

**OVERVIEW OF THE SITUATION OF EDUCACION FOR
SUSTAINABLE DEVELOPMENT IN MEXICO**

Edgar González-Gaudiano, PhD¹

Section 1. Overview of Education for Sustainable Development (ESD)

1.1 Brief description of the national educational system

The National Educational System (SEN) is formed by government and civil society institutions which are responsible for offering educational services and preserving, transmitting and enriching the cultural store of Mexico. According to the General Education Law, the SEN is composed of pupils and educators, education authorities, plans, materials, educational methodology and education norms. It also comprises government educational institutions, authorized private institutions and autonomous public universities.

The law recognizes the following classification of education services: initial education (ages 0-4); basic education (ages 5-14: pre-school, primary and secondary levels); special education; senior high-school, and higher education. This is what is called public schooling education, and is the formal, conventional way that people reap the benefits of going to school. The education types and levels previously mentioned provide services in public schooling, at-home and co-ed formats.² The following table shows the statistics for 2002-2003.³

2002 – 2003 School Year			
National Register: teachers and schools			
Type/ Level	Enrolment	Teachers	Schools
Total	30'900,000	1' 587, 999	225,078
Basic education	24'153,164	1'045,793	203,970
▪ Pre-school	3'635,903	163,282	74,758
▪ Primary	14'857,191	557,278	99,463
▪ Secondary	5'660,070	325,233	29,749
Senior-high school	3'295,272	233,844	11,327
Higher education	2'236,791	231,558	4,486
Work training	1'164,667	36,398	5,295

In addition to policies designed to augment the number of schools and teachers, programs are offered for borderline students or those who are falling behind, which serve the double purpose of tending to vulnerable sectors of the population by offering equal opportunities to enter the education system. The Human Development Program (*Opportunities*) and the Higher Education National Scholarship Program provide the kind of support that keeps students at school, while dealing with the age-old problems of gender.⁴ During the 2002-2003 school year, over 5.8 million scholarships were

¹ Public Education Secretary's Advisor on Environmental Education for Sustainability

² Source: National Education Program, 2001-2006

³ Source: The United Status of Mexico Educational System: Principal figures for the 2002-2003 school year.

⁴ For example, the amounts of scholarships for girls and young women are higher than for male students.

UNU-APEC Education Network Invitation Programme for
Education for Sustainable Development

granted, which is equivalent to subsidizing one out of every five students attending public schools.

In the same way, the National Council for Life and Work, whose mission it is to attend to those whose education has fallen behind, offers reading classes, primary and secondary education, and teaches living and work skills according to the special characteristics and needs of young people (over 15 years of age) and adults who, for different reasons, were unable to begin or continue their basic education. One of its main strategies is community education centers, which operate thanks to public and private donations and offer services using new communications technologies (satellite network, Internet access, computers, etc.). At the moment, there are almost 3,000 of these in operation, some of which serve Mexicans living in the U.S. The model used by the Council features: the gender equality approach; the environment; human rights; a vision of the future; culture for peace; development of a sense of belonging, identity and awareness of cultural diversity.

For its part, the National Education Development Council coordinates services for people who live in small, scattered communities in conditions of high marginalization, far from urban centers. During the 2002-2003 school year, this Council provided initial education services (450,712), pre-school (153,025), primary (157,597) and post-primary (10,237). Services are organized around two strategies: community education and compensatory programs, which consist of support for the abatement of educational backlogs.

Additionally, other institutions offer programs aimed at improving equality indexes such as: education for people with different capabilities, bilingual multicultural education for boys and girls from 62 ethnically and linguistically different groups in the country, and education given to migrant workers' children in Mexico.

It is therefore apparent, albeit at first glance, that the scope and variety of educational services offered, and the diversity of teaching conditions, among other aspects, makes the educational system in Mexico especially large and complex.⁵

1.2 Government policy on ESD

As long ago as the United Nations Conference on the Human Environment (Stockholm, 1972), the importance of the role played by environmental education (EE) in the prevention of and response to environmental deterioration was emphasized. However, as in the case of the majority of Latin-American and Caribbean countries, Mexico was slow to join the environmental education movement. Environmental education underwent gradual institutionalization and only picked up speed in the early 1990s. The late incorporation and slow institutionalization of environmental education in the region have brought both advantages and disadvantages as compared with the experience of the developed countries; advantages in the sense that it has been possible for environmental education to become deeply involved with development processes, which has given it a social, economic and cultural seal of approval; disadvantages in the sense that, in general, it has been marginalized and subordinated to education and environmental management processes.

⁵ Source: National Education Program, 2001-2006

UNU-APEC Education Network Invitation Programme for Education for Sustainable Development

However, since the 1990s, environmental education has been incorporated and has taken hold slowly, yet permanently, in the SEN's different levels and formats; it has also been fomented by numerous groups and organizations in broad spheres of the non-formal sector, in both urban and rural settings.

Among its goals, the National Education Program, 2001-2006, establishes that of "updating, in basic education, the environmental education and sustainable development syllabuses" and "promoting an environmental care and sustainable development culture by means of teacher training and fomenting social participation". Furthermore, it points out the importance of signing collaboration agreements with the Environment and Natural Resources Secretariat (Semarnat) "to promote environmental education and the sustainable exploitation of natural resources programs in basic education schools".⁶

In a supplementary way, the National Environment and Natural Resources Program 2001-2006 point out that "To achieve the Mexico we desire we need to:

Take the political decision of giving to the environment and sustainable development issue the critical importance it has; Encourage environmental education and training as the main factor of change in society in order for society to participate actively in the decisions regarding environmental management and sustainable development promotion; Assume that sustainable development is a shared challenge; Be creative to involve all society's sectors accepting that the Federal Government can not assume alone all environmental challenges, reason for which it is necessary the coordinated participation of the state and municipal governments together with the private sector; Accept that women and men have different participation and responsibilities, and that they also vary from one region to another. ...In general, these differences occur in a context of discrimination and unfair power relationships; Admitting that Mexico is a young people country and to take advantage of its potential it is necessary to invest in its education and create environmental programs for the young people ... [And] Respond to the needs and use the richness from 3000 years of cultural diversity of our indigenous peoples."

There does not exist, however, a clear national policy regarding education for sustainable development, which is a neologism that has not even been fully accepted by the environmental education community as it still has conceptual gray areas and a great many operative problems. In spite of this, we are convinced that it is eminently feasible for education for sustainable development in Mexico to be associated with environmental education, precisely because of its profile both in Mexico and in the nearby Latin-American region, which is tied in several cases to areas of work proposed by the UNESCO for ESD, namely:

1. Overcoming Poverty
2. Gender Equality
3. Health Promotion
4. Environmental Conservation and Protection
5. Rural Transformation
6. Human Rights
7. Intercultural Understanding and Peace

⁶ National Education Program, 2001-2006. SEP, México, 2001, p. 144.

UNU-APEC Education Network Invitation Programme for
Education for Sustainable Development

8. Sustainable Production and Consumption
9. Cultural Diversity
10. Information and Communication Technologies

This report mentions, therefore, several programs and activities related to the set of fields that make up education for sustainable development, such as education for human rights, education for gender equality, and intercultural education, with emphasis on environmental education.

1.3 The present status of ESD-related activities in both formal and non-formal education

The issues of environmental education for sustainable development are on the current agenda, as are didactic and supplementary materials. However, it must be recognized that the incorporation of environmental issues in basic education has occurred preponderantly in Natural Science and Technology programs, leaving a shortage in the Social Sciences and Humanities.

For this reason, the national curriculum reforms currently under way have included materials and activities designed to build knowledge, attitudes, skills and values related to the environment and sustainability in all areas of learning. The current reinforcement of environmental education for sustainable development (EESD), intends that upon completion of their secondary education, student should:

- Understand evolution as a single system and the interrelationship between human beings and nature from an integral viewpoint that allows them to take their place as part of the environment (with its natural, social, economic and cultural components, among others) and to assess the effect of their activities upon it.
- Understand that their respectful behavior, responsible consumption and supportive participation contribute to sustaining and improving the environment and to stimulating their own present and future quality of life, as well as contributing to the sustainable development of their district, state and nation.

In pre-school education, a new program of education is being designed in which it is proposed to work in two formative fields: “World exploration and knowledge” and “Physical development and health”, which will strengthen the proposal of EESD to be given to Mexican children from an early age.

In primary and secondary education, the definitions of biodiversity, the environment, and sustainable development are being analyzed and updated, as well as the congruence with which the materials relating to each concept in the different subjects are interrelated and given continuity and depth in order to encourage a trans-disciplinary approach. Moreover, several states on their own initiative, particularly Aguascalientes, Chiapas, Estado de México, Guanajuato, Guerrero, Quintana Roo, San Luis Potosí, Sonora, and Zacatecas, have asked for extra books on the problem and its environmental characteristics at state and regional level for different grades of primary education. A further 12 federal entities have opted to teach environmental education as a secondary school subject.

UNU-APEC Education Network Invitation Programme for Education for Sustainable Development

Additionally, aspects of gender equality are considered across the breadth of the basic education curriculum from start to finish. The materials that are given to youngsters and adolescents as of the last year of primary and throughout secondary education promote reflection about the stereotypes and prejudices associated with gender, and encourage analysis of the equal rights and opportunities that they are entitled to.

The way that gender is viewed encourages pupils to analyze the relationships that are built between individuals and groups; they understand the ways in which unequal and discriminatory relationships between men and women have been culturally established, and they identify different ways of redefining them based on respect, reciprocity and equality. For this reason, emphasis has been placed on gender equality refresher courses for teachers. Some of the refresher courses given (school year 2003-2004) are:

- Building gender equality at primary school.
- On the way to secondary school. Initiatives to help secondary school entry from a gender equality perspective.
- Gender equality as a factor in supportive association in basic education.
- Gender equality as an indispensable element of primary and secondary school teaching.

As of 2004-2005, the Secretariat of Public Education (SEP) will put into effect an Education on Human Rights Program, which will ensure that knowledge is transmitted, attitudes molded, skills acquired and values established regarding democracy and human rights at all levels of education. At the same time, materials for the subject are being written and a smooth progression from pre-school through higher education ensured; work is being done on matters pertaining to school atmosphere and educational policy so that the experience gained by pupils at educational institutions will have a positive impact on their democratic and human rights education. The program also includes public servant sensitization and training, especially teachers, so that they may take on their role as promoters of human rights and be aware of their responsibility should they obstruct or violate them. In the case of teachers, they are sensitized to the important role they play to guarantee the basic right of all human beings to receive an education.

While the senior high-school level is characterized by its great variety of institutions and plans of study, teaching materials related to environmental and sustainability issues can still be greatly improved. Reforms to the general senior high school and technical education programs include these materials not only in courses designed to teach the subject, but also incidentally in other courses. Thus, environmental education for sustainable development has become a central syllabus of these reforms. For example, in the first year course entitled "Ethics and values", which lasts for two semesters, one topic out of five is on EESD or, including analysis and discussion of The Earth Charter. In this course, current environmental problems are tackled, taking as a reference point the concept of citizenship in order to identify citizens' rights and obligations in this respect. Furthermore, the complex implications of managing environmental problems on a local level are analyzed. With this, the student is expected to acquire the ability to recognize environmental problems and propose measures within his possibilities, based on the concept of quality of life.

UNU-APEC Education Network Invitation Programme for Education for Sustainable Development

In higher education, noteworthy progress can be documented.⁷ The growth in the number of degree courses, specialties, post-graduate courses, and avenues of research on environmental issues in the last twenty years have borne the fruit of over 1,200 academic programs in 177 institutions of higher education.⁸ However, the traditional degrees and post-graduate courses, principally those in the areas of the Social Sciences and Humanities, have been more reluctant to commit to environmental and sustainability issues. On the other hand, a recently constituted consortium of twelve institutions of higher education known as Complexus has implemented more integral policies on these subjects.⁹ Additionally, the National Environmental Education Academy was founded in the year 2000.

With respect to the education of young people and adults, the National Adult Education Institute has incorporated environmental issues into its materials of both the Basic and Advanced Programs, where the following modules are offered: “Our planet, the Earth”, “Mexico, our home”, and “Let’s get to know ourselves better” and “Let’s live better”. The package “For a better environment” is about to start up as part of the Diversified Program. In addition, states like Michoacán, Tamaulipas and Yucatán, have complementary books on the environment and sustainable development.

The Public Education Secretariat offers teacher training by means of several courses on environmental education and sustainable development. The national course on environmental education for secondary schools has been given to over 30,000 teachers and a new general course has been available as of 2004 is being augmented with new program modules. Moreover, states like Tabasco and Michoacán have developed refresher courses adapted to their own environmental characteristics, which have even been requested by other states.

With respect to non-formal environmental education, important progress has been made, principally through work done by non-government organizations. Of the 279 organisms linked to the environmental field in 1999, registered by the Mexican Nature Conservation Fund, 51% carry out non-formal environmental education projects.

In the urban context, spaces for the organization of environmental education activities have multiplied, creating numerous organizations which offer public information and education services. One example of this is the Environmental Communication and Information Center of North America. This NGO offers specialized environmental information services that manage and tie in audiovisual information and Internet connections in Spanish from all over Latin America. Other public institutions such as museums and zoos also have spaces and environmental education teams.

In the rural context, there have been some noteworthy efforts on the part of several organizations regarding the strengthening of the role of rural actors in the promotion of environmental education. One important step is the training of people who live in rural areas as promoters of environmental education who, through their

⁷ See, for example, Semarnat-ANUIES (2002) *Plan of action for sustainable development in institutions of higher education*. México, ANUIES-Semarnat.

⁸ Data from Semarnat (1999) The directory of *institutions of higher education* with academic programs related to the environment and sustainable development may be consulted at <http://www.semarnat.gob.mx/cecadesu/>

⁹ <http://ambiental.ws/complexus/>

UNU-APEC Education Network Invitation Programme for
Education for Sustainable Development

acknowledgment and appreciation of traditional knowledge, bring about initiatives that benefit their communities.

The need to strengthen sustainable non-formal environmental education has been mentioned. It is necessary, in this sense, to encourage diagnostic and strategy-planning workshops to make appropriate decisions regarding evaluation, risk identification and materials, among others, as well as updating the directories of those who implement the projects. Another avenue of work must be the inclusion of a more purposeful, higher quality educational dimension in productive projects, especially those involving the exploitation of natural resources, driven or financed by the government and civil organisms.

Whilst establishments of sustainable environmental education are still at an early stage of development in Mexico, it is necessary, however:¹⁰

- a) To coordinate consolidation efforts and lend continuity to those projects which emphasize the diversity of educational spaces and their financing problems.
- b) To create a national council or a network for the sharing of experiences and results.
- c) To provide more support for activities related to community and regional development through training and the strengthening of campaigns to modify consumer behavior.
- d) To establish new and better financing mechanisms for educational projects with their implementation and accounts all above board.
- e) To make the principles of sustainable environmental education congruent with pertinent methodologies so as to avoid the possibility of the projects fortifying the very thing they are supposed to combat, to systematize experiences and develop a methodological framework which incorporates different disciplines that promote research, and to encourage the use of accepted pedagogical strategies for environmental education.¹¹

The general outlook indicates, for instance, that sustainable environmental education in rural areas has not received sufficient institutional and financial support, in spite of its enormous potential as a complement to community development processes. Some governmental rural policies have been in contradiction to environmental policies, and have responded to the predominance of a productive model that widens the dichotomy between rural and urban areas. For the same reason, there has been a frequent call to have communities participate in the definition of rural projects; to include policies allowing rural sector participation in education; and to respond to productive needs and to the improvement of domestic and community spaces. It is therefore desirable that all of the proposals should stem from the principle that local know-how and natural resources be used.

It should be pointed out, however, that in the case of sustainable environmental education for rural areas, an important number of social organizations and producers

¹⁰ There are records of the existence of 77 establishments that report their involvement in EE Project development. Of these, 21 are different kinds of centers, 11 are museums, 18 are zoos, 6 are aquariums and the remainder are either parks, botanical gardens and planetariums or a combination of such.

¹¹ Source: González-Gaudiano, E. (Coord.) (2000) Country Report, México. III Latin-American Environmental Education Congress, Caracas, Venezuela.

UNU-APEC Education Network Invitation Programme for Education for Sustainable Development

have been working on the implementation of a new model that promises to outdo the training provided by the “green revolution” model. Thus, it is apparent that a lot of work has been done in favor of the so-called “silent revolution” in rural Mexico, as attested to by the inventory of more than 2,000 initiatives, with a sustainable development focus, for the exploitation of natural resources in Mexico.

For their part, the urban areas have proposed that reflection be encouraged, through environmental education, on the sustainability of cities and the principal environmental problems requiring attention; on taking advantage of the strengths of urban centers; seeking the participation of different social actors, and tying in the formal and the non-formal; and on building awareness of the fact that we live in a moment of great social differences that requires the creation of a communicative medium between people from different social groups so as to improve the ways in which we live together and to lessen social vulnerability. Perceived as equally desirable are the incorporation of a systematic vision, the definition of the exact contribution of environmental education so as not to expect more than is possible, the participation of local authorities and the evaluation of existing proposals.

In general, the environment and sustainability field is a complex space of social considerations, comprising an enormous variety of discourse and ideologies in greatly varying degrees and levels of radicalization. Sustainable environmental education is included in this space, often in contradiction to the cultural and economic forms heralded by the mass media, especially since the increase in commercial trading that goes hand in hand with the neo-liberal economic styles brought about by globalization.

Sustainable environmental education has much to offer the process of formation of new social identities that respond to the challenges of the difficult times we live in. Because, as this new pedagogical field is constituted, we are moving further and further away from the original proposals of environmental education coupled with naturism, conservationism and the other forms associated with a viewpoint that emphasizes the preservation of the natural environment without taking into consideration the needs and expectations for social change of human groups that live in natural spaces.

As confirmed by the plan agreed upon at the World Summit on Sustainable Development, held in Johannesburg, South Africa, in 2002, the principal issues revolve around the eradication of poverty, the modification of patterns of production and consumption, and the quality of life: issues that contain a healthy dose of environmental conservation, but which are framed in the social and economic dimensions which define the current international political scene. This will contribute to the definition of a new profile of educational processes that goes hand in hand with new environmental and sustainable development policies.

1.4 Challenges, constraints and opportunities

In accordance with the proposal made by the UNESCO for running the United Nations’ Decade of Sustainable Development Education, in 2004, the Public Education Secretariat (SEP) has begun to set up alliances with different sectors in order to ensure that the Decade’s objectives are met. In this sense, an alliance was signed with National Association of Universities and Institutions of Higher Education, and shortly an alliance between the SEP-Semarnat and the National Chamber of the Industry of Transformation

UNU-APEC Education Network Invitation Programme for
Education for Sustainable Development

for the same purpose. Over the next few months, the results of the negotiations with other strategic sectors, such as the mass media, will be defined in order to set up the corresponding alliances.

The following are some of the factors, carefully analyzed by the SEP, that require attention and strengthening so that they may contribute to achieving the expected results:

- The systematic evaluation of the learning, teaching and program objectives proposed for EESD.
- Initial training for future teachers of the different courses within EESD.
- Refresher courses for teachers and state technical-pedagogical teams.
- Teaching, in order to promote the formation of concepts, skills, attitudes and values so that the students may understand the current environmental situation; commit to individual and collective participation in the conservation of the environment by means of problem analysis, prevention and abatement in their home districts; so that they may recognize the effect of their actions by following through and evaluating, as well as building on the present to improve their quality of life and construct a desirable future. They analyze, appreciate, take responsibilities and pride in their contribution to the sustainable development of Mexico.
- Clarifying of differentiated responsibilities for the generation of environmental problems and dealing with them (knowledge, prevention, abatement and solution), according to people's ages (children, adolescents and adults) and the social actors who participate.
- Inter-disciplinary work inside each school.
- The school's relationship with the community.

According to the 2000 national census, 8.6% of the country's population speaks an indigenous language, and according to the Mexican Almanac, more than 10 million Mexicans are considered to be culturally-speaking indigenous. The 62 ethnically and linguistically-differentiated groups that inhabit the country are located in 24 of its 32 states, but just nine (Oaxaca, Veracruz, Chiapas, Puebla, Yucatán, Hidalgo, Estado de México, Guerrero and San Luis Potosí) account for 85% of the indigenous population. 38% of the indigenous population is under the age of fifteen. An important part of this population lives in rural areas, working as farm laborers or day workers with scant working qualifications. Extreme poverty and demographic pressure have intensified seasonal migration in search of farm work, which is available over a network of thousands of kilometers that stretches to the north of the country or even crosses the border. In Sinaloa alone, there are some 35 thousand indigenous children between the ages of 7 and 15 employed on farm land; this reality is repeated in different parts of the country. For a multitude of reasons and in search of self-development opportunities, indigenous youths migrate to urban centers, where the possibilities for such development are extremely scarce mainly because of social and cultural barriers.

It is considered important to make an effort to encourage the participation of indigenous groups, by acknowledgement of their cultures, to include them in a better future, to get them involved in the development of their traditional territories, and the

UNU-APEC Education Network Invitation Programme for Education for Sustainable Development

handling of their natural resources in their own way. This implies planning sustainable development for these objectives and services, coordinating with the exploitation of natural resources, technical assistance and credits, and a productive, communitarian mobilization model.

The challenge consists of justly increasing the coverage of the education system, broadening the supply and making it more accessible to the least privileged groups, paying particular attention to the inclusion of women, closing existing gaps in enrolment indexes among states, social and ethnic groups, and fortifying scholarship programs to widen the opportunities for access to education of students in adverse economic situations.¹²

The effect of the measures adopted has been to raise the quality of education throughout the system, to make educational programs more flexible and to grant scholarships to those who are at risk of dropping out of school for financial reasons.

With respect to education for young people and adults, there are problems caused by running the program (training of tutors; irregular student enrolment; materials distribution); problems caused by the setting in which the courses are given (one out of every three adults has difficulty studying because they work excessively long hours; housewives have a serious limitation when it comes to studying); and problems with academic results since only a small number of students complete their courses and obtain a certificate of studies.

Job training programs do not reach the most underprivileged sectors of the population. Regarding the poverty-stricken, it is necessary to renew the supply of existing training programs for young people with low incomes or in conditions of poverty and unemployment. As far as women are concerned, the gender angle must be emphasized in personnel training programs for promoters. Generally speaking, the quality of this educational service and its coverage still need to be improved.

However, a certain amount of progress has been made; for instance, several innovating initiatives to negotiate agreements with the different Work Training Centers, and the National Technical Professional College of Education, to include gender components in their programs and to bring about the participation of women in scholarship program for unemployed workers. Thus, women are offered training for jobs not traditionally thought of as 'feminine' in character: carpentry, plumbing, serigraphy and car mechanics.

When it comes to opportunities, international cooperation is making good progress. Global Environmental Citizenship is an environmental education and communication project started in 2003 and scheduled to last for three years. It is sponsored by the Global Environmental Facility and the United Nations Development Program (UNDP), under the management of the United Nations Environment Program (UNEP). Involved in the project are six Latin-American networks which, in order to achieve their own

¹² On a national level, there are differences among the states regarding access to education. For example, at senior high school level, while 80% of the 16-18 age group in the Federal District attend school, in Chiapas, Puebla and Oaxaca the figure is under 44%. The differences between states are more critical in the case of rural populations which live in very small settlements, migrant workers and indigenous peoples. In each of these categories, women are even more underprivileged.

UNU-APEC Education Network Invitation Programme for
Education for Sustainable Development

specific objectives, work with local groups to provide incentives for participation in the movement towards the various areas of sustainable development. The six networks are:

- 1) The Latin-American Parliament (PARLATINO)
- 2) Consumers International
- 3) The International Union of Local Authorities (IULA)
- 4) The Latin-American Churches Counsel (CLAI)
- 5) The IUCN Commission on Education and Communication
- 6) The World Association of Community Radios Broadcasters (AMARC), through the Latin-American Radio Broadcasters Association (ALAR)

The project includes seven countries; four from South America (Argentina, Chile, Perú and Ecuador) and three from Mesoamerica (Costa Rica, México and Cuba), and involves the participation of different governmental agencies. Due to its scope and components, it could well be considered an ESD project. Its objectives: to promote organized social participation based on an understanding of citizen rights and responsibilities with respect to the environment; to write the local-regional environmental agenda in simple language so as to inspire the civil society to creativity and to carry out actions in favor of environmental protection; to encourage a change in the daily behavior of the individual and society towards the environment; to contribute to the raising of critical and participative citizen awareness.¹³

Section 2. Regional centers of excellence in ESD (RCEs)

With respect to the RCEs proposed by the United Nations University, this is an idea, in least in the case of Mexico, that could favor the articulation of already existing educational programs and activities on a variety of topics (the environment, gender, human rights, inter-cultural aspects, the exercising of democratic rights, etc.) on the theme of education for sustainable development. It would also favor the implementation of local programs, in an attempt to adapt proposals to the population's specific characteristics: an indispensable condition for a multi-cultural, mega-biodiverse country with great regional and economic asymmetries, as well as the exchange of experiences, the recovery of traditional know-how and the setting up of alliances among different local action groups. However, we do not consider that this implies the creation of a new educational space. Firstly, because it might have the opposite effect and cause a division as opposed to an articulation. Secondly, because several of these tasks are already being carried out by existing institutions, and finally, because it would mean investments that would alter the order of priorities already set in current plans and programs.

We believe that the important functions that have been suggested for the RCEs must principally provide incentives for synergies between groups, organizations and institutions and only in the event of detecting the necessity for a space apart from those which already exist, would it be created. Above all, education for sustainable development requires a very dynamic coordination and articulation of initiatives which have traditionally been put into operation independently, so as to act as a catalyst for processes, make best use of resources and avoid duplicities and dispersions.

¹³ <http://www.rolac.unep.mx/ciudadania/>

Section 3. Sustainable production and consumption

Production¹⁴

Since 1995, the federal government has conceptualized a series of programs, some designed to prevent pollution. The government and the industrial sector have signed collaboration agreements. Nevertheless, the implementation of the agreements has lacked the necessary resources from both the government and the private sector. Furthermore, work has been done on demonstration projects to show the successful implementation of preventive measures in various regions of the country and in several industrial fields.

Worthy of note is the fund created by the government and the private sector to encourage energy savings. This fund has operated successfully for more than ten years, financing the installation of more energy efficient motors, lighting and equipment.

During the last ten years, there have been more than 25 private sector initiatives to improve environmental performance and competitiveness. One of these is Global Environmental Management Initiative (GEMI): integral responsibility and eco-efficiency. A further four have focused on pollution prevention, and six involve environmental management systems. However, these initiatives have been oriented towards medium-sized and large companies and have not received sufficient resources to increase their impact.

During 1993-1994, as part of its world initiative to promote cleaner production, the UNIDO (United Nations Industrial Development Organization) financed a pilot cleaner production program in three sugar mills. Towards the end of 1995, the project gave birth to the Mexican Center for Cleaner Production (CMPML) set up jointly by the National Polytechnic Institute and the National Chamber of the Industry of Transformation (Canacintra). Since then, the CMPML has worked with over 50 companies in different sectors and has increased its capacities, training more than a thousand people.

In 1996, the US Agency for International Development (AID) provided support to the CMPML as part of the global EP3 program, which made it possible to work in other areas of the country, particularly on energy-saving projects. The AID has also provided financial support for the development of policies and training, especially in environmental management systems in the Tlalpan district in Mexico City.

Other initiatives include work sponsored by the German Technical Cooperation Agency, GTZ, in Mexico City, and Canacintra and the National Ecology Institute. Further pollution prevention work has been done by Global Environmental Management Initiative and the World Sustainable Development Council. The Border Environmental Cooperation Commission (Cocef) has implemented pollution prevention initiatives in the maquiladora sector at the Mexico-United States border. The Mexico-

¹⁴ Source: CCA (2003) Towards pollution prevention in North America: Updating. Document written by the North American Alliance for Pollution Prevention, México D.F.

UNU-APEC Education Network Invitation Programme for
Education for Sustainable Development

USA Science Foundation has been involved in other work in Tamaulipas and Chihuahua.

In 1995, the Commission for Environmental Cooperation (CEC) of North America carried out a study to determine the state-of-play of pollution prevention initiatives in North America. The study made a series of recommendations for the three countries taking in to account their different economic situation and the different stages of their development. The study concluded that the initiatives of institutions that promote pollution prevention were well developed in Canada, reasonably developed in the United States and at an incipient stage of development in Mexico. The lack of information, technology and financing was considered to be among the principal reasons for this kind on initiative not being implemented. The study recommended:

- To encourage information-sharing in order to ensure that initiatives in this area are not isolated from each other.
- To provide technical support for pollution prevention.
- To create projects capable of demonstrating the benefits of pollution prevention initiatives to businessmen.
- To offer suitable financing mechanisms to these projects.
- To apply industrial policies and practices capable of stimulating companies and generating relationships through productive ties so as to incorporate pollution prevention principles.

Between 1996 and 1998, the CEC initiated ten pilot projects to demonstrate the economic and environmental benefits of pollution prevention to different industrial sectors, including tanneries, paints, glass-making, smelting, metallic finishes and food processing.

In 1996, the CEC and Mexico's principal industrial association, Concamin, set up a pilot fund, the Fiprev, for pollution prevention projects in small and medium-sized Mexican companies, which began making loans towards the end of 1998. The CEC lent the fund technical support, managed by Funtec. The fund manages around 3 million U.S. dollars.

As of September 2003, the Fiprev had granted 61 loans to a total of around \$1,450,000 U.S. dollars. It is calculated that the environmental benefits generated by these projects so far include annual savings of almost 2,800 tons of chemical substances—5,800 since the Project started—that were not absorbed by surface water, and annual savings of around 150,000 m³ of water (310,000 m³ since the start of the Project). This has generated annual savings of approximately \$1,300,000 U.S. dollars—more than 2.2 million since the start of the Project.

The directive of the Inter-American Development Bank (IDB) includes the promotion of clean energy, fuel efficiency, transportation, water conservation, industrial or dangerous waste, and the reduction of waste and its recycling. Pollution prevention is being driven, and in 2003 its area of influence was increased by 300 kilometers into Mexico from the border. This is opening windows of opportunity for encouraging pollution prevention in the northern border states of Mexico. A fuel efficiency project was recently approved for Mexicali to the tune of around 3 million U.S. dollars.

Consumption¹⁵

In 1972, Consumers International recognised why “collective action to protect the environment can only be achieved when there is widespread individual awareness of the environmental consequences of consumption” (DSD, 1998). In 1985, the UN Guidelines for Consumer Protection constituted a broad framework for promoting action not only on issues of product safety and economic efficiency, but also to promote social justice and economic development.

The relationship between consumption, production patterns and development was included in Chapter 4 of Agenda 21 at the Earth Summit in 1992. In 1995, the CSD recommended the incorporation of sustainable consumption as one of its goals. Sustainable production and consumption was among the most important debates at the World Summit on Sustainable Development in Johannesburg (2002) and it was included in the political Declaration.¹⁶ Although the majority of developed countries have regulatory, economic and social policy instruments dealing with consumption, consumerism is increasing almost everywhere; furthermore, consumer movements in Europe and North America are very different. In Mexico the consumer movement is just starting and has a weak link with environmental education.

Education for sustainable consumption is mainly concerned with promoting supply information (i.e. product information concerning mode of production, possible environmental impacts, advertising costs, etc.) on products and with empowering the consumers’ critical capacity regarding their available options, taking advantage of growing public concern about the relationship between consumption and environmental deterioration.

The UN agenda statements recognise the relationship between consumption and production, and the necessity of improving the efficiency of natural resource management among other important aspects.¹⁷ This highlights the link with economic policy which contributes to easing the pressure on the environment, and if the assumption is made that consumption in developing countries must be increased, nowhere is it specifically mentioned that income must be increased as an essential precondition to obtaining radical progress. The truth is that the proposal for each country to establish its own limits and to modify current consumption patterns has not generated much enthusiasm from any of the parts involved.

Paragraph 28 of the Programme for the Further Implementation of Agenda 21 adopted by the UN General Assembly Special Session on Sustainable Development in New York in June 1997 recommends courses of action required for a shift towards sustainable consumption. Regarding education it only advocates, “Encouraging the

¹⁵ González-Gaudiano, E. Paper presented at OECD Workshop on “Education and Learning for Sustainable Consumption” (Paris, 14-15 September 1998)

¹⁶ “The Challenges we Face: We recognize that poverty eradication, changing consumption and production patterns, and protecting and managing the natural resource base for economic and social development are overarching objectives of, and essential requirements for sustainable development.”

¹⁷ However, it is recognised that there has been more progress in production than consumption. The policies dealing with clean production and eco-efficiency, for example, have better prospects in the short term. As far as consumption is concerned, the most definite agreements are leading towards establishing policies on purchases made by government offices and their management of waste, which has been called ‘greening the government’.

UNU-APEC Education Network Invitation Programme for
Education for Sustainable Development

development and strengthening of educational programmes to promote sustainable consumption and production patterns.” A similar comment is made regarding the role of the media and publicity: “Encouraging the media, advertising and marketing sectors to help shape sustainable consumption patterns.” Very little for such a great responsibility. All of this requires specific pedagogical strategies for each group and segment of the population; for example, for those popular sectors which are very vulnerable because their lack of competencies combines with their lack of consumption (e.g. literacy, accessing information and services, etc.) combines with their lower purchasing power to deny them an efficient participation in the goods and services market. Overcoming legal and economic vulnerability therefore becomes impossible without suitable educational processes for each social sector which would directly influence the elimination of poverty and consolidation of democracy through wide-ranging processes of public participation and cultural development.

Nevertheless, education for sustainable consumption cannot be set aside from those current social processes which are derived from globalisation. Social identities are tied in with consumerism in a series of products (food, clothing, music, etc.) Nowadays, business practices generate a set of conditions which make it ill-advised to insult young people who, for example, identify more with rock music than traditional songs. Their identities have been reconfigured; starting out from a different notion of self and others, which must be taken into account when considering education processes. Identity is no longer restricted to national territories or culture since both the material and symbolic dimensions of modern life have been affected.

In Mexico this is expressed through disjointed initiatives and measures which need to be integrated into co-ordinated strategies from which success indices may be derived, taking into account the inherent complications of evaluating pedagogical results over the short-term. Despite all of this, the last fifteen years have seen exponential growth in the number of environmental educators, in their organisational and empowerment processes, in their penetration into different kinds of institutions and organisations, and in environmental educational and recreational centres or the incorporation of environmental education into their workplans.

Education for sustainable consumption is an incipient area in Mexico. Even though some of the issues are dealt with in the field of environmental education, they have not had a specific focus on consumption, but rather on protecting the environment. In addition, the Mexican Association of Studies for the Defence of the Consumer, founded in 1971 and already the largest of its kind in Latin America and the Caribbean, was one of the first to promote greater sensitivity on the consumption issues. This association employs the basic strategy of publicly denouncing companies violating the norms and of fomenting campaigns against the consumption of certain products, which means that it is not specifically or directly concerned with educational objectives.

Consumer education practices began in Mexico during the seventies and this area has been included into their formal education systems. Nevertheless, the consumer's relationship with the market has been regulated very little and the available information does not reach all sectors or social groups so that they may claim their rights and develop the capacity to critically analyse commercial advertising. This would enable them to distinguish between their true needs and those induced by growing market complexity caused by globalisation phenomena and, in the case of Mexico, more

UNU-APEC Education Network Invitation Programme for
Education for Sustainable Development

particularly by the trading treaties it has signed, which have modified traditional product supply qualitatively and quantitatively in a short span of time.

Some groups of environmentalists and educators have placed importance upon some of the most pernicious effects of advertising, especially when it is aimed at young children, regarding the treatment of issues not only related to consumption and the environment (food of scant nutritional value, energy and water saving, waste management, trafficking in wildlife, etc.) but also others such as violence, human rights, the physically handicapped, etc. Anyway, the most frequent criticism is levelled at those advertisements aimed at high-income sectors of the population (cars, designer clothes, luxury items, trips abroad, etc.) which are considered offensive to the majority of the population, who are in a precarious economic situation.

It is important to strengthen the sustainable dimension of consumption in EE projects because the globalisation of communications and economic processes generate high social tensions over the marked differences in people's consumption, which is being expressed in the form of higher incidences of violence and delinquency, especially in urban zones. In the short term this will bring about the need for legislation on commercial advertising to avoid exacerbating the consumerism of the few while faced with the economic and socio-cultural realities of the great many who do even have access to the most basic needs satisfaction.

Certainly, consumer education flies right into the teeth of the gale of the corporate interests of the big producers and distributors, who have in many cases acted with unrestrained impunity. But true citizenship will never exist without better informed social participation acting in defence of people's interests and aspirations and which "is repaid with consumer rights protection and promotion policies and strategies, which go far beyond the defence of the value of money to encompass what is known as the defence of the value of the person.

On the other side of the coin, it is the economically healthier sectors which cause the greatest environmental impacts as a result of unsuitable consumption practices and a market which produces goods and services to satisfy the extravagant demands of a reduced sector of the population with purchasing power. Similarly, consumers' organisations become socio-economic, political and cultural strategies which makes it possible to return a decisive role to those who had lost their right to have exercise market influence.

It can be inferred that these results are unreachable unless environmental educators' networks and civil society organisations in general start including education for sustainable consumption in their workplans. While we are all consumers in one way or another, consumption as a generalised social phenomenon reveals different levels of participation, from the most individual to political activity.

The national programme for the organisation of consumers is promoted by the Federal Consumers' Procurator's Office (Profeco). This programme constitutes an institutional response to public demand for alternatives likely to create a consuming culture. In this proposal, educating the people as to how to choose a suitable form of behaviour with respect to consumption is an essential component.

UNU-APEC Education Network Invitation Programme for
Education for Sustainable Development

- a) If it is admitted that consumption patterns can be changed by means of regulatory processes, economic instruments and social instruments, such as education, it would be a good idea to try to find a better way to put these three components together. For example, environmental regulation, measures to fight poverty and institutionalised educational processes must be promoted or they will not gel. For the moment they work independently from each other, which reduces their margins of effectiveness.
- b) Education for sustainable consumption must be strengthened in parallel with improvements in income distribution so that increased consumption does not in turn increase environmental impacts. There is no possibility of encouraging sustainable consumption through educational processes if the basic needs have not been satisfied.
- c) There is a material dimension and a symbolic dimension associated with consumption. No educational process can avoid both dimensions, which makes it necessary to develop different teaching techniques, especially to attend the most vulnerable social segments such as children and young people from poor families with different cultural backgrounds from those lifestyles advocated by the mass media which have been established as dominant models.
- d) For these reasons, pedagogical proposals aimed at promoting sustainable consumption must be specific and designed for each particular situation. Successful experiences in other countries or in different national contexts will be ineffective if they mean to impose themselves on other unrelated realities. Examples of success can be useful, so long as they are analysed as references defined by the boundaries of their own characteristics.
- e) The organisation of consumers is a necessary pre-condition to obtaining clearer results in the modification of social consumption patterns, in addition to the effort which must be made in the organisation of formal educational systems.
- f) Education for sustainable consumption must be strengthened as one aspect of environmental education, since a movement has arisen to push independent educational programmes in the context of the range of treaties and agreements promoted by different international agencies and organisms. Thus, we encounter education for the protection of biodiversity, for the fight against desertification, etc. If this situation continues, it will not only provoke disjointed efforts which divide issues that should be dealt with together, but will also set off a struggle to obtain financial resources for each of the programmes, which will further reduce the already insufficient funds earmarked for education in developing countries.
- g) From Mexico's incipient experience in this issue it can be inferred that the country's particular composition and social distribution demands that policies on education for sustainable consumption must vary in accordance with the target population group (rural, urban, indigenous, etc.) and with the producers.
- h) As one aspect of environmental education, education for sustainable consumption bridges the gap to reach other spheres of public education, such as population studies, health education, education for human rights and for democracy, among others. By means of consumption, we Mexicans can reintegrate ourselves as citizens of an increasingly globalised world with our own distinctive, albeit plural, characteristics. It is not a case of defending essential "Mexican" identities because that would be absurd in a world of complex transitions which produces plural,

UNU-APEC Education Network Invitation Programme for
Education for Sustainable Development

provisional and nomadic subjectivities. It is a question of recognising existing social and cultural diversity and collectively constructing civilised proposals to achieve the right to equity in a world of differences.



Documento disponible en

<http://anea.org.mx>