

виразніше, відчувається необхідність розвитку механізмів, які забезпечили б раціональне використання ресурсів в інтересах усіх народів планети. Екологічне мислення формується тільки у процесі освіти і виховання людини, тобто психолого-педагогічного процесу впливу на індивід з метою формування у нього наукових основ природокористування. Це, також, і формування моральних принципів активної соціально-економічної позиції в галузі охорони оточуючого людину середовища та раціонального використання природних ресурсів. Іншими словами, це формування екологічного світогляду – як усвідомлення необхідності збереження спільного для всього людства довкілля.

Необхідність екологічної освіти і виховання нею вже усвідомлено частиною світового співтовариства. Освіта переросла національні рамки і набула міжнародного характеру. Питаннями освіти, в галузі охорони оточуючого людину середовища і раціонального використання природних ресурсів, займаються спеціалізовані організації ООН. Значний внесок в організацію і розвиток екологічної освіти вносять ЮНЕСКО та ЮНЕП. Розроблена ними, у 1975 році, Міжнародна програма з просвіти в галузі оточуючого людину середовища схвалена абсолютною більшістю країн – членів ООН. Зміст програми відображає як концептуальні підходи до розв'язання проблеми, так і стратегію освіти в галузі екології з урахуванням диференційованого охоплення населення різних груп, їх соціального досвіду. Мета цієї Міжнародної програми:

- координування дій країн у галузі екологічної освіти;
- сприяння збиранню й обміну інформацією про досягнення в цій галузі;
- розробка методології освіти і методики її здійснення;
- розробка національних програм і планів проведення наукових досліджень, пов'язаних з потребами і першочерговими завданнями в цій справі.

Програма передбачає випуск довідникової та інформаційної літератури, її розповсюдження в усіх країнах. Важлива роль надається бюлетеню "Контакт", який видається п'ятьма мовами і розсилається у п'ять регіонів світу фахівцям і закладам, які активно сприяють розвитку екологічної освіти і виховання.

Освіта з питань навколишнього середовища повинна відіграти важливу роль у раціональному використанні природних ресурсів кожною країною в охороні та поліпшенні навколишнього середовища. Світова стратегія розвитку освіти в галузі охорони оточуючого людину середовища полягає в наступному:

- освіта в галузі оточуючого людину середовища – невід'ємна частина процесу загальної освіти;
- необхідно концентрувати увагу на критичних проблемах;
- освіта повинна мати міждисциплінарний характер і сприяти усвідомленню екологічних цінностей, колективному благополуччю, приділяти основну увагу проблемі екологічного виживання людини;
- освіта в галузі охорони оточуючого людину середовища – процес, який повинен здійснюватись протягом всього життя, а не обмежуватись системою формального навчання;
- нагально необхідно об'єднати освітянську галузь охорони оточуючого людину середовища – з іншими формами навчання;
- тематика має стосуватись всіх розділів шкільної і позашкільної програм;

- освіта з охорони оточуючого людину середовища – це не тільки предмет для занесення в наявні шкільні програми, а загальноосвітній процес охорони оточуючого людину середовища.

Усвідомлення гостроти і масштабності екологічної проблеми, пізнання її глобального та регіонального характеру, створення системи екологічної освіти і виховання – це передумови для формування екологічної культури. Під таким кутом зору висвітлюється взаємодія людини і природи як моральна проблема усвідомлення місця людини у системі природних зв'язків.

Екологічну культуру можна визначити як специфічну соціальну програму людської життєдіяльності, закріплену в матеріальних і духовних цінностях, відповідно до вимог вимогами природного середовища. Необхідність вирішення екологічної проблеми, яка виникла перед людством, її залежність від поведінки людини і взаємозв'язок глобальних проблем (енергетичних, продовольчих, сировинних ...) настійно вимагає відповідних практичних дій і координації досліджень на локально-регіональному та міжнародному рівнях. Тобто необхідним є системний підхід до їх вирішення.

Тому аспекти екологічного виховання повинні базуватися на усвідомленні єдності та цілісності природи і суспільства як функціонально рівних частин біосфери. Необхідно усвідомити, що змін можна досягти, якщо критично оцінити свою діяльність в біосфері.

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THE ROLE OF THE TRANSBOUNDARY BIOSPHERE RESERVES IN SUPPORTING THE LOCAL SUSTAINABLE DEVELOPMENT

The described problems of creation transboundary biosphere reserves, and their role in sustainable development of territories, the submitted history of creation transboundary biosphere reserves and basic tools of management by them, is shown the basic problems transboundary biosphere reserves and road of their overcoming.

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Роль транскордонних біосферних заповідників у підтриманні місцевого сталого розвитку

Описані проблеми створення транснаціональних резерватів, та їх роль у сталому розвитку територій. Подана історія створення транснаціональних біосферних заповідників та окреслено основні інструменти управління ними. Зосереджено увагу на основних проблемах транснаціональних заповідників та шляхи їх подолання.

In the early 70s, UNESCO launched the *Man and Biosphere (MAB)* Programme, with the main objective to create an international platform for implementing cross-sectoral (nature and human sciences) scientific research – by taking the advantage of a worldwide network of 'valuable terrestrial and coastal ecosystems (the 'Biosphere Reserves')' – and for promoting solutions to reconcile the conservation of biodiversity with its sustainable use. The concept of the *Reserve* intends to be a comprehensive one: by a careful zoning process (identifying the *core* – mostly corresponding to a fully protected area – the *buffer* and the *transitional* zones) it is foreseen to support the development of the entire area, by involving the different stakeholders (local population, politicians, business community, international community) in the land use and resources planning processes.

It was clear very soon that many of these valuable areas were located across different countries' borders; so far, the idea of establishing the 'transboundary Biosphere Reserves' was the only possible way to integrate diverse national policies into the same master plan. The case of the Carpathian Mountains provides an example of this international effort: founded in 1998, the 'East Carpathian Transboundary Biosphere Reserve' encompasses portions of land belonging to Ukraine, Poland and Slovakia and intends to be an attempt in protecting and promoting the sustainable development of the area. The challenge of the integration of the traditional economic activities (mostly forestry and agriculture) with the new demands from the emerging markets (biodiversity and landscape protection, recreation, eco-tourism) represents the key factor for the sustainability of the territories included in the Reserve; the apparently contrasting demands arising from the society – on one side – and the sound natural resources management are in strong need of being reconciled.

1. The recent development of the 'environmental issue' at international level

The last decades of the XX century have been strongly characterised by the growing importance of the environmental issues in the international agendas; the socio-economic system of the dominant 'western development model' entered in a critical phase. In particular, the beginning of the sixties marked the start of a process of critics towards the impact of the market economies on the planet resources and its consequences on the human rights.

The crisis assumed its main 'environmental' characteristics at the beginning of the seventies, when – from the perspectives of the different traditional discipline approach – the strategic questions of the energy supply and resources consume turned into 'ecological issues', to be risen at international level (Pavan, 2001). The de-

licate question of the 'development' proved to be a comprehensive one, encompassing traditional socio-economic, as well as ecological aspects, at the same time. The international community started to pose questions and to find answers to these delicate issues, by promoting relevant international platforms for top-level technical and scientific debates. The turning point was marked by the 1972 Stockholm *International Conference on Human Environment*, out of which the *Brundtland Report* appointed all the States to clear responsibilities for a more sound development; the basis for the further elaboration of the 'sustainable development' concept were posed. Consequently, the *United Nations Environmental Programme (UNEP)* was launched.

For the first time, the 'environmental issues' became predominant in the political agendas and it was clear how the problems are not stopping at the countries' borders, thus requiring international responses. Agenda 21, together with the three main international conventions (Biodiversity, Desertification and Climate Change), which have been discussed during the 'Earth Summit' in Rio de Janeiro in 1992, become the key-documents on which the national governments have been appointed to implement the sustainable development principles.

Two main levels of intervention have been clearly identify: the international *fora* (mainly organised and implemented by the UN system and other relevant international agencies), which has been expected to play a supra-national coordination role, and the level of the single countries' Governments, which have been given the main task to implement the resolution at local scales.

Nevertheless, this process is taking more time than expected and the coming Johannesburg *UN World Summit on Sustainable Development* is standing as a monitor for the work that is still to be done. In particular, the socio-economic conditions of the different regions and countries in the world are marking diverse speeds in the processes of sustainable development programme implementation. So far, the pivotal role of the international agencies is still crucial in the attempt to harmonize the interventions and to balance the excessive differences.

2. The un response: unesco and its mab programme

Much earlier than the 'Rio Conference', UNESCO realised the importance of reflecting upon the use of the world resources within the development frames; in fact, the agency promoted and organised the *Conference on Rational Use of the Biosphere Resources*, already in 1968.

Since that time, most of the international conferences have been characterised by very sectoral and technical meetings, which mostly 'improved the distance between the technical-scientific and the socio-economic knowledge' (UNESCO, 1979). One of the most relevant results of the Conference was the launch of the *Man and Biosphere (MAB)* Programme, which has been operating since 1971. The Programme was rooted in the traditional biological and ecological disciplines, where most of the initiator scientists came from; in fact, they were aware of the delicate natural systems functioning schemes, studied and scientifically organised by the recently developing ecological sciences. Nevertheless, with plenty of far-sightedness, they realised that a combination of natural and social sciences was ne-

cessary to approach holistically the human and natural ecosystems relationships. The Programme has been founded, since its very origin, on an interdisciplinary approach, by integrating contributions from both natural and social sciences.

The dimension of the programme was intended to be global, as only a worldwide perspective was perceived as the necessary one to properly study and understand the delicate mechanisms of the evolving ecosystems and the interrelations between man and biosphere. The Programme's main issues are clearly expressed by its first Council's guidelines:

- the clear need to combine the traditional scientific approach with the more recent socio-economic one;
- the interdisciplinary approach has to be implemented in all the major Programme's projects, to better understand the relationship between the human populations and their environments;
- the constant development of the research aspects of the Programme has to be promoted, mostly focussed on the better understanding of the carrying capacity of the natural ecosystems;
- the importance of the worldwide networking has to be stressed, to better understand the different bio-geographic aspects and to elaborate valuable scientific approaches to favour the biological diversity at the global scale;
- the projects implemented by the Programme have to be 'sustainable', both technically and financially;
- the importance to plan sound environmental education programmes has to be stressed, to be developed at the level of the single projects' areas;
- the strategic importance of the harmonisation of the scientific approaches has to be developed, in order to have comparable data to be processed, and the need to plan periodical revision of the projects to be performed on a regular basis.

These paradigms of the MAB Programme are still very valid and – in the light of the more recent environmental issues' developments – being part of a larger and growing awareness toward the sustainable development.

3. The main mab tool: The biosphere reserves

Since its beginning, the main implementation tool of the Programme has been the creation of a world-wide network of 'valuable terrestrial and coastal ecosystems' (UNESCO, 2000), called 'Biosphere Reserves (BRs)'.¹

In the intents of the Programme, these territorial structures are called to play a strategic role at the scale of the local development, as engines for the sustainable development. In fact, with support of a sound zoning procedures, three main different areas are to be identified to characterised a BR:

- the *core area*, normally centrally located, as corresponding to a zone which is already protected by law as a valuable natural resource (national or regional park, nature protection area, etc.);
- the *buffer area*, usually surrounding the core, which is characterised by an already existing presence of human activities and is expected to be planned in accordance to the principles of the sustainable development;

- the *transitional area*, which acts as a liaison between the buffer and the surrounding territories which are not included in the Reserve; the intensity and the features of the human presence is here higher than on the previous areas, but still compatible with a sound local development.

The regional character of the BRs is another important feature of theirs; "even if in the first definition of Biosphere Reserves it is stated clearly that the type of ecosystem proposed for protection in the 'core zone' must be well representative of the bio-geographical region it is found" (Breymer, 2000). The original "Biosphere Reserve concept was by definition well before its time in the early 1970s, while now, at the eve of the 3rd millennium, it is very much in time" (Phillips, 1998); in fact, the reaction of the national Governments¹ to the Programme has been positively growing, reaching the existing number of 411 Reserves, located in 94 different countries.

As being distributed all over the world and covering almost all the main ecosystem typologies, the BRs differ very much area by area; nevertheless, they encompass the main three functions in anywhere:

- identification and conservation of the biological and natural diversity;
- development of models of sound land use practices which facilitate the local sustainable development;
- definition of sites which are particularly appropriate to locate research, environmental monitoring and education activities.

The key feature of the BRs planning and management activities is the involvement of the existing – as well as the potential – stakeholders in the decision-making processes; the bottom-up approach adopted at local level intends to be combined with the link with the regional and world-wide network of similar initiative, in order to intensify the positive synergic effects and to mutually exchange the results of the research activities carried on at any single location.

4. The key role of the transboundary reserves

Many valuable natural areas are located nearby or across nations' borders, both for ecological and political reasons; in fact, in many cases the States' limits have been traced along 'natural lines' (mountain chains, rivers, etc.) and, strategically, protected areas have been identified nearby the frontiers. The approach to a sound management of these areas cannot be than an international one, calling for a transboundary-planning frame. This is also to prevent the common phenomenon of the abandonment of these areas, which has been affecting very much many locations (example can be especially found on the mountains, such as the Alps, the Carpathians and the Tatra). As far as the formal aspects are concerned, BRs lack a proper independent legal status in the majority of the countries. This is seen both as strength and as a weakness of the Programme; this "allows a considerable flexibility and room for putting new ideas into practice in a variety of contexts: BR managers does not depend solely on applying rules and regulations to carry out specific activities, except when these exist for the structure in charge of the site. On the

¹ The original term 'Biosphere Reserves' has been recently criticized (*First Urban Biosphere Group Meeting Report*, 2001), as not corresponding to the evolving complexity of the territorial structures so defined. Additionally, the word 'reserve' evokes locations far away from any human settlements and strictly set aside from any activities, so far not fully reflecting the overall concept of the integrated land use planning originally given by the Programme.

¹ In fact, the process of the Biosphere Reserves designation starts from the individual States' initiative, which are expected to identify and propose to UNESCO the most valuable terrestrial and coastal portions of their territories to be included in the Programme; only upon a strict process of monitoring the characteristics of the sites - which are expected to match the defined requirements - the areas are eventually officially included in the MAB list.

contrary, BR managements relies on convincing the local communities, and of the obtainment of their support before any action can be undertaken with the MAB label. In this way, the existence of a BR can facilitate the cohabitation of different structures concerned with the piece of land" (Bioret *et al.*, 1998).

Nevertheless, the concept of the transboundary BRs has been criticised by some sides of the international community, which mainly state how the process of their establishment is still mostly driven by political, and countries' prestige reason rather than substantial ones.

5. Conclusion: the mab programme as a challenge for Ukraine

As stated by Bridgewater & Cresswell at the 1996 IUCN *World Conservation Congress* in Montreal, "land management and planning have traditionally occurred using the cadastral base. The division of land into ownership parcels, larger without any ecological context, is a planning legacy that impact strongly upon our ability to plan biodiversity conservation and management in an effective way. Effective, long term management that will conserve ecological processes, crucial to the capacity of the land to sustain human communities, needs what Barker (1992) terms as a 'paradigm shift'. That shift is offered by the Biosphere Reserves, providing a regional basis for biodiversity conservation and management". The lack of a specific legal frame for the BRs zoning and planning processes, relies mostly on the commitment of the local managers and policy-makers. In the specific case of the countries in transition – and, in particular of the former USSR republics – "there are undoubtedly many players in environmental agencies who regard the lack of clear regulations and entitlements as a green light to refrain from any kind of activity" (Breymer, *op.cit.*). Ukraine counts 6 BRs¹, out of which 2 are transboundary; in fact their locations are quite remote and still reflect the 'traditional' approach to the UNESCO Programme. In the frame of a country's economy which is in transition to the free market, a more modern approach is expected to identify the environmental policy for the sustainable development; in particular, BRs could represent a modern tool to implement a sound multi-actors land use planning process, which is expected to incorporate the traditional local uses and habits into a more flexible cadastral system.

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¹ The Ukrainian MAB BRs are the following ones: *Chernomorskiy* (founded in 1984), *Askaniya-Nova* (1985), *Carpathian* (1992), *Shatskiy* (2002). The transboundary BRs are the following two: *Dunaiskiy* (at the Danube Delta, jointly established with Romania in 1998) and *East Carpathians* (established together with Poland and Slovakia in 1998).

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