

## **ANALYSIS OF PROBLEMS OF ECOLOGICAL EDUCATION IN THE TURKIC COUNTRIES (CASE STUDY ON AZERBAIJAN AND KAZAKHSTAN)**

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### **INTRODUCTION**

Ecological problems in all regions of the world are often the main factor restricting local economic development (Abbasov and Kondratyev 2006; Simonowicz and Carson 2003). In the past 30 years they have been the most catastrophic causes affecting 800 million people per year on average (Dutta et al. 2006). Some international organizations reported that the number of people affected by floods, climate changes and droughts have been increasing for the last 100 years. There is high probability that frequency, volume and duration of floods will be increased in the future, due to global and local ecological disasters. Research works that has been carried out on different parts of the world obviously indicate growing impact of ecological problems on climatic patterns (e.g. McBean and Motiee 2008; Adamowski and Bougadis 2003) and water resources (Abbasov and Mahmudov, 2009; Abbasov and Smakhtin, 2009).

There is a growing awareness that ecological education will play a key role to stop degradation of ecological dignities of the world in the next dozens of years (Abbasov and Mashtaeva, 2008).

There is high level of ecological education in developed countries, where most of ecological issues are partially or completely solved. E.g. Japanese experience of environmental management become visible in daily life of all people that manifest itself in every step in the form of clean environment, including clean surface waters, clean streets etc. (IWRMI). American way of ecological education can also be considered as a most effective way to increase ecological awareness of broad masses. Regular surveys and awareness measures taking by various institutions make American people very responsible to manage resources safely and correctly, gradually increasing their knowledge and understanding regarding environment (Heathcote, 1998).

Unfortunately, many countries of the world, including Azerbaijan and Kazakhstan are in the early stages of their experience to solve environmental problems increasing public awareness for the wide layers of population. It is widely accepted that in these countries most of environmental and ecological issues are generated from irresponsibility of local officials and low level of knowledge of indigenous people. E.g. the issues regarding the management of solid wastes in Azerbaijan are directly related to low awareness level of residents that are rather irresponsible to manage their wastes. As a result, in most cities of Azerbaijan streets are sometimes jammed with garbage and other daily wastes. Such examples could be easily found regarding other natural dignities, since most of them are easily wasted and, people not knowing value of their property become not interested to manage and save their resources.

Given that school and university education is important to create impression and increase awareness on the society, gaining a necessary knowledge about environment and its significance in schools is very important. Regular survey activities taken by various institutions could also be very essential to increase awareness of people concerning environment and natural resources, and reduce negative impacts of environmental related issues. However, in curricula of secondary school education of aforementioned countries there are not enough materials concerning environmental issues. Moreover, university education has also immense problems to prepare high level specialists in this field. Additionally, most of NGO activities has surface character and does not generate feedbacks from society.

To increase public activities in solving of environmental related issues would be very urgent increase quantity and quality of ecological education in schools and universities, simultaneously increasing role of public activities in implementing advanced methods of environmental management. Hence, there are strong suggestions that most of environmental related issues become very easily solvable involving people through awareness works.

## **CASPIAN CASE**

Last year authors of this report have jointly conducted a project “Curricula development for secondary schools of Azerbaijan, and Kazakhstan (related to Caspian Sea)”. This was a small, but rather effective project (funded by Department of State, USA) to bring school representatives together with the purpose of solving current educational problems regarding the Caspian Sea. Caspian Sea is the largest lake of the world and has a great value in economic and cultural life of people, living in surrounding countries. It deeply impacts environmental condition in near-by areas as well. This gigantic lake contains

more than 90% of the world resources of sturgeon and more than 10% of world's oil resources. Over the last times importance of the Caspian Sea has increased even more, due to collapse of the Soviet Union and getting independence of surrounding new countries. Energy production and export from the Caspian Sea region becomes most important branch of the economies of Azerbaijan, and Kazakhstan. Construction of new pipelines through Caspian Sea made it one of the most important energy sources and transport roads of the world. In nowadays, role of the Caspian Sea in economic life of the western countries increases as well.

Because the Caspian Sea provides economic value to many nations, wise management of its resources is essential to maintaining peace and economic development in the region. However, low level of the public awareness does not make possible to find ways to solve many problems related with many issues of this water body. For example, illegal fishing has been the main reason for the sharp decline in sturgeon and black caviar and other native species.

This project has aimed a goal to prepare wide curricula materials regarding the Caspian Sea and its economic, ecologic and cultural importance. Various lesson plans reflecting various issues around the Caspian Sea were included to the prepared lesson plans. Participants-professors of the project were selected from various university and schools of Azerbaijan and Kazakhstan, which were prepared various lesson plans. Most of developed lesson plans represent integrative curriculums which can be used by teachers of secondary schools of Azerbaijan and Kazakhstan. The following topics were chosen for the proposed lesson plans:

- Cultural values of the Caspian Sea (History, Public Education)
- Economic values of the Caspian Sea (Economy)
- Oil production on the Caspian Sea (Economy, Geography)
- Political problems on the Caspian Sea region (History, Geography)
- Environmental problems of the Caspian Sea (Geography, Ecology)
- Silk way, through Caspian Sea (History, Geography, Public Education)
- Energy security on the Caspian Sea region (Geography, History, Politics)
- Biodiversity on the Caspian Sea (Ecology)
- Pollution of the Caspian Sea (Ecology, Geography)
- Oil history of the Caspian Sea (History)
- Our neighboring nations in the Caspian Sea region (Geography, History)
- Kazakhstan, Azerbaijan, and Europe –New Union around the Caspian Sea
- Black caviar just for sturgeons (Ecology, Public Education)
- Ecological education in Caspian countries

## RESULTS

On December 27<sup>th</sup> the symposium was organized in Baku, Azerbaijan. This symposium was attended by 25 teachers and education officers, including 5 teachers from Kazakhstan. It was a good possibility to establish contacts between teachers of Kazakhstan and Azerbaijan.

This project was a first successful attempt to bring together school and university instructors of Caspian countries. Participants of the symposium came to an important decision that Caspian Sea cannot be studied separately and it must be perceived by societies of Caspian countries as whole ecological and economical area. Therefore, in this symposium for the first time, the idea to establish Caspian Educational area was proposed.

As a result of the project various curricula samples were developed. There are a variety of ideas and approaches to teach school children in these curricula samples are given. All of developed curricula models were printed in the form of compact brochure in Azerbaijani and Kazakh languages. These brochures were sent to 150 schools and libraries of Azerbaijan and Kazakhstan. These materials will partially solve the problem concerning scarcity of educational means in school education of Azerbaijan and Kazakhstan and can be used over long-term period. Moreover it will stimulate to prepare similar curricula models, regarding various ecological and social problems of Caspian nations in the future.

Apart from that the following topics were discussed:

- Reforms in education of Azerbaijan and Kazakhstan
- Problems of integration to western system of education (Bologna system)
- Scarcity of teachers in provincial schools and their reasons.
- Problems of teaching of Caspian Sea in schools of Azerbaijan and Kazakhstan its solution
- Problems concerning access to secondary and university education

The following patterns make possible to consider this project as a successful mission:

1. Joint work of teachers from different countries can be considered as a good beginning for future partnership.
2. Publication of the curricula samples in Kazakh and Azerbaijani languages. Both teachers and students in Azerbaijan and Kazakhstan will use these samples in the future, over long-term period which will increase effectiveness of the project. In this way, teachers in Azerbaijan will use lesson plans of Kazakh authors and vice versa. Also, approaches of Azeri authors will be very

interesting for Kazakhstan teachers. Authors suggest that these brochures will fundamentally contribute to the level of public awareness, regarding the management of the Caspian Sea.

3. On December 10-13, 2008 the integrative lesson was conducted in the school #20 Baku, Azerbaijan. This lesson was organized by Khuraman Kazimova (Modern Educational Complex, Baku), Mehriban Kazimova (Computer College, Baku) and Akbar Qodjaev (School #20, Baku). This lesson gave a full knowledge to students regarding various aspects of the Caspian Sea. The similar lesson was organized in Astana, by teachers of Modern Economic Lyceum and Eurasian National University.

4. Participants decided to prepare integrated educational text-book about Caspian Sea. In the preparation process will be participated not only specialists from Kazakhstan and Azerbaijan, but also from Turkmenistan. In this book historical, ecological and economical role of the Caspian Sea will be highlighted.

## CONCLUSIONS

1. Since mass education of people is very important to increase knowledge and information of people about the environment and natural resources, school education has to play a key role in this path. Therefore, there is an urgent need to increase quantity and quality of ecological education in all educational institutions of Azerbaijan and Kazakhstan.
2. To increase public activity and involve people to the solving of environmental management issues, it will be very useful to provide wide awareness works among population, through surveys, courses and other outreach activities. These measures have to help people to understand current environmental issues and benefits which might come from solving them.
3. In order to increase public participation in the processes of solving of environmental related issues, governments of Azerbaijan and Kazakhstan should demonstrate efforts to gain additional means for mass education.
4. Authors suggest that there is an urgent need to study experience of developed countries and implement these advanced methods into Azerbaijani and Kazakhstani experience.
5. People should have direct accesses to the information regarding the situation of the environment. From this viewpoint, self-dependent NGO surveys and original researchs can maintain people about the quality of foods and water they use. Having knowing about the quality of the used resources, they will be more interested in solving them.

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***Summary*****ANALYSIS OF PROBLEMS OF ECOLOGICAL EDUCATION IN THE TURKIC COUNTRIES (CASE STUDY ON AZERBAIJAN AND KAZAKHSTAN)**

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In this study some issues of the ecological education in Azerbaijan has been discussed. Given that school and university education is important to create impression and increase awareness on the society, gaining a necessary knowledge about environment and its significance in schools is very important. To increase public activities in solving of environmental related issues would be very urgent increase quantity and quality of ecological education in schools and universities, simultaneously increasing role of public activities in implementing advanced methods of environmental management. In 2008 authors of this report have jointly conducted a project "Curricula development for secondary schools of Azerbaijan, and Kazakhstan (related to Caspian Sea)". This was a small, but rather effective project (funded by Department of State, USA) to bring school representatives together with the purpose of solving current educational problems regarding the Caspian Sea. This project has aimed a goal to prepare wide curricula materials regarding the Caspian Sea and its economic, ecologic and cultural importance. As a result of this project, various curricula has been developed.