural, ecological, etc. of the South Eastern Mediterranean region and thereby to promote a culture of peace and tolerance between countries*" with a holistic, interdisciplinary approach. Primary and secondary schools from 14 countries[5] in the area, including Turkey, join the project. (UNESCO, 2004a)

There is a national coordinator in each country, and a coordinator teacher in each school. In provincial level, every year one of the SEMEP schools is chosen as the coordinator school, which will be responsible for establishing communication with the national coordinator and among the schools in the province. (Hatipoğlu[1], 2005)

National coordinators of participating countries meet yearly to decide on the subject that schools have to study that year. During the year, schools carry out activities on the specific issue, by researching, preparing information boards, making models to visualize their work and finally

[5] 14 countries are active participants: Albania, Bulgaria, Croatia, Cyprus, Egypt, Greece, Israel, Italy, Jordan, Malta, Palestinian Authority, Romania, Slovenia, and Turkey. (UNESCO, 2004a)

preparing a report at the end of the year. The report and activities are then presented and evaluated during the SEMEP day in May, where all participating schools in the country and the national coordinator attend. Some projects receive awards as 'most comprehensive project', 'best visual design', etc. (Hatipoğlu[1], 2005)

In 2004, the subject was "water and culture". School A prepared a project on water structures in Istanbul since antiquity until today, where they examined how the water structures changed in place, structure, and quality in time, and how the development of the city and non-planned urbanization influenced these. School A's project had the 'most comprehensive project' award for that year. (Hatipoğlu[1], 2005)

Ceylan (2005) thinks the project is working well expect for some organizational deficiencies. For example, meetings and deadlines for sending projects are not announced enough in advance, and regarding the evaluation of projects, there are no clear criteria or procedure, and this makes most schools think that the assessment is not fair (Ceylan, 2005). Arusoglu (2005) mention the lack of a website for SEMEP. This would ease communication and information exchange among the national coordinator and schools and even with schools from other countries.

The project is a regional project and one of the aims is to increase awareness of the common heritage and understanding of peace. So, one could argue that international cooperation would be expected among schools. However, as said by Hatipoğlu[1] (2005), national coordinators only have communication with national coordinators of other countries, not teachers or students.

Environmental Education and Implementation Project for Schools (ÇEP)

ÇEP, is an Istanbul based project, coordinated by the Governorship of Istanbul, and aiming to increase environmental awareness of students by giving them educations and making them arrange and participate in environmental activities in the school and out of the school. While all other EE projects mentioned here are implemented on voluntary basis, ÇEP is made obligatory to all primary and secondary schools in Istanbul. ÇEP will be explained and its implementation will be analyzed further in Chapters 5 and 6.

The Eco Schools Program

Eco Schools Program provides an environmental management system approach to schools where students play the principal role. Coordinated by the Foundation for Environmental Education (FEE), the program is implemented in 35 countries. Eco Schools program will be explained in Chapter 6.

Evaluation

This chapter showed the general situation regarding environmental education in schools (specifically primary schools). We could conclude that there is a movement towards developing or increasing environmental education in schools in the country, through changes in the curriculum and extra curricular projects implemented. GLOBE and SEMEP seem to be specific projects where GLOBE is aiming to show the use of science for environment to students, and SEMEP aims to enhance understanding of environmental and planning issues from a regional perspective. ÇEP and Eco Schools programs approach the issue from a broader perspective.

In Section 2.2.1, it was stated that EE in educational systems above all should provide critical thinking to students and increase students participative and cooperation skills. A combination of including environmental issues in the curriculum and developing and implementing projects as the ones mentioned above would be useful for not only making students understand environmental issues but also would help them gain environmental friendly attitudes and habits.

After showing the general view of EE in Turkey, the next chapter will specifically describe the project ÇEP, and later discuss how it is implemented.

5. ÇEP – THEORY AND DESCRIPTION

For the purpose of analyzing the implementation of ÇEP, in addition to comparing it to another environmental education program (Eco Schools), a framework for public policy analysis will be utilized. This chapter intends to describe and analyze ÇEP theoretically, by utilizing the analytical framework developed by Michael Howlett and M. Ramesh (1995) for studying public policy. Thus, first the analytical framework of Howlett and Ramesh will be explained, and then ÇEP will be described and later analyzed according to the framework.

5.1. PUBLIC POLICY ANALYSIS

Howlett and Ramesh (1995) are academics involved in political science in universities in Canada and Australia. In their book "Studying Public Policy – Policy Cycles and Policy Systems", they discuss the current approaches to analyzing public policy and they develop a framework for analyzing policies, by defining a set of factors influencing policies. This theory is found relevant for this study because ÇEP is considered a new public policy, and as it will be seen in Chapter 6 from the analysis; obviously the success of implementation is dependent on many factors.

Section 5.1 is a summary of the relevant chapters from the book by Howlett and Ramesh (1995). References will be given only when other sources are used.

5.1.1. Public Policy Making - Introduction to the Concept

Howlett and Ramesh define public policy as:
"a set of interrelated decisions taken by a political actor or group of actors concerning the selection of goals and the means of achieving them within a specified situation where these decisions should in principle be within the power of those actors to achieve."

Public policies are analyzed by dividing the policy process into stages, which consequently form the policy cycle:

1. Agenda setting: problems come to the attention of governments
2. Policy formulation: policy options are formulated within government
3. Decision making: governments adopt a particular course of action or non action
4. Policy implementation: governments put policies into effect
5. Policy evaluation: results of policies are monitored by both state and societal actors. This stage may result in the re-conceptualization of policy problems and solutions.

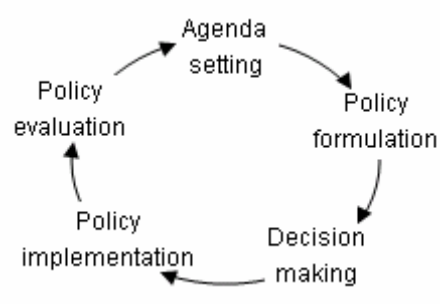


Figure 5.1. Policy cycle

According to Howlett and Ramesh, this policy cycle model allows understanding of policy making by breaking the complexity of the process into stages to be investigated alone or in terms of relationship to other steps. However they argue, it can be misinterpreted that, policy makers always try to solve public problems in such a systematic way. In some cases, some stages may be compressed or skipped. So the situation in practice can be different than the model. Besides, the model does not mention who or what drives policies and what factors affect them.

Howlett and Ramesh, argue that an improved model is needed, that identifies the factors involved in and influencing the policy process. Consequently, elaborating on the public policy definition, and expanding the policy cycle, they develop an analytical framework for studying public policy by including a wide range of factors affecting the overall policy process. They first define the factors, and policy instruments, then analyze each step of the policy making process.

Although in their book, Howlett and Ramesh develop the framework for the whole policy making process stage by stage, in this study, the framework will be utilized for discussing only the 'policy implementation' stage. In addition, policy instruments and factors affecting policy making will be elaborated slightly.

5.1.2. Factors Affecting Public Policy Making

In the view of the authors, actors and institutions play an important role in the policy process. Institutions are structures and organization of the state, society and the international system. Although individuals, groups or states participating in the policy process have their own interest, the way they interpret and pursue their interest and the outcome of their efforts are shaped by institutional factors.

The authors examine the role of the various actors in policy systems and asses how they are affected by the surrounding institutional arrangements.

Actors in the policy process

Actors in the policy process may be individuals or groups, and for each case they vary, but in all cases they come from the state and the society. For simplification actors are divided in five categories:

1. Elected officials
2. Appointed officials
3. Interest groups
4. Research organizations
5. Mass media

Elected officials are the executive and the legislature. Executive is referred to as the cabinet (in many countries) and its central role derives from its constitutional authority to govern the country. Legislature is responsible for holding governments accountable to the public rather than to make or implement policies. Appointed officials are the civil servants (or public servants) that assist the executive in the performance of its tasks. They can also be collectively referred to as the "bureaucracy". Interest groups play a significant role in the policy process, the extent depending on their organizational and political resources, as well as the knowledge they possess. Research organizations are generally universities and think tanks[6] intended to influence public policy. Academics do not necessarily seek solutions to policy problems. Think tanks are generally more partisan than academic researchers; however they too must maintain an image of intellectual autonomy from the government or political party if policy makers are to take them seriously. Mass media is the crucial link between state and society, and can strongly influence the preferences of the government and the society on public problems and solutions to them. After defining actors, below institutional factors will be mentioned.

Organization of the state

The organization of the state affects its ability to make and implement policies in two dimensions: autonomy and capacity. Autonomy is the extent of the state's independence from self serving and conflicting social pressures. Policy making institutions responsive to societal demands are likely to generate policies that benefit some groups but worsen the welfare of the society as a whole. Capacity is a function of state's organizational coherence and expertise, and it determines its success in performing policy functions. Unity within and among various levels and agencies, and high level of bureaucratic expertise are crucial to enhance capacity.

[6] A think tank is an independent organization engaged in multi disciplinary research, which tends to be directed at proposing practical solutions to public policy problems or finding evidence to support the ideology driven positions they advocate.

Organization of the society:

Capabilities of a state are determined not just by how it is organized internally, but also by how it is linked to the society. To be able to make and implement policies effectively, state needs the support of prominent social groups for its actions. Unity within and among social groups facilitates policy making and promotes effective implementation. The best situation for effective policy making and implementation is that both the state and society are strong, with close partnership. Usually, business is the most influential interest group to affect public policy.

Organization of the international system:

In addition to domestic institutions as discussed above, the public policy process and its outcomes are shaped by international organizations in many countries. To see the effects of international systems, international regimes are assessed. Regimes are defined as 'sets of governing arrangements' or 'network of rules, norms, and procedures that regularize behavior and control its effects'. International regimes vary according to their form, scope of coverage, level of adherence, and the instruments through which they are put into practice.

5.1.3. Policy Instruments

Policy instruments are tools or governing instruments by which governments attempt to put policies into effect. These are the actual means or devices the governments have at their disposal for implementing policies.

Authors say there have been several approaches to classify policy instruments, and they develop a spectrum of policy instruments by combining the ideas of several researchers:

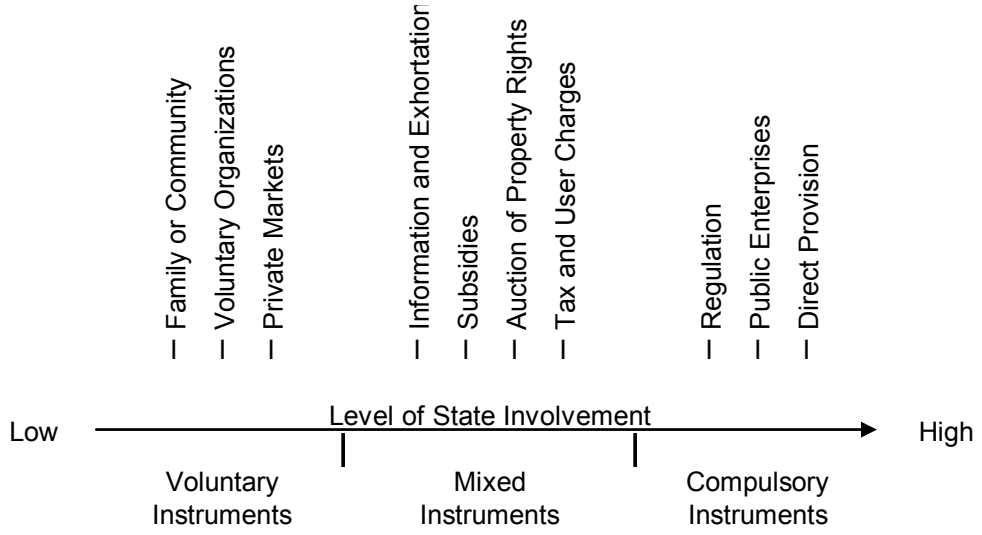


Figure 5.2. Policy instruments spectrum (Howlett and Ramesh, 1995)

Governments should choose between and combine instruments in an appropriate way, taking into account limitations and capabilities of each category of instruments.

Voluntary instruments:

They entail no or little involvement by the government, and desired task is performed on a voluntary basis. Government may decide to do nothing about certain problems, believing that the best can be done by market, family or voluntary organizations. Voluntary instruments are preferred in many societies because of their cost efficiency, consistency with cultural norms of individual freedom, and support for family and community ties. The categories defined under voluntary instruments are summarized below.

Family and community:

The government may choose to take measures to expand the role of families, relatives, friends in providing goods or services to serve the policy goals, either by cutting on government services or by promoting their involvement. This does not cost anything to the government unless there are subsidies or grants provided. But these are weak instruments for addressing complex economic problems.

Voluntary organizations:

Voluntary organizations involve 'activities that are indeed voluntary in the dual sense of being free of state coercion and being free of the economic constraints of profitability and the distribution of profits'. Some functions like shelter for woman or children or cleaning up beaches could be provided by the government too, but may be left wholly or partly to voluntary organizations. These are efficient means of delivering economic and social services, they offer flexibility and speed of response and the opportunity for experimentation that would be difficult in governmental organizations. Besides, they decrease the need for government action, and they contribute positively in promoting community spirit, social solidarity, and political participation. However, they may become bureaucratic and in practice be no different from governmental organizations. Besides, if they are depending on governmental funds, it may be cheaper for the government to perform the task itself.

Market:

This is the most important and contentious voluntary instrument. There is voluntary interaction between consumers and producers, where the consumers seek to buy as much as they can and the producers search for highest possible profits. The primary motive on both sides is self interest. It is an effective and efficient means of providing most private goods and can ensure that resources are devoted only to those goods and services valued by the society, as reflected in the individuals' willingness to pay. However in several situations it may be an inappropriate instrument to use, as in the case for providing things that public policies are intended to address (as defense, policing). Besides, market is an inequitable instrument, because it meets the needs of only those with the ability to pay. When a government decides to use market as an instrument,

it is usually accompanied by other instruments such as a regulation to protect consumers or workers.

Compulsory instruments

These are directive instruments, that compel or direct the action of target individuals and firms, who are left with little or no discretion in devising a response.

Regulations

Regulation is 'a prescription by the government which must be complied with by the intended targets, and failure to do so usually involve penalty'. They take various forms and include rules, standards, permits, prohibitions, legal orders, and executive orders. An advantage of regulations is that, the information needed is less since the government does not need to know the subjects preference, and just establishes a standard. In administrative terms, regulations are more efficient than other instruments if the government has all the information. In times of crisis when an immediate response is needed, they are more suitable. Besides, they may be less costly than other instruments as subsidies or tax incentives. All that is required is an administrative agency to enforce compliance, rather than an agency to supervise or offer fiscal incentives. The disadvantage of regulations is that they distort voluntary or private sector activities, and they are often inflexible and do not permit consideration of individual circumstances.

Direct Provision

This is the basic and most widely instrument. Instead of expecting the private sector to do something desired by the government, or regulating private sector's performance of the task, the government may directly perform the tasks in question. Social security, policing, fire fighting may be examples for these. This instrument is easy to establish because of low information requirements. Besides, it avoids problems with indirect provisions such as negotiations and discussions. However, a problem with this instrument is that, political control over services may be directed to promoting government's reelection potential, rather than serving the public. Furthermore, since there is no competition among bureaucratic agencies, they do not need to be cost-conscious, for which the tax payers pay.

Mixed instruments:

Mixed instruments have features of voluntary and compulsory instruments. Government is partially involved in these.

Information and exhortation

Providing information with the aim of changing behavior is a passive instrument. Exhortation involves a little more government activity than dissemination of information. Although it does not

include changing behaviors through rewards or sanctions, it is a good starting point for dealing with problems to which definite solutions are not available. It is a rather less costly option, since it does not involve bureaucracy or financial commitment. The main disadvantage of exhortations is that, they are weak instruments and government may use it to pretend they are doing something about the problem, while actually they are doing nothing. Thus these should be used in conjunction with other instruments.

Subsidies

Subsidies are all forms of financial transfers to individuals, firms and organizations from governments or from other individuals, firms or organizations under government direction. The purpose is to reward a desired activity. These are easier to establish if there is coincidence between the government's and people's interest. However they do not provide instant response to problems. Some ways of subsidies are: grants, tax incentives, vouchers and loans.

Taxes and user charges

Tax is a legally prescribed compulsory payment to government by a person or a firm. Besides increasing revenues of the government, it can be used as a policy to avoid undesired behavior, or to encourage a desired behavior. User charge is a particularly innovative use of tax. The government imposes a price for undertaking certain behaviors, which may also be seen as a financial penalty for discouraging undesired behavior. User charge is a combination of regulation and market instruments, where the government sets a charge for an activity without prohibiting it. Taxes and user charges are easy to establish since they enable individuals and firms to find alternatives to paying charges. Besides they are flexible instruments that the government can adjust according to the point reached regarding the target. They also reduce the need for bureaucratic machinery, since reducing the target activity is left to individuals and firms. Their main disadvantages are that, they require extensive information for setting the level of taxes and charges, and they are not effective in providing immediate response.

5.1.4. Policy Implementation

After a public problem entered in the agenda, a government chooses an option to solve it, and the next step is putting it into practice: policy implementation, which is the process whereby programs or policies are carried out. Not necessarily a policy will be implemented as it is planned.

Researching policy implementation, some analysis perceived that implementation is a top-down process concerned with how the implementing officials could be made to do their job more effectively. But some perceived as a bottom-up approach, which starts from the perspective of those affected by and involved in the implementation of a policy. Later, a third approach emerged, rather than studying the administrative concerns of implementation, looked at implementation as

a process in which various tools of government were applied to concrete cases in policy design. These studies tend to concentrate on the reasons and rationales for the choice of particular tools by the government and the potential for their use in future circumstances.

Realities of policy implementation are distinct from the objectives and procedures prescribed for achieving them. It is important to recognize the limitations, as listed below:

- Nature of the problem itself affects implementation. The problem is characterized by its technical difficulties (availability and affordability of technology) and the diversity of the problem, the size of the target groups and the extent of behavioral change expected from the target group. As the problem gets more complex, and the size and extent of behaviors of the target increase, the implementation becomes more difficult.
- Social context: Changes in social conditions such as increase in unemployment or proportion of the aged, may affect the interpretation of the problem, and impose a burden on public finance.
- Economic context: varying economic conditions in different regions or sections of society affect implementation.
- Technological context: Availability of a new technology can cause changes in the implementation stage, due to for example invention of a cheaper technology to meet a target.
- Political context: Variations in political circumstances, for example a change of government may lead to changes in the way policies are implemented without change in the policy itself.
- Administrative context: Each organization involved in the policy implementation has its own interests, ambitions, and traditions that affect implementation.
- Political and economic resources of the target groups is an important factor that, powerful groups affected by a policy can condition the character of implementation by supporting or opposing it.

These limitations should be taken into account at earlier stages of policy making for successful implementation.

The authors finally list measures that policy maker can take, to improve implementation:

1. Decision makers must state the goals of the policy and their relative ranking as clearly as possible. This serves as a clear instruction to implementers what exactly they are expected to do and the priority they must attribute to their tasks.
2. Policy must be backed by a viable causal theory as to why the prescribed measure is expected to resolve to problem.
3. The policy must have sufficient funds allocated to it for successful implementation.
4. The policy should set out clear procedures that implementing agencies must adhere to when carrying out the policy.

5. The task of implementatiom must be allocated to an agency with relevant experience and commitment.

Perspectives for analyzing policy implementation

Howlett and Ramesh comment on the approaches for analyzing implementation. If policy design is emphasized to study implementation; this is referred to as top-down approach, which assumes that the policy process can be usefully viewed as a series of chains of command where political leaders articulate a clear policy preference which is then carried out at increasing levels of specificity as it goes through the administrative machinery that serves the government. So this approach starts with the decision of the government, and examines the extent to which administrators carry out or fail to carry out the decisions, and seeks to find the reasons underlying the extent of the implementation. However, this approach assumes the policies have clear goals, although in reality they are often unclear. The most serious shortcoming of this approach is that its focus is on senior decision makers, who often play a marginal role in implementation, than lower level officials and public.

Criticizing the top-down approach, a bottom-up approach is developed. This approach starts with the public and private actors involved, and examines their personal and organizational goals, strategies, and networks they have built. Then it goes upward to discover goals, strategies and contacts of those involved in designing, financing, and executing of programs. The bottom-up analysis showed that in most cases, the success or failure depends on the commitment and skills of the actors at the bottom, directly implementing programs. The key advantage of this approach is that it directs attention to formal and informal relationships constituting policy networks involved in making and implementing policies. This approach orients the implementation study away from policy decisions and back towards policy problems, thus enable the study of private and public actors and institutions involved in the problem.

According to the authors, for comprehensive understanding of the subject, the 2 approaches should be combined.

After giving an overview of Howlett and Ramesh's theory for analyzing public policies, the following section will first describe ÇEP, and then will try to analyze it by utilizing the factors defined by Howlett and Ramesh. Then in Chapter 6, the implementation of ÇEP will be presented by using the data gained through interviews and observations, and will be elaborated using the framework and discussions of Howlett and Ramesh.

5.2. ÇEP

This section will present the focus of this study, the 'Environmental Education and Implementation Project for Schools'– ÇEP. Depending on the interviews with establishers of the project and other people involved, and information from legal documents and relevant websites, the project will be described, without taking into consideration its implementation. ÇEP will be analyzed theoretically by utilizing the framework of Howlett and Ramesh. The implementation of the project will be elaborated in Chapter 6.

5.2.1. Background and Aims

The idea of an environmental education project for schools was initiated by 'İslam Sadıker', the former Vice Director of the Provincial Environment and Forestry Directorate of Istanbul[7]. Sadıker, while working as the environmental directorate in a district municipality in Istanbul, had carried out environmental education seminars together with NGOs, aimed at students and adults. Upon his recommendations, ÇEP was started in 2000 in Istanbul, by the Governorship of Istanbul. In 2002 ÇEP took the form of a 'Guideline Directive'[8] where aims, contents, organizational aspects, main subjects of interest, and responsibilities of relevant parties are listed. (Governorship of Istanbul, 2002; Sadiker, 2005a) In 2003 several other governorships of other cities decided to start the project as well, however in this study only the situation in Istanbul will be analyzed.

The aim of ÇEP is to create and increase environmental awareness among students, who consequently will become individuals that question environmental problems and that take action for and participate in their solutions (GOI, 2002). Sadıker (2005a) mentions that, the project also aims to make students understand the meaning and importance of issues like democracy, civil society, and participation in decision-making. To serve sustainable development is also revealed as one of the aims by the directive and Sadıker's statements (GOI, 2002; Sadıker, 2005a).

ÇEP is coordinated by the Provincial Environment and Forestry Directorate and National Education Directorate of Istanbul. It is stated in the Guideline Directive that cooperation is intended to take place with the district administrations[9], municipalities, NGOs, trade associations, environmentalists, and media. (GOI, 2002)

[7] In Turkey, several ministries, including Ministry of Environment and Forestry and Ministry of Education, are represented in cities by provincial directorates, and these provincial directorates work under the governorships.
[8] In Turkish the term 'Yönerge' is used, which means a directive that is prepared as a guideline, giving instructions regarding the ways directives and regulations are to be carried out (Milliyet, 2002). It is found relevant to translate the term as 'Guideline Directive'.
[9] In Turkey, local authorities in provinces are governorships and municipalities, and in districts, district governorships and district municipalities. For more information on their organization and responsibilities, see: http://www.mahalli-idareler.gov.tr/

The financial resources needed for the implementation of ÇEP is to be supplied from the budgets of the governorship and municipality, through sponsorships, and by donations from organizations or people. Management of the expenses is to be done by coordination of financial departments of governorships, municipalities and donor organizations. (GOI, 2002)

5.2.2. Implementation Mechanisms

In sections 5.2.2 and 5.2.3, the statements from the Guideline Directive about implementation mechanisms are presented (GOI, 2002). References in these sections will be given only where sources other than GOI (2002) are used.

ÇEP involves all public and private primary and secondary schools in Istanbul[10], and is targeted to all grades from 1st to 11th. Initially two volunteer teachers from each school and five volunteer students from each class are to be selected. Leaded by the Head of School, they form the School Working Committee together with a representative from the parents-teachers association. They are provided with the Guideline Directive, 'Detection and Warning Forms', and 'environmental volunteer IDs' that they will be using during activities.

There are three implementation mechanisms: environmental education, environmental audits, and environmental actions.

1) Environmental education

Every school is supposed to organize activities such as seminars, workshops, exhibitions, and prepare information boards on environmental problems and their solutions. Education should be provided through such activities.

The students should be informed on the following issues: clean production, clean energy, biodiversity, right to know, international environmental treaties, being environmentally friendly, rights of consumers, Local Agenda 21, protection of nature, and the three-R strategy; reduce-reuse-recycle.

Schools are encouraged to choose a subject every month (such as solid waste, water pollution, energy, etc.) and carry out activities to make students understand the issue comprehensively. The volunteer students will be leaders but participation of all students is expected. Team work should be encouraged among students. Every school is free to choose the priority areas to work on, according to the characteristics of the district the school is situated in (Sadıker, 2005a).

[10] There are 2400 schools and 2,5 million students in Istanbul. (Sadıker, 2005b)

Some suggestions of Sadiker on how to study the issues are (Sadiker, 2005b):

- *"Putting flags and papers in the school, where the aims and objectives of ÇEP is written, and information on issues such as the environment of Istanbul, waste, recycling, separation at source, protection of natural sources, pollution, etc. is presented.*
- *Setting up 'environmental publication boards' in schools*
- *Showing movies, documentaries, and performances on environmental issues*
- *Giving homework to students on environmental issues*
- *Taking students to trips to factories that work with the environment*
- *Encouraging students to separate paper and batteries at school, in order that they develop such habits, etc."*

There is no fixed ÇEP program that schools have to follow, however in the curriculum, as a tradition, specific weeks are attributed to specific issues that should be mentioned (energy week, forests week, etc.) and during these weeks, activities on these subjects are expected to be carried out. In 2003, a ÇEP booklet was prepared for teachers, to guide and inspire them for interesting activities. (Sadıker, 2003; Gürler, 2005)

Since 2005, ÇEP is included in the curriculum of the 4th grade, as one of the subjects to be studied in the social science course (Sadıker, 2005a). In the book prepared by Kolukısa et al. (2005) for schools, ÇEP is introduced to students in 4 pages. The type of activities included, how it is organized etc. is explained with illustrations in a way to make it attractive for students. Considering that ÇEP is directed to all students in all grades in Istanbul as an out of curriculum activity, one would assume that all students would be informed starting from the first grade through activities as listed above. So when they come to the 4th grade, they must have already known the project and have carried out activities for 3 years. Having these in mind, in my opinion, to add ÇEP in the curriculum of the 4th grade should not be necessary. On the other hand, ÇEP is an Istanbul based project, but social science course is taught all over the country. So maybe the aim with adding ÇEP in the curriculum is introducing and promoting it to students from out of Istanbul.

Although the subjects to be taught to students are listed in the guidelines, it is not stated clearly who will carry out the education and to what extent the issues will be elaborated. Possibly, the schools are left free to decide on these. But here the consideration should be: do the schools have the capacity for this? At this point, training of teachers, especially on recent issues as Local Agenda 21 and right to know act is essential. As stated in the previous chapter, teachers receive training on several issues, including environmental ones, gradually. Besides, there are NGOs that provide education in their specific subjects, who are willing to help teachers (Kırsal Çevre, 2005).

So there are some attempts to increase the capacity of teachers in this sense. The situation in implementation will be elaborated further in chapter 6.2.

2) Environmental audits

Another main mechanism of the program is environmental audits that would be performed by the students. Each school is assigned an area in its district, and volunteer students are responsible for the environment in this area. They are supposed to perform audits in the area with their teachers to try to identify environmental problems. When they see a problem, they should first warn the people who cause the problem, and if the problem still exists in their second trip, they are supposed to fill in the 'detection and warning forms' prepared for ÇEP to be later submitted to related authorities. An example of this form is below.

DETECTION AND WARNING FORM

Date : ..... / ..... / 200.. **Form Number :**

Polluting Company/Residence			
District		Street	
Suburb		Number	
Detected Environmental Pollution Theme			
	a) Solid Wastes		**e) Visual Polllution**
	b) Air Pollution		f) Problems regarding Green Spaces
	c) Noise		**g) Sidewalk Occupancy Problems**
	d) Water Pollution		h) Other
Explanations :			
Provincial Environment and Forestry Directorate of Istanbul		**Telefon : 212 519 49 15**	**Faks: 212 520 13 60**

Figure 5.3. Detection and Warning Forms prepared for ÇEP (Sadıker, 2005b)

Issues to be considered during audits are listed as:

- Solid wastes: Is garbage placed in bags are properly put in containers or they are everywhere, is recycling provided through separated containers, etc.
- Water pollution: Is municipal and industrial wastewater is discharged directly into rivers, lakes, seas or ground, is the water containing detergents from balconies are connected to sewage system or drained directly to the street, etc.
- Air pollution: What types of fuel are used, how is the situation of exhaust gases from cars, etc.
- Parks and green areas: Are parks and green areas, plants, and forests kept well, etc.
- Visual pollution: Are the buildings and walls clean, do cars park on sidewalks, etc.
- Noise: What kinds of noise are originated from residences, industries, microphones of sellers on the streets?
- Other

Sadıker (2005a) states that, the secondary aim of ÇEP is to reach parents and the community. When the students perform visits to their assigned district, they are expected to catch attention of public, by appreciating and promoting good practices, as well as warning bad practices.

Reflecting on the Detection and Warning Forms and the issues to be considered, it is obvious that much attention is given to visual aspects. This could be because these are the most easily recognizable aspects of environment by students, even with little environmental knowledge. Besides as Özkoca (2005) states taking into account the environmental awareness level of the country, visual pollution is the only environmental issue that most people consider a problem. In my opinion, this seems to be a good point to start making students realize and care about what is happening in their surroundings. However, this approach also gives a limited view of environment to students, and may make them perceive environmental problems as only local aspects. So, this approach could be a start for raising environmental awareness, but it should be supported with further education on global environmental issues, like clean energy, sustainable development, biodiversity, etc. as stated in the previous part 'environmental education'.

3) Environmental actions

Students will be encouraged to choose a problem of their district, study about the issue, and prepare information boards, with the help of their teachers and environmentalist people in the area (if there are). They will be allowed to perform demonstrations and activities in their district about the issue, within legal limits.

Schools in the same area may choose to work together. Experiences shall be shared with other schools, and activities shall be prepared in a way that they are informative to other people.

This step seems to widen the target group of the project. If implemented effectively, demonstrations of children would reach people out of the school in the area, and this would contribute to environmental awareness rising in the local community.

In June, a festival is prepared during the environment week, where schools present their activities, and successful schools are awarded the "Starfish Award", which is the logo of ÇEP, as well as other presents like a forest camp in summer.

5.2.3. Organizational Issues

As stated before, ÇEP is established by the Governorship of Istanbul, and is coordinated by Provincial Environment and Forestry Directorate and Provincial National Education Directorate. There are three interconnected committees in the organization of ÇEP: Provincial Working Committee, District Working Committee, and School Working Committee. The parties that should

take part in committees, and their responsibilities are explained explicitly in the ÇEP Guideline Directive.

Provincial Working Committee is supposed to meet once every month for evaluating the activities and discussing necessities, measures to take, and possible improvements to the project. Participation of local governmental authorities, provincial environment and education directorates, trade associations, NGOs, environmentalist people and media is expected in the committee.

District Working Committee is supposed to meet once every two weeks with the aim of discussing the solutions to problems reported by schools via Detection and Warning Forms. For the problems they can not solve within the district, they notify the Province Working Committee (Sadıker et al., 2003). The parties that are to take part are listed as, district governmental authorities, district education directorate, NGOs, environmentalist people and local media.

School Working Committee is supposed to meet once every two weeks, to evaluate past activities and to discuss future activities. Head of school, volunteer teachers and students and parents-teachers association are included in the school committee.

Reflecting on the organization committees, having different levels of organization committees seems convenient for such a big scale project. Inclusion of NGOs, media and public is positive for increasing collaboration among these and local authorities. The organization appears to be planned well on paper but the situation and participation in practice, will be analyzed in Section 6.3.1.

5.2.4. Analysis of ÇEP – Based on the Theory of Howlett and Ramesh

Before going into implementation of ÇEP, we can analyze the factors affecting the policy process taking into account the analysis of Howlett and Ramesh. The situation in implementation will be explored later in Chapter 6. However the presence of actors and their potential influence, besides the potential effect of the institutional arrangements to ÇEP will be elaborated in this section.

The definition of public policy and the stages of policy cycle are mentioned in Section 5.1 as an introduction to the concept of public policy studies and will not be elaborated further, since the focus of the project is the implementation of ÇEP. However it is obvious that, poor planning in prior stages may lead to failure in implementation. Thus, when analyzing implementation in the later chapters, these will be discussed where relevant.

Among the five categories of actors defined, ‘appointed officials’ and ‘interest groups’ seem to have the greatest importance for the implementation stage of ÇEP. Appointed officials for this

case are: teachers and heads of schools that are the main implementers of the project, and local authorities and directorates of environment and education that are supposed to support teachers. The main interest group of the project is the students, since the aim is to increase their environmental knowledge and awareness. If the students change their environmental behavior in a positive way as aimed by the project, this will affect the whole public, since environmental quality will increase. So the interest group can be regarded as the whole public in a broader sense.

Regarding the institutional arrangements, the importance of a strong state and society and close partnership between them is mentioned for effective implementation. Since close collaboration with NGOs is expected, this is an especially important aspect for ÇEP. The teachers will evidently need support, either from the state or NGOs, or both, since -as stated in the previous chapter- they generally lack knowledge and awareness in environmental issues. Regarding the international arena Turkey is in, EU accession is deemed positive in many aspects, including environmental improvements.

Although ÇEP is a project that all schools in Istanbul are obliged to implement, there is no information on any compulsory instruments. It is obvious that giving environmental awareness to children is not left to family or community, and ÇEP is introduced as a compulsory EE program for all schools in İstanbul. This way, regardless from the interest and commitment of families or voluntary organizations, all the students are intended to be educated on environmental issues. However it seems to be based mainly on voluntary commitment of most stakeholders. Each school is supposed to carry out activities with the leading of 'volunteer' teachers, not assigned teachers. NGOs and other people are expected to participate but no reward is mentioned. Local authorities also have responsibilities; however the guideline directive does not mention sanctions for non compliance. There are implicit statements as: "*For the failures in implementation, the employees of the relevant authority and their directors will be held responsible*". Thus, the policy instruments are not explicitly defined for ÇEP. The situation in implementation will be examined in the next chapter.

6. COMPARISON AND ASSESSMENT OF ÇEP and ECO SCHOOLS

After describing ÇEP and analyzing the policy process in theory, this chapter aims to describe another environmental education project – the Eco Schools program, and compare the two projects. With this purpose, first the Eco Schools Program will be described, then ÇEP and Eco Schools will be compared theoretically. After that the implementation of both projects will be analyzed, by making use of interviews with teachers and people from the relevant authorities.

6.1. The Eco Schools Program

Eco Schools which is an international environmental management and certification program is implemented in 35 countries, including Turkey (FEE, 2003a). The program was started in 1994 by the Foundation for Environmental Education (FEE)[11] upon the 1992 UN Conference on Environment and Development, where, the need for environmental education to achieve sustainable development was mentioned (FEE, 2003b; UNESCO, 2005a).

FEE (2003b) mention that the program provides an integrated system for environmental management in schools, based on an ISO 14001/EMAS approach. The aim is to raise students' awareness of environmental and sustainable development issues by combining classroom studies with school and community actions in which students take an active role. It is considered as an ideal way to facilitate sustainable development at a local level, and to implement Local Agenda 21 in the School Community. (FEE, 2003b)

Turkish Environmental Education Association (TURCEV) is the representative of FEE in Turkey and is responsible for implementation of Eco Schools and other projects of FEE in Turkey (TURCEV, 2005a).

Eco Schools program incorporates a flexible structure, to be adopted at any school in any country. The process, based on the principles of an environmental management system (EMS)[12], requires participation of a wide range of stakeholders in the school and the community, where students play

[11] Foundation for Environmental Education (FEE) is a non-governmental, non-profit organization aiming to promote sustainable development through environmental education (formal school education, training of staff and general awareness rising). FEE is mainly active through five environmental education programs: Blue Flag, Eco-Schools, Young Reporters for the Environment, Learning about Forests and Green Key. (FEE, 2005a)

[12] US EPA defines EMS as: "*a set of processes and practices that enable an organization to reduce its environmental impacts and increase its operating efficiency*" (US EPA, 2005). Continuous improvement of environmental performance and participation of all levels in an organization should be aimed by an EMS (DS/ISO 14004, 2004). The basic principle of most environmental management systems is the "Plan, Do, Check, Act" model, which leads to continuous improvements (US EPA, 2005). These steps are explained by DS/ISO 14004 (2004) as follows:
Plan: identify environmental aspects, set an internal performance criteria and set environmental objectives and targets.
Do: assign roles and responsibilities, provide training for awareness and competence, and establish internal and external communication.
Check: conduct ongoing monitoring and measurements, take corrective and preventive actions.
Act: review, identify areas for improvement and take action to improve the EMS.
With this approach, the environmental management system is continually improved. (DS/ISO 14004, 2004)

the principal role. Schools that achieve the requirements are awarded the 'Green Flag', which is an internationally recognized eco-label for environmental education and performance. The Green Flag is valid for a period of two years. It has to be renewed subsequently, and thus it is a continuing process. (FEE, 2003b; TURCEV, 2005a)

6.1.1. Implementation Mechanisms

The implementation mechanism of the project is presented by TURCEV, the executor of the project in Turkey. In this part, references will be given only if information from sources other than TURCEV (2005a) is used.

The school that is interested in implementing the project makes an application to TURCEV, who subsequently sends them the relevant documents. A fee of 30 Euros is to be paid by the school. Then, the Eco Schools Committee is established in the school, by around 20 students and teachers. If they are interested, parents may join as well. The committee assesses environmental impacts of the school, such as the amount of waste generated or infrastructural issues, and defines one subject of concern to be handled the whole year. Özkoca (2005), the coordinator of Eco Schools from TURCEV, states that, they recommend schools to study "waste" the first year. The other main subjects of the program are water, energy and biodiversity. Schools are encouraged to choose a different subject each year, however if the coordinator teachers think that the subject is not comprehended well by the students, they may choose to continue with the same subject for the second year (Özkoca, 2005).

After defining the subject, a yearly action plan for activities to be carried out is prepared and sent to TURCEV. An example for activities is, for example, for the subject 'waste', identifying the amount and character of waste generated, and starting a waste separation or waste minimization campaign in the school (Özkoca, 2005).

Eco Schools project is actually carried out separately from the curriculum, but is supported by the curriculum. Efforts should be made to involve environmental education throughout the curriculum and environmental issues should be mentioned as much as possible in every course. The important point is that all teachers in the school are committed to the project.

Schools may get in touch with other organizations for benefiting from their expertise and experiences. Everyone in the school (teachers, students) should be informed on the activities carried out, and should participate in activities as much as possible. An effective way would be preparing an Eco Schools information board in the school and presenting project related activities and information on environmental issues there. Schools are also encouraged to include the local community in their

action plans. If parents, local authorities, businesses, and local public are involved in Eco Schools program, this may contribute to the implementation of Local Agenda 21 as well.
Schools prepare an activity report at the end of each semester to submit to TURCEV. At the end of the school year, schools who managed to achieve at least two third of their action plan may apply for the Green Flag award. Then TURCEV visits the school to see how successfully the project is implemented, and decide on awarding the Green Flag or not. In Turkey, the project started in 1995, and currently 77 schools have the Green Flag.

Eco Schools is meant to play a role in developing responsible attitudes and commitment at home and in the wider community and to provide a basis for citizenship education, by facilitating participation and cooperation for solution of problems.

6.2. Comparison of Eco Schools with ÇEP

The implementation success of each project is questionable and will be discussed in the next section. Here, after having defined the models and implementation mechanisms of both projects, a comparison will be made.

One of the main differences between the two projects is that ÇEP is made obligatory to all schools in Istanbul with a Guideline Directive, but implementing Eco Schools is on voluntary basis. Both projects aim to raise the environmental knowledge and awareness of students and make them participate in solutions to environmental problems, however, for implementing Eco Schools, the school managements or teachers in the schools should already be committed to take action for environment, while for ÇEP the school's commitment prior to the project does not matter.

Eco Schools, using the Plan-Do-Check-Act approach of an EMS system, aims to provide continuous improvements in the environmental performance of schools, while ÇEP has three implementation mechanisms - education, audits and demonstrations, which do not mention continuous action or improvements.

Having defined goals and an action plan, and checking for improvements could be appropriate for implementation of ÇEP too.

In both programs, schools are free to choose the main subject to handle. Eco Schools defined distinctly the main subjects to handle – waste, water, energy, biodiversity, while ÇEP left schools more free to choose. Besides, for ÇEP schools have to choose a subject for each month, while according to Eco Schools a subject should be studied for one year.

Considering that environmental activities are not the only activity carried out in schools, it would be unrealistic to expect one month to be enough to make students understand an issue comprehensively.

Both projects mention providing a basis for citizenship education by increasing students' participative capacities, in addition to environmental gains. Collaboration with NGOs and local community is encouraged in both, while for ÇEP, NGOs and local authorities are expected to take part directly in the coordinating committees. Both projects mention the contribution to the implementation of Local Agenda 21 if implemented successfully.

ÇEP is coordinated through a larger network of committees at provincial, district and school levels, while Eco Schools is coordinated by TURCEV all over Turkey. Taking into account that ÇEP is implemented in 2400 schools and Eco Schools in 77, it is sensible to divide coordination in different committees. However as in the project SEMEP, there could have been a coordinating Eco School in each province to arrange communication between TURCEV and other schools, this would decrease centralization and maybe increase communication and information exchange between schools as well.

In both projects, some materials such as guidelines are provided to teachers but no training is mentioned. This could be considered a defect, since teachers generally lack environmental knowledge and awareness and should receive in service training before implementation of new programs, as stated before.

ÇEP is established by a Guideline Directive but auditing of the project is not mentioned. Only, at the end of each year schools have to prepare reports and present what they have done in a festival, and get awards if they are found successful. The success criteria are not defined by the guideline as well. While, for Eco Schools, an evaluation takes place at the end of the year considering the criteria defined by the Foundation for Environmental Education (FEE). As stated before, schools get the Green Flag Eco Label, if found successful.

Sadıker (2005a) mentions that, he got to know about Eco Schools after ÇEP was started in a conference about EE and he was surprised on how similar the two projects were. Except for the EMS approach that is the base for Eco Schools, the two projects are actually similar, as they both aim to increase environmental awareness of students by making them and their teachers participate in environmental activities.

The similarities and differences in implementation will be analyzed in the next section and further elaboration will be made. Below the main differences are listed.

6.3. Comparison of Eco Schools with ÇEP - in Practice

This section will present the implementation of ÇEP and then analyze it according to the theory of Howlett and Ramesh (1995). Then the implementation of Eco Schools will be explored, which will be followed by a comparison of the situation for the two projects.

6.3.1. Implementation of ÇEP

Background for data collection

In the beginning of this study, the plan was to measure the success of ÇEP, in terms of increasing environmental awareness of students. The analysis would be done by interviewing teachers in schools to see how ÇEP is handled, what activities are carried out, etc. and preparing questionnaires for students to see the level of their environmental knowledge and awareness, and how ÇEP increased these. The aim was to analyze especially public schools, which usually are disadvantaged regarding economical, informational and material resources and which do not implement any other EE project. However, the first attempts to interviewing some teachers from randomly picked public schools showed that, actually most of the school managements and teachers did not know and do a lot about ÇEP. Furthermore, some school administrations refused to speak about their schools, saying that the information is confidential, and that they can not share it with strangers, although the question asked to them was simply “what have you done in your school within ÇEP?”

As mentioned in the previous section, one of the secondary aims of ÇEP was to increase general environmental awareness of public (other than students), which would be maintained through the activities of students in their district. Besides, it was also stated that collaboration with NGOs and interested people was expected by the project. So ÇEP is not a closed project implemented only inside the school. In this sense, it is contradicting with the aims of ÇEP that the school manager does not want to give information to a citizen who is willing to know about it. In my opinion, this is already an implementation deficiency. Since they do not want to speak about it, we can not know if they are implementing ÇEP or not. But, even if they are implementing it, that is, education on environmental issues is provided to students, students perform audits and demonstrations in the district, etc., still one could argue that the project is not implemented as intended, collaboration with public is missing. When they do activities out of the school, do people see what they are doing or not? And don’t they answer questions of people who see their demonstrations and ask about it?

The attempts to contact the authorities in the district working committee in Sarıyer district were also not successful, a lack of interest was observed. At the end the only contacted government authority was Provincial Environment and Forestry Directorate, the coordinator of the project.

After having contacted around 10 schools Sariyer district[13] (either directly or by phone) it was believed that, it would be too time consuming to find a public school which implemented ÇEP well. Finally, 5 schools from 3 districts are interviewed regarding ÇEP, and other projects. The schools have the following features:

- School A: Private school implementing SEMEP, Eco Schools, and ÇEP.
  (Contacted upon recommendation of the Provincial Environment and Forestry Directorate that considered the school active in environmental issues)
- School B: Private school implementing SEMEP, Eco Schools, GLOBE and ÇEP.
  (Contacted upon recommendation of the Provincial Environment and Forestry Directorate that considered the school active in environmental issues)
- School C: Private school implementing Eco Schools, and ÇEP.
  (Randomly picked)
- School D: Public school implementing ÇEP
  (Randomly picked)
- School E: Public school implementing ÇEP
  (Contacted upon recommendation of the Provincial Environment and Forestry Directorate that considered the school active in environmental issues)

Below, the way the 5 interviewed schools implemented ÇEP will be presented.

Implementation in School A

School A, which is implementing SEMEP, Eco Schools and ÇEP, is referred as one of the environmentally active schools in Istanbul (Sadıker, 2005a).

Hatipoğlu[1] (2005), the voluntary coordinator teacher for ÇEP, Eco Schools and SEMEP in School A, states that the District Working Committee of ÇEP in Kadıköy District, in which she also takes part in, made a yearly plan for schools to follow. School A has already a plan to follow for Eco Schools and SEMEP, and if the subject to be studied is different in two projects, according to Hatipoğlu[1], it becomes difficult to study two different subjects at the same time (e.g. Eco Schools subject is water and ÇEP subject is waste). She says, the aim of both projects is to increase environmental awareness of children rather than fulfilling an obligation, so they try to merge subjects as much as they can but mainly follow their Eco Schools plan in the school. (Hatipoğlu[1], 2005)

They do not gather School Working Committee as required by the ÇEP directive. Actually, the only environmental education activity they carried out especially for ÇEP was the visits to their defined

[13] Sariyer is one of the 33 districts in Istanbul. It is considered as one of the most successful districts regarding the implementation of ÇEP. (Sadıker, 2005b)

area to see the environmental problems and filling out the Detection and Warning Forms. All other environmental activities are carried out within Eco Schools or SEMEP. However they do not perform the inspections anymore either, since there was no feedback to the previous forms sent. School A also sent an activity report two years ago, regarding their environmental activities at the end of the year. But since there was no feedback, they did not send any reports again. There has been no inspection of implementation ÇEP by any authority. (Hatipoğlu[1], 2005)

Implementation in School B

School B is another environmentally active school which is implementing Eco Schools, SEMEP, and GLOBE besides ÇEP (Sadıker, 2005b).

In School B, environmental projects are coordinated by a group of teachers, of which Ceylan is the main coordinator. Ceylan (2005) mentions that, teachers are mostly willingly involved with environmental projects. Like School A, School B made inspection visits to their district especially for ÇEP, and no other activity. They filled out 20 Detection and Warning Forms, and got a feedback for 1 of them. They usually send a ÇEP report at the end of the year by writing down the activities carried out within SEMEP and Eco Schools. Ceylan stated they were chosen the best working school in their District for three years. School B also does not gather the School Working Committee. (Ceylan, 2005)

Implementation in School C

School C is a randomly picked private school which is implementing Eco Schools project. The coordinator teacher Hatipoğlu[2] states they do not carry out any activity especially for ÇEP, but they carry out all environmental activities under Eco Schools, as the other 2 schools. Regarding the selection of coordinator teachers, science department was told by the school management to carry out all EE activities in the school. (Hatipoğlu[2], 2005)

Implementation in School D

School D is a randomly picked public school. According to the coordinator teacher Korkmaz, this year they did not make any environmental activities and still did not gather the School Working Committee. Some of the activities School D carried out in the last two years are, collecting paper, tree planting with an environmental NGO, and seminars to children given by NGOs. School D never went on inspection visits to their district. Korkmaz volunteered to be the coordinator of ÇEP, however due to lack of time and hard work load, they can not spend enough time on ÇEP. They do not separate paper anymore in School D. (Korkmaz, 2005)

Implementation in School E

School E is a school regarded successful by the Provincial Environment and Forestry Directorate (Sadıker, 2005b). However, coordinator teacher Çavusoğlu (2005) says they were never promoted or awarded, and besides, they have not been active so far. This misunderstanding may be because of lack of communication between the Directorate and schools. In the last years, they made a paper and battery collecting campaign in the school. Participation to this activity by students was impressive. After collecting those, they contacted several times to ask for a vehicle to the district municipality and later an NGO working on wastes, but no one came. At the end teachers had to find a way to dispose them. After this experience, they do not separate wastes anymore in School E. School E also never went on inspection visits in their district. (Çavuşoğlu, 2005)

As for the selection of coordinator teachers, school management decided that counseling teachers would be coordinators for ÇEP in School E. The coordinator teacher complained that after doing their regular work, there is almost no time left for ÇEP. Besides although she thinks EE is important and should be given in school, she says they do not know how they can educate children. She says it would be helpful if they received some education material as CDs, brochures, posters, etc. Actually there are NGOs that perform EE activities on the specific subjects they work in, and some of them came to School E to give seminars. But School E's teacher expects a more comprehensive material. As stated before, a booklet was prepared for ÇEP to be a guide for teachers on activities. However, School E did not receive the booklet. (Çavuşoğlu, 2005)

General evaluation of implementation

Private schools interviewed mention they carry out environmental activities under other projects as SEMEP or Eco Schools, while the activities of public schools interviewed did not go further than collecting paper. But even this basic activity failed in some schools, since there are not paper containers everywhere, they did not know what to do with the collected paper, and could not get support form a local authority or and NGO. It is seen that none of the schools interviewed gathered School Working Committee for ÇEP.

It could be argued that 5 schools can not be representative for analyzing the implementation of ÇEP in 2400 schools in Istanbul. However, the teachers in Schools A and B were taking part the in Provincial and District Working Committees for some time, and they also state from their experiences that, ÇEP could not have been a successful EE project (Ceylan, 2005; Hatipoglu[1], 2005). Besides, the 3 districts chosen are regarded as among the most successful districts in Istanbul (Sadıker, 2005a). Furthermore, in 2003 a workshop was prepared by the Provincial Environment and Forestry Directorate, to gather teachers to discuss about ÇEP. The comments and complaints during the Workshop were very similar to those of the 5 schools interviewed. Participants agreed on the lack of visual and written material to be used for EE activities, the lack of support from

local authorities, lack of time and motivation for volunteering teachers, and malfunctioning of Detection and Warning Forms (Sadıker, Hotinli and Engin, 2003).

As explained in previous chapter, in the Detection and Warning Forms mostly visual pollution is mentioned. According to Ceylan (2005), since there is no "Visual Pollution Directive" in Turkey, even if the municipalities receive the Forms, they do not have anything to do about it. Besides, it is already municipalities' duty to keep the streets clean, so they are already obliged to do that, it should not be the students' obligation to tell them about the pollution in the streets.

All interviewed teachers mentioned that they try to fit environmental work in their normal working time and there is no reward for teachers participating in EE projects. Most teachers agreed that if they were rewarded, more teachers would volunteer for such work, and they would work more committed. Sadıker (2005a), mentioning that he had more expectations from the project before starting, also underline the general lack of volunteering and participation – of teachers, heads of schools, general public, parties in Committees – in the project as a reason for failure.

According to Ceylan (2005), who also used to be a representative of an NGO in the Provincial Working Committee, the main reason why ÇEP could not achieve success is that there has been no pilot studies and evaluation of the project, everything started all at once. Besides she thinks there are few people in the Provincial Environment and Forestry Directorate working committed to the project with good will, and the Directorate in general does not support the project enough.

Hatipoğlu[1] thinks the Guideline Directive is prepared well and looks decent on paper; however it is hard to implement it properly. She mentions one of the reasons as the lack of organization, communication and coordination. For example the change of coordinator of ÇEP in the Provincial Environment and Forestry Directorate was not announced to schools. Besides, since there is no auditing, the implementation of ÇEP depends on the interest of the teachers and heads of schools, although it is obligatory on paper. Hatipoğlu[1] thinks the expansion of the Provincial Working Committee would enhance implementation. (Hatipoğlu[1], 2005)

Gurler (2005), the new coordinator of ÇEP after Sadıker, also mention that although responsibilities of all parties are defined explicitly in ÇEP Guideline Directive, participation in the project is generally low. Ceylan, Gurler and Hatipoğlu[1] agree that Provincial Working Committee should be expanded and presence of NGOs in all Committees should be increased. At this point communication with local NGOs seems important for the District Working Committee. Another potential is the parents. All schools mentioned there is almost no support from parents. Considering that there are a lot of non working mothers in Turkey, they could be encouraged to work with the School Working Committee.

As for the teachers, to make parents participate, there should be advantages provided for making it attractive.

Gurler (2005) argues that the principles of EE could be planned and activities of NGOs could be coordinated by the Directorate to provide holism, so the Directorate could function as a coordinator rather than provider of EE. However, NGOs have resource problems as Gurler states. She mentions they plan to turn ÇEP in a civil society project and apply for the Small Grants program of the EU for funding.

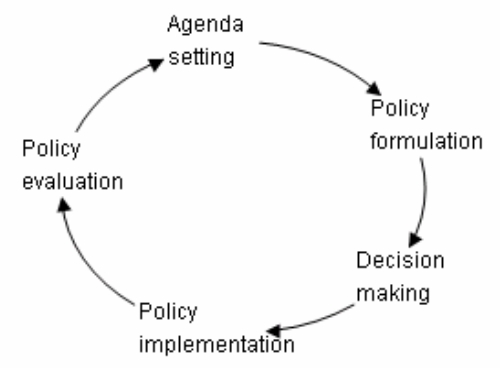
Another defect of the project is, as for including environmental issues in the curriculum, the teachers did not get any training. As mentioned above, although an activity guide was prepared, it did not reach all schools.

After saying all the shortcomings, still one should not argue that ÇEP is a complete failure. Actually, Sadıker (2005) when thinking of starting such a project, was aware how difficult achieving successfully all the students in Istanbul would be. He decided that the logo of the project would be a starfish, because he considered himself as the man throwing the starfish to the ocean one by one to help them survive when the tide goes off[14]. Sadıker (2005a) states "*It is worth trying to raise environmental awareness in even ONE child who is the decision maker of tomorrow*".

Finally, Gurler (2005) says, implemented well or not, the real results of the project will be understood in years, when these students involved in the project become decision makers.

6.3.2. Analysis of Implementation – Based on the Theory by Howlett and Ramesh

Going back to the policy cycle, factors, and the realities of implementation defined by Howlett and Ramesh, ÇEP's implementation will be discussed in this section.



Considering the planning stages of ÇEP and what has been done until today, we could argue that the stages in the policy cycle do not concretely take place or are not planned well. In my opinion, after deciding that an EE project directed to students was needed, before establishing a new EE program, the existing EE activities could have been analyzed to see their strengths and weaknesses. Sadıker (2005) mentions that, he got to know about Eco Schools in a conference about EE after ÇEP was started and he was surprised at how

[14] The whole text of the starfish story can be found in Annex II.

similar ÇEP and Eco Schools projects were. So we could argue that for ÇEP, the 'agenda setting', 'policy formulation' and 'decision making' stages are compressed. That is, an idea of an EE project was emerged, and it seems that after making a quick model of implementation the project started suddenly.

After starting the project in 2000, a Guideline Directive was put into effect in 2003. This may mean that, before 2003, the project was completely voluntary based, and for increasing participation in the project by making it compulsory, the Directive was prepared. This can be regarded as the feedback of 'policy evaluation' back to 'agenda setting'. Another option for the two years delay for a Directive could be that, the parliament could just put the Directive into force in two years. After that, in 2003 although a workshop was made with teachers to discuss the implementation, and the teachers had commented on the failures and implementation problems, not much was done for improvements. And the interviews show that, the workshop did not lead to improvements. So the 'policy evaluation' did not lead to changing and re conceptualizing of the policy.

In practice, no monitoring of the project by responsible authorities exists, and it seems that there are no compulsory instruments for implementation of ÇEP. As teachers mentioned, rewards to participating teachers would be an encouraging instrument (Çavuşoğlu, 2005; Apa, 2005; Hatipoğlu[1], 2005).

Assessment of Realities of Implementation

According to Howlett and Ramesh, implementation is affected to a great extent by the limitations of the relevant contexts. The significant categories affecting implementation of ÇEP are analyzed below:

- Nature of the problem: The real problem at the starting point is the lack of environmental knowledge and awareness in public. This problem is expected to be solved by applying an EE project in schools. However the executors of the project are teachers, who are also part of the public with lack of knowledge and awareness. And as the training to teachers on the issues is limited, they are expected to perform activities going beyond their knowledge and capacities. Besides, the size of the target group is considerably big (i.e. all schools in Istanbul).
- Social context: In my opinion the general level of environmental commitment in the society affects the implementation of ÇEP. If the public deemed their children's environmental awareness an important need, then they would ask authorities to do something about it.
- Economic context: The extent to which the implementation of ÇEP is dependent on financial resources is questionable. Even if the schools had all financial resources, implementation would still be a problem without their knowledge and commitment.
- Administrative context: As stated before, the authorities involved in the process are not very interested, so the lack of compulsory instruments leads to lack of implementation. If they and all

other interested parties had the commitment, than maybe the lack of compulsory instruments would not matter this much.

The measures that policy makers take into account, as listed by Howlett and Ramesh are also mostly lacking in this case. In this case, the most important element, according to me is "*the allocation of an agency to the task of implementation with relevant experience and commitment*". Whereas for ÇEP, none of the included agencies, authorities or people have the relevant experience on environmental education, except for the NGOs. However their presence and contribution in the implementation of ÇEP is also questionable. Teachers mentioned seminars given on some subjects by NGOs, but not support for implementing ÇEP.

After discussing the implementation of ÇEP, the next section will examine the implementation of Eco Schools, followed by a comparison of the two projects.

6.3.3. Implementation of Eco Schools

Three of the five schools interviewed are implementing Eco Schools and they all have already had the Green flag award. After seeing the examples of implementation of ÇEP, below the way Eco Schools is implemented by the schools interviewed will be presented.

Implementation in School A

School A has been implementing Eco Schools for 7 years. As for ÇEP, Hatipoğlu[1] states that, it is a time consuming process for the coordinating teacher. Mostly students from the ecology club[15] take place in environmental activities, but all the students are informed about the activities via information boards, announcements of awards, and information on the school bulletins, and activities are open to any of them. (Hatipoğlu[1], 2005)

In the previous years they worked on waste, energy and water in School A. Currently they are studying biodiversity. Hatipoğlu[1] (2005) gives examples of activities they carried out so far regarding each subject:

Wastes: An experiment on organic wastes was made. Two different boxes were filled with soil, and in one of them organic wastes were put while in the second box cans, cigarettes, plastic were put. The decomposition of organic wastes was observed in time, while the other wastes stayed the same in soil. Another waste related activity was finding ideas to reduce waste, such as making objects from plastic bottles.

Energy: The students formed an energy team, and inspected all the school for unnecessary bulbs, and asked the school management to remove them. After a month, the electricity bill was compared

[15] In School A, students can join cultural, sportive, scientific, and social clubs to carry out extracurricular activities on areas that they are interested in. (Irmak Okulları, 2005a)

with the previous months. Around 20% decrease in the bills was observed. Besides, Greenpeace gave seminars to students on clean energies.
Water: An activity to see “how clean is the water we use” was made. The students living in different areas attached a piece of surgical gauze to a tap in their houses, and after some time, removed the gauze and dried it, and observed the yellow spots differing from area to area. They also checked on taps for losses, and warned the school management to fix them, and then observed the difference between new water bills with older bills. Hatipoğlu[1] mentions that they focus on such observable activities to attract children’s attention.

For the evaluation for the Green Flag, school submits a report, and then a committee from TURCEV comes to the school to see the activities, information boards, and talk to the students who were involved to see what they have learned. According to Hatipoğlu[1], Eco Schools have worked well and she is satisfied with students’ interest in the activities. (Hatipoğlu[1], 2005)

Implementation in School B

School B has been implementing Eco Schools for 3 years. One year, under the subject waste, they made a project on how to reduce cafeteria wastes. The second year the subject was water, and they made activities on reducing water consumption. And for the last two years they have been studying waste again, this time with the subtitle “stories of wastes”.

Ceylan asked each class teacher of the 4th grade to allocate her one class per week for Eco Schools. She thinks this is the best way to spread Eco Schools activities in the school.

Ceylan says Eco Schools is comprehensive enough to be successful but again teachers do not get any materials or training, and thus success in a school depends on the teachers’ knowledge, ideas of activities, and commitment. Besides she does not find the evaluation process credible. Contrary to Hatipoğlu[1], Ceylan states, instead of a committee, one person from TURCEV comes and just sees the school, the information boards, waste baskets, etc. and decides on awarding the Green Flag. (Ceylan, 2005)

Implementation in School C

School C has been implementing Eco Schools for 2 years. They choose 2 students from each class from 1st to 8th class, carry out activities with them, and ask them to inform their friends in their classes. So far they have made activities for reducing energy consumption similar to School A and they have separated paper wastes. (Hatipoğlu[2], 2005)

Evaluation

As Özkoca (2005) stated all students in the school are the target group of Eco Schools. It is normal that a number of students are more active, but the general view in School A is that students in the ecology club are working with all environmental activities. The system in School B, having a class for ÇEP in the 4th grade seems to reach a wider group of students.

As Hatipoğlu[1] (2005) stated, when TURCEV comes to inspection, they only talk to the students involved in the project. One would argue that especially other students should have been interviewed, to see if Eco Schools is understood in the whole school. Because, Eco Schools is based on an EMS approach, and aims the involvement of all school teachers and students in the activities.

Eco Schools coordinator in TURCEV changed very often in the previous years, which Ceylan (2005) sees as a drawback. Informative seminars for teachers are made every year, but the meetings are not made in an interactive atmosphere, i.e. teachers do not talk about the problems in functioning or do not share experiences. She thinks a festival where all Eco Schools from Turkey attend and present their activities would be an opportunity to share experiences and see good practices. (Ceylan, 2005)

Özkoca (2005) states that some schools have very well planned action plans, but they do not put them into practice, while some schools carry out interesting activities, but without participation of most of the students. According to Özkoca (2005), the success of Eco Schools depends on the interest and commitment of teachers and school managements, as well as the help of local authorities especially for activities regarding wastes, since municipalities will be the ones to take and dispose separated wastes. Finally, Özkoca (2005) mentions that, generally speaking, the project is successfully implemented. Although few schools stop working after having the Green Flag once, most schools want to continue with their activities and in some schools, environmental commitment and participation in Eco Schools take part in the schools general policy. This way, even if the school management or teachers change, school still continues implementing Eco Schools. (Ozkoca, 2005)

6.3.4. Comparison

As seen from the examples and from the statements of people involved in both projects, a general lack of implementation is observed for ÇEP. Since Eco Schools is a voluntary project, the schools committed to carry out environmental activities participate in the project, and it is generally implemented in the schools involved.

In both projects, lack of training and material support is mentioned by teachers. Besides, teachers agree that they should be rewarded to volunteer in such activities. For Eco Schools, in some schools

as School A, an interested teacher volunteers for commencing and implementing the project, while in some schools as School C, school management decides on implementing the project and chooses teachers to conduct it. In the second case, the project becomes an obligation for the teacher, as in ÇEP, and motivation of teacher becomes an important factor for success. So rewarding of teachers in both projects is important for improving success.

One could argue that generally looking, in theory Eco Schools is more applicable, whereas ÇEP's implementation mechanisms are difficult to accomplish, especially for the Detection and Warning Forms. When teachers complain about lack of time, taking students out for audits is already a trouble for them. Furthermore, the Detection and Warning Forms prepared for audits are also not really applicable. As said before, the aspects listed in the forms are mainly visual pollution aspects and besides in most cases there is no feedback to schools regarding these forms. Another result of this can be that, students may lose faith in authorities and think that their efforts are useless.

Lack of communication among schools is observed in both projects. Making a festival at the end of the year, as in ÇEP, is a good potential to exchange ideas and good practices among schools.

The participation of parents is not practiced for both projects. Almost in every school there is parents-teachers association, members of this association could be motivated and encouraged to take part in environmental activities for both projects.

As said before Gurler (2005) mentioned that NGOs presence in EE activities should be increased. At this point, as I argued before, the founders of ÇEP could have analyzed EE projects implemented before, such as Eco Schools, and instead of implementing a new project, they could have supported the implementation of Eco Schools in more schools. At the end, the aim is increasing environmental awareness and knowledge and participation capacity of students.

This chapter analyzed the implementation of ÇEP and Eco Schools, the next chapter will present the potentials for EE in schools in Turkey.

7. POTENTIALS FOR ENVIRONMENTAL EDUCATION IN TURKEY

There are projects that are in planning phase and networks of EE for educators, which could improve the situation regarding EE in Turkish schools. This chapter will discuss these potentials.

7.1. Green Pack Education Project for Sustainable Development

Green Pack is a multi media kit for environmental education and education for sustainable development, and is targeted mainly to primary school teachers and students, but it can be used in other levels of education as well. Green Pack is prepared by the Regional Environmental Center for Central and Eastern Europe (REC)[16] and adapted to each particular country. It is comprised of a variety of materials: a handbook for teachers with lesson plans and worksheets for students, a video cassette with animated clips, a CD-ROM with information on environmental topics, and a role playing game based on environmental dilemmas. The teachers using the kit will be able to conduct their lessons with the additional information and tools provided by the Green Pack. (REC, 2005b; REC, 2005c)

The general objectives of the Green Pack are, to increase environmental awareness of students, teachers and other members of the society, to increase capacity in education for sustainable development, and to provide a basis for further developments. The Green Pack, which aims at developing new values and models of behaviors in students, is not a separate course to be taught; instead it is designed in a way to help educators from different disciplines link every course with environmental issues. It is expected that, Green Pack will reach the other members of the society via the students and teachers. (REC, 2005c)

Green Pack includes 22 subjects related to environment and sustainable development, and presents these in 5 sections (Doğa Derneği, 2005):

- environmental components: air, water, soil and biodiversity
- threats to the environment: urbanization, noise, waste and chemicals
- human activities and their impacts: energy, transport, industry, agriculture, forestry, and tourism
- global challenges: climate change, ozone depletion, acidification, issues affecting seas and oceans
- values: ethics and values related to consumerism, human health and environment, citizens' rights, and responsibility for the Earth's future

[16]The Regional Environmental Center for Central and Eastern Europe (REC) is a non-partisan, non-advocacy, not-for-profit international organisation with a mission to assist in solving environmental problems in Central and Eastern Europe (CEE). The center fulfils this mission by promoting cooperation among non-governmental organisations, governments, businesses and other environmental stakeholders, and by supporting the free exchange of information and public participation in environmental decision-making. The REC has its head office in Hungary, and country offices and field offices in 16 beneficiary countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Former Yugoslav Republic of Macedonia, Poland, Romania, Serbia and Montenegro, Slovakia, Slovenia and Turkey. (REC, 2005a)

Starting form 2007, Schools in Turkey will start using Green Pack, which is supported by the Bird Research Association (a Turkish NGO), Nature Association (a Turkish NGO), Turkish Ministry of Education, Turkish Ministry of Environment and Forestry, and other interested organizations and people. The project is financed by the European Commission's Life Third Countries Program and the Italian Ministry of Environment. (REC, 2005c)

It is planned that, until the end of the pilot phase (2005 – 2007) 100 teachers will be educated to educate other teachers, 1600 teachers will be informed on how to use the Green Pack in the education process, 2000 Green Packs will be produced and 200.000 students will meet the project. (Doğa Derneği, 2005)

Green Pack will be the first EE project to be implemented in Turkey which is launched with the saying "education for sustainable development". ÇEP and Eco Schools mention contributing to sustainable development; however they both have the core of pure environmental education. Green Pack looks very well planned, both regarding the subjects to be studied, including global environmental aspects and aspects related to ethics and values, and regarding the approach to integrating it in the curriculum. In the projects analyzed before, we saw that teachers usually complained about the lack of training and materials provided to them, or that they did not how to include environmental issues in the curriculum. Green Pack provides several means as CDs, cassettes, games and lesson plans to help teachers link their courses with the issues.

Together with the current efforts in changing the curriculum and adding more environmental element, Green Pack seems to be a great potential for increasing the quanitiy and quality of EE in schools.

7.2. Mediterranean Education Initiative for Environment and Sustainability (MEDIES Network)

MEDIES is an initiative on Education for Environment and Sustainability, launched during the world summit in Johannesburg in 2002 by the Greek Government, with the aim of gathering the educational community in the Mediterranean region, for facilitating the implementation of Agenda 21 and contributing to sustainability. (MEDIES, 2004a)

The core of MEDIES is a network of educators, schools, ministries, NGOs and other organizations or people involved in EE and ESD from the Mediterranean countries, including Turkey, and they share experiences and know how through an interactive web page. MEDIES website also contains useful material such as "a Handbook on Methods Used in Environmental Education and Education for Sustainable Development" for educators. Besides, several regional and national seminars and

conferences are organized aiming to support educators through proper teacher training in the EE field. (MIO ECSDE, 2004b)

MEDIES is supported by the Greek Ministry of Environment, the Italian Ministry of Environment, Mediterranean Information Office for Environment Culture and Sustainable Development (MIO ECSDE[17]), UNEP/ Mediterranean Action Program, and UNESCO. (MIO ECSDE, 2004b)

The materials are prepared in first in English then translated in each country's language in time. Until now only one document was translated to Turkish, the publication "Water in the Mediterranean" (MEDIES, 2004b). There are many more materials to be used in class for EE, however, if they are not translated to English, the target group will remain schools that have teachers that speak English. This initiative looks promising as a regional project, but since it is mainly an online exchange system, it requires that schools or teachers have access to computers and internet. This may limit the amount of people using it in Turkey.

The currently implemented EE projects in Turkey did not mention sustainable development extensively. Green Pack seems to be a big step towards education for sustainable development in Turkey. If it can reach enough teachers and students, then it may influence implementation of other EE projects as well. The implementers could look at the issue from a broader perspective with the help of Green Pack, and EE activities in many schools could go further than just collecting paper.

The next chapter – Conclusion will present the findings of the study, and come up with recommendations for improvements in EE in Turkey.

[17] The Mediterranean Information Office for Environment Culture and Sustainable Development (MIO-ECSDE) is a Federation of Mediterranean NGOs active in environment and development issues. It functions as a technical and political platform and umbrella for NGO intervention in the Mediterranean scene. In co-operation with governments, international organisations and other socio-economic partners, MIO-ECSDE plays an active role in the protection of the environment and the sustainable development of the Mediterranean region. (MIO ECSDE, 2004a)

8. CONCLUSION

Public environmental awareness is considered important for successful environmental protection (Janicke, 2002; Worldbank, 2003; MOEF, 2005b). Although there are discussions on the extent of behavioral change that awareness and knowledge leads to, this study did not elaborate on this issue, assuming that, some knowledge and awareness may lead to changes to a questionable extent, while no knowledge or awareness will lead to no behavioral changes.

With this assumption, it is found relevant to analyze the efforts to increase environmental awareness in Turkey, by providing environmental education (EE) in schools. And with this aim, the new EE project - ÇEP that is made obligatory to all primary and secondary schools in Istanbul is analyzed specifically, as well as looking generally at the situation of EE in schools in the country. As explained further in Chapter 5.2, ÇEP aims to increase environmental awareness of students by providing them education on environmental issues, and by making them carry out activities around their school where they check the state of the environment and perform demonstrations.

The purpose of this study as stated before is to see the challenges and potentials for EE in schools in Turkey and specifically the new project ÇEP, and commenting on how to improve the situation. For this purpose literature surveys are made and interviews with teachers and people from relevant authorities are conducted.

This chapter will present and summarize the findings of this study, which reveal the challenges and potentials for EE, and try to come up with suggestions for improvements.

8.1. Findings of the Analysis and Recommendations

This section will present the findings of the analysis and recommendations, first regarding specifically ÇEP, and second regarding the general situation in Turkey.

8.1.1. Findings for ÇEP

For analyzing the focus project – ÇEP, a theory on public policy analysis is used, and besides a comparison with another EE project – Eco Schools Program is made. The analysis showed that ÇEP is not implemented as intended. The several reasons for this lack of implementation, which are discussed throughout the report, will be summarized here.

ÇEP is planned with positive intentions of making students environmentally conscious decision makers of the future. However, it seems that the characteristics of the country are not considered in the planning stage of the project.

The previous study on 'capacity building for environmental policy and management in Turkey', mentioned in Chapter 1 showed that, regarding environmental laws, Turkey has the needed institutions and legal framework, but the functioning of institutions and implementation is lacking. This is valid for the case of ÇEP as well.

Teachers and heads of schools play the key role for the implementation of ÇEP. While, they are responsible for educating students in environmental issues, they themselves actually lack environmental awareness and commitment. Even if they are committed to educate students on these issues, they mostly do not have access to materials. Besides, although the project is compulsory for all schools in Istanbul, voluntary participation of teachers is expected; thus there are no sanctions or regulations for making teachers take part in the project. But there are also no encouragements either. So, participation only depends on the teachers' individual commitment. In some cases, the head of the school assigns teachers for this work, which is probably because there are no volunteering teachers. Local authorities also play an important role and are supposed to support teachers, however their level of commitment and interest towards the issue seem to be also low. The parents are not interested in the project as well and they do not check if the project is implemented and do not ask the schools to implement it properly. The general picture is that there is no pressure to schools for implementing the project, neither from parents, nor from governmental authorities. So we could argue that implementation depends completely on the interest of school management and teachers.

The decision makers of the project expected participation of NGOs and a collaboration among schools, local authorities and parents, however the case schools showed that they didn't get much support from NGOs other than the seminars provided to students on specific subjects. A lack of coordination and communication among parties, that is, schools, NGOs, local authorities, is noted.

The size of the target group and the fact that there have been no pilot studies are also negative factors affecting implementation.

8.1.2. Recommendations for ÇEP

First of all, a better planned project, which takes into account previous projects made with the same intentions (as Eco Schools and SEMEP), could be more useful. So, I would argue that, if decision makers are to make changes to improve the program from now on, they should consider other programs, and activities of NGOs, and make a very explicit structure of implementation for teachers. Also, materials to be used for EE should be provided to schools, so that even if the teacher does not have enough knowledge on the issue, he/she can follow the plan and use the materials provided. It was mentioned that some materials were prepared but did not reach all schools. So, coordination between authorities and schools for the dissemination of the materials is crucial in this respect.

Still, if the project is completely based on voluntary action of teachers, a well made plan and well prepared materials might not be enough for success in implementation. A collective use of voluntary, compulsory and mixed instruments seems to be necessary for this case.

Regarding voluntary instruments, leaving implementation to NGOs is reasonable, considering that there are several NGOs working on environmental issues. However, their activities could be coordinated by one authority. On the other hand, it is not certain that NGOs will be able to cope with the size of the target group (all schools in Istanbul). So, instead of NGOs with limited resources going to schools one by one, they could assist in the preparation of materials for teachers to use, and they could go to schools only when teachers ask for assistance. Mixed instruments as subsidies would be an encouraging instrument for teachers to take part in the project. Besides, parents could also be encouraged to take part by using information and exhortation. This would work for teachers too; having more environmental awareness, they would ideally want to impose it to their students. Direct provision of in service teacher training – which is gradually taking part in several issues including environment – is an option for teachers as well, but again considering the size of the target group, this option appears to be time consuming and expensive. Thus the use of a combination of instruments seems useful.

After listing the findings and recommendations regarding ÇEP, the next section will present the findings regarding the general situation of EE in Turkey, and come up with recommendations for improvements

8.1.3. Findings Regarding the General Situation of EE in Schools Turkey

For seeing the challenges and potentials for EE in Turkey, while analyzing ÇEP specifically, the curriculum contents and other EE projects are also considered.

The new curriculum that includes environmental aspects in a broad range of courses seems to be a very important step towards spreading environmental education all over the country. Although the pilot studies were found successful, there are doubts regarding the implementation in all schools in Turkey. Similar problems to the ones in ÇEP occur in this respect too. First of all, the teachers and schools are not ready to implement the new curriculum immediately. The curriculum introduces new ways of teaching and approaches to education, and it would be difficult to adjust to these changes for teachers, not only for inclusion of environmental issues. Besides, as for ÇEP, with their lack of knowledge and awareness, the teachers are likely to have troubles giving effective environmental education to students. Trainings are provided gradually, and will probably take a long time and financial resources, because of the size of the target group – the whole country. Not only teachers but also schools are physically not ready to implement the new curriculum effectively in terms of materials, books, and computers.

Other than increasing inclusion of environmental issues in the curriculum, there are extra curricular EE projects, besides ÇEP. Some of these are mentioned in this study: GLOBE, SEMEP, and Eco Schools. Eco Schools handles environmental issues from a broader perspective, while GLOBE focuses on the use of science for environment and SEMEP on regional aspects. Although ÇEP was not implemented successfully, these voluntary based projects that schools choose to adopt are usually implemented well, and are considered useful by teachers for increasing environmental awareness and interest among their students. Being voluntary based, these projects are implemented by schools that have environmentally committed teachers or managements. This explains why they are implemented better than ÇEP. Yet, the schools implementing these projects also are supposed to implement ÇEP, since it is obligatory for all schools in Istanbul. But they do not see it necessary to carry out extra activities for ÇEP, after these other projects.

Although the importance of participation of all students is mentioned, teachers agree that in practice it is not so easy to include all students and they usually carry out activities with a group of students, and informing the rest of the students. At this point, the importance of inclusion of environmental issues in the curriculum comes out as a potential way to reach all students.

The Green Pack Project is the newest initiative towards environmental education, moreover, education for sustainable development. The earlier projects mentioned slightly contributing to sustainable development, but Green Pack is the first one handling subjects related to sustainable development in a broader sense. As a well planned tool comprising of handbooks, CD ROMs and video cassettes, Green Pack seems to be an important potential for EE in Turkey. Certainly, the training of teachers and improving of physical conditions of schools to be able to use the materials provided will take time. The establishment of networks like MEDIES is also useful especially since it provides helpful materials for teachers.

Although researchers agree that effective environmental education should be given in an interdisciplinary way rather than individual instructions, the efforts of NGOs to provide education in specific subjects to schools is also an important potential too, and an evidence of environmental interest of a group in the Turkish society, which is not deemed an environmentally active one.

Actually, ÇEP could also be considered a potential as well, because, although it looks like an unsuccessful project, even the presence of it shows that there are efforts on increasing environmental education in the country. Furthermore, in Chapter 3, while discussing the EU's approach towards EE, it was criticized that EU does not apply any pressure on Member States on environmental education. This critic was made, because; previous studies had shown that, for environmental initiatives, usually a pressure from the top is needed in Turkey. But for ÇEP, the EU did not have any role, which may be the evidence that the situation is improving.

8.1.4. Recommendations for Improvements in EE in Schools

In-service training of teachers on environmental issues is essential and already gradually provided. Although university education is not elaborated in this study, teacher education in universities should contain EE in all branches so that future teachers have the environmental knowledge and awareness to educate their students.

Regarding in-service teacher training, as it would be too costly to educate all teachers, the way followed for the Green Pack, that is, educating a group of volunteer teachers, and making them educate their colleagues, seems practical.

For improvements in the programs or the curriculum, periodic evaluations of students' awareness and knowledge levels, and observations in schools should be made, to see if the program is implemented and if it is useful.

Although not mentioned extensively in this study, community education and education at work place is very important. Local projects that include collaboration of schools, public and local authorities could be an option for community education. Information boards could be used to inform public on environmental issues, incentives to businesses in the area for participating in or funding environmental projects could be applied. In-service training for local authorities is also important. As said for ÇEP, the EE activities of NGOs could be coordinated by an authority and they could be supported through sponsorships of businesses that would be encouraged to do that through subsidies. It is important that parents are educated too. Although the students pass most of their time in school, their behaviors will certainly be affected by their families'.

Another option can be collaboration between private and public schools. Private schools with resources, knowledge and interest on the issue can choose a public school and carry out activities together with the public school.

This study tried to identify the challenges and potentials for environmental education in Turkey, by analyzing a newly implemented project in Istanbul, ÇEP, and looking at the curriculum and other extra curricular projects. The schools interviewed are located in Istanbul and the issue is approached mainly from an urban perspective. However, I would argue that the main results are generalizable for the whole country, especially regarding teachers' lack of awareness, lack of materials in schools, and general lack of interest of public, local authorities and other levels of society.

To summarize, the main challenge for EE is the general low interest of teachers, parents, authorities, public, and other relevant parties in the issue. Although there are efforts to spread EE in the country through including it in the curriculum or establishing new programs, the interest of the listed parties

effects implementation of these efforts. Furthermore, the conditions of schools, lack of financial and material resources are other burdens. The size of the country is also a challenge for improving the overall situation. As stated above, previous studies showed that regarding environmental institutions and laws, general implementation and functioning deficiencies are present in the country.

Although the general interest is found low, it is also possible to say that the picture is not so dark. There seems to be a gradual improvement, considering that, there are different EE programs some of which are implemented well, that the curriculum contents are being changed in a favorable way, and that the burdens are recognized and efforts in decreasing these burdens are continuing. These observations besides the establishment of new EE projects –as Green Pack, are the main potentials for improving the situation of EE in Turkey.

The next section presents the perspectives for further studies.

8.2. Perspectives

As said above, this study analyzed a limited number of schools in Istanbul and generalized the results for Istanbul and then the country, taking into account the comments of key people interviewed and the remarks from the Workshop attended, which gathered people working with this issue from NGOs, schools, universities, etc. Time restrictions limited the scope of analysis, besides difficulties in reaching people in public authorities.

This study focused on the presence and implementation of programs, rather than results, as students were not interviewed. A further study could be made for analyzing the environmental awareness and knowledge of students by preparing questionnaires, interviewing, and observing their behaviors. As stated before, this study assumed that environmental knowledge and awareness may lead to environmental friendly behaviors. The programs may provide extensive education on environmental issues, but the students not necessarily become environmental activists or at least change their behaviors. In a further study, the effect of knowledge and awareness on behavior could be analyzed, both theoretically and practically.

Another option to approach the issue would be a comparative analysis with a country considered more active in the issue, to see how EE developed in that country, and what have been the challenges and how they were solved.

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http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTDEVCOMMENG/EXTDEVCOMSUSDEVT/0..contentMDK:20243775~menuPK:64146900~pagePK:64146915~piPK:64146896~theSitePK:423901.00.html (Accessed: 20.10.2005)

ANNEX I – ONLINE ENVIRONMENTAL EDUCATION TOOLS

http://portal.unesco.org/education/en/ev.php-URL_ID=14518&URL_DO=DO_TOPIC&URL_SECTION=201.html

www.esdtoolkit.org

www.recyclezone.org.uk

http://www.themagdalenproject.org.uk/magdalen_project.htm

www.e4s.org.uk

http://freecycle.org/

www.rspb.org

www.oxfam.org/coolplanet/

http://www.globalfootprints.org

http://www.cat.org.uk

http://www.create.org.uk/default.asp

http://www.nef.org.uk/powered/kits.htm

http://www.re-energy.ca/

www.scolar.org.uk

http://www.pembina.org/

ANNEX II – THE STARFISH STORY

Once upon a time, there was a wise man that used to go to the ocean to do his writing. He had a habit of walking on the beach before he began his work.

One day, as he was walking along the shore, he looked down the beach and saw a human figure moving like a dancer. He smiled to himself at the thought of someone who would dance to the day, and so, he walked faster to catch up.

As he got closer, he noticed that the figure was that of a young man, and that what he was doing was not dancing at all. The young man was reaching down to the shore, picking up small objects, and throwing them into the ocean.

He came closer still and called out "Good morning! May I ask what it is that you are doing?"

The young man paused, looked up, and replied "Throwing starfish into the ocean."

"I must ask, then, why are you throwing starfish into the ocean?" asked the somewhat startled wise man.

To this, the young man replied, "The sun is up and the tide is going out. If I don't throw them in, they'll die."

Upon hearing this, the wise man commented, "But, young man, do you not realize that there are miles and miles of beach and there are starfish all along every mile? You can't possibly make a difference!"

http://muttcats.com/starfish.htm