
ENVIRONMENTAL REHABILITATION OF SUMGAI, UNDP PROJECT

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SUMMARY

This paper analyzes the “ecological pathology” which has developed in major industrial cities, in particular, Sumgait, Azerbaijan Republic. From a historical perspective, the intense and extensive development of Sumgait failed because of the intense concentration of heavily polluting industry which did not ensure safe industrial systems and well founded requirements for their use. Neither the appearance nor the infrastructure of Sumgait was adequately planned and implemented to address the demands of this concentration of development. The development character of Sumgait and its subdivisions, especially industry, has already predetermined in many respects the ecological situation in the city and in the region. As a result, Sumgait has been listed as one of the priority cities of the former USSR with the most contaminated environments. Ecological rehabilitation of the Sumgait region has been considered, in particular, by establishing a Special Ecological Area and following through on all that follows from that designation to correct past problems and properly plan for the future.

1 SUMGAI - PROBLEMS AND MEANS OF ECOLOGICAL REHABILITATION

“All is connected with all”; “All must somewhere disappear”; “You get nothing for nothing”; “Nature knows better” - so has formulated Barry Commoner, the author of the remarkable book “Closed Circle,” the main laws of ecology in the manner of four aphorisms. Without taking into account these laws, we humans can ruin all alive and ourselves in addition. Regrettably, in many circumstances, we do not take this potential impact into account, but simply underestimate or, like the ostrich, having dug his head into the sand, do not notice them. Then ecological crises arises with all their resulting consequences.

Practice shows that in many circumstances, the obstacles to solving ecological problems often are not found in the technical or financial possibilities of solving a problem, but in weaknesses characteristic to human nature. It is impossible to attribute this to human egoism. Such behaviour is a result of failure to understand what is going on, is shortsighted and insufficient thinking. We should all understand that natural resources protection is key to future prosperity, much more reliable than any inconsistent course of policies. It not only guarantees a country the power required to protect against any threat, but ensures prosperity after threats are addressed.

By calling our ecological crisis a pathology, it corresponds to having been created in ecologically adverse cities. Pathology — is a science, dealing with causes, mechanisms and live organisms in disease situations. One can maintain that cities are subject to the pathology process as well as industrial processes, regardless of their sizes, as a product of a social organism. This phenomena, reflecting deviations from existing ecology-economic, and social, law and moral standards, can be named city pathology.

What are the reasons for this negative ecology-pathological phenomena arising in cities? There are two somewhat contradictory reasons, which can explain the emergence of ecological pathology. According to the first version, cities, originally having been established in order to provide safe and suitable conditions for people functioning and living, at the end turned out to be uncontrollable, while ecology-economic and social processes, once upon a time having begun, continue to evolve, regardless of human being will, preventing its normal development.

The second reason explains the causes of the ecological pathology in the nature of society. Those governing according to "managing groups", who organize a town space and its structure in accordance with their own interests. In this instance for maximum increase of production and profit.

The partial contradiction between these two explanations is based only on the fact that ecological processes are developing simultaneously, spontaneously, and systematically. Only both versions, taken together, can explain ecological pathology.

Historically poor methods and intense development reflected on Sumgait's appearance and its infrastructure, and great mistakes were made when designing safe industrial systems and requirements for their use. This, in its turn, has brought about concentrations of industry, unacceptably large amounts of extremely dangerous chemicals and technologies, which resulted in negative impacts on the population and environment. From the first, the industry of Sumgait, a main source of environmental pollution, developed intensively, covering all aspects of industrial production. High rates of industrial development over an unusually short time (1950-1965) allowed Sumgait to rank among the leading industrial centres of the former USSR. In this period all major industrial enterprises were commissioned, but after there were intensive increases of basic production capacities.

The multidisciplinary nature of the industrial development and accumulated irregularities in its structured subdivisions has created a problem of one-sided development of industry that substantially affected the ecological condition of the city. So, over a period of 1970-1985 the industrial infrastructure including primary development of chemical and petrochemical industries increased threefold, the assortment of products being manufactured also increased considerably. Increases in production capacity and the amount of produced product, has resulted in expanded use of raw material and a growing challenge of cargo turnover, water-energy balance, and amount of industrial waste disposal in the surrounding area.

The nature of Sumgait development and its structured subdivisions, particularly industry, in many respects, has already predetermined the ecological situation in the city and the region, resulting in Sumgait's placement on the list of priority cities of the former USSR with the most polluted environment. Excessive industrialization has also brought deformation of the population urbanization process, where an intensive transition of the labor force from rural regions of the Republic (especially west, adjacent to a border with Armenia) into the industrial area took place. When the main factor of economic growth is industry, into which main capital investments within a long time are channeled, production dominates simple and extended labor force.

Under the socialist planned economy, when in a literal sense all is planned and financed from one Center, this means that strategies bring profit to the Center. This inevitably leads to losses to everybody involved in this strategy. When a certain level of industrialization is exceeded, the damage, inflicted by polluting the environment, exceeds profits from industrial production. Despite having reached huge economic successes, the extensive way the city was industrialized has already brought by the middle of the 1970's, extensive environmental pollution in the region:

- First, the industrial complex of the city is characterized by a high degree of concentration of industrial production, that is 6 times greater than any corresponding factor in the Apsheron economic region. This is true for the capital Baku as well, also, in contrast with many other industrial centers of the former USSR.
- Second, factories are characterized not only by low technical and economical factors, but by high materials consumption, energy consumption and low share of product, generated the effect of which became a greater amount of non-utilized by-products and wastes.
- Third, extended exploitation of physically worn-out equipment leads to unstable work, frequent damage, and increases of uncontrolled and volley exhausts. The absence of goal-directed work on modernization and renovation of operating industries in “stagnant” times has brought about the fact that more than a half of industrial complex equipment is in use more than 20 years, 7 percent more than 30 years and etc. The collapse of the former USSR founded on the communist ideas has left an inheritance both in achievements and its problem. The negative development of social-political processes on this enormous territory, economic relationships’ breach have brought about significant isolation of not only sovereign Azerbaijan, but its industrial base as well. In particular, Sumgait became the reason for rapid decline of industrial production, loss of traditional raw materials markets, intensification of the economic and financial crisis, reduction of social-ecological programs, etc. Having been established over the years as the industrial center it faced the threshold of inconvertible destructive processes, further development of which might have become a catastrophe on a national scale.

In these complex conditions, in the Spring of 1994 in accordance with the initiative of the president of Azerbaijani Republic Heydar Aliyev, a global scale of work was started to create a “Free economic area” on the territory of Sumgait on the basis of new economic relations. One might think this bold idea, aside from solving greater social-economic problems, has enormous political value in recovering the prestige of Sumgait in the eyes of the world. Azerbaijan’s political and economic independence and organization of “Free economic area” on the territory of Sumgait has put in principle a new system of goals in solving ecological problems of the city, achievement of which requires complex consideration of economic problems from the point of view of environmental requirements and radical change in the forms and methods of identifying optimal options of city development.

One can speak about problems facing us only after having answered a question - what and how are we going to rebuild? “Serious problems, which we face, cannot be solved on the same level of consciousness, which characterized when we generated these problems”. These words of great Albert Einstein can serve as a starting point where the first difficult step has already been made. In the opinion of foreign and local experts, one of the most important documents, when creating free economic areas is their ecological safety. This concept that must be defined by:

- Ability to understand the situations created by new conditions.
- Prevention of ecological crises prevention with the cardinal change of goals, priorities for development and interactions.
- Complexity and systematic character of the work being conducted.

The application of ecological concepts is designed to solve these problems as well as provide rational natural resource usage and demographic problems. With democracy and a market economy, a new approach must raise the economic and environmental work of the city to a higher qualitative stage, rationalizing economy of all types of resources, material, raw material and energy, integrated economic development decision-making. Practice shows that it is impossible to achieve success in natural resource protection, by solving only selective problems or trying to save some resource separately from the rest. It is impossible to solve ecological problems piece-meal. We often ignore this important principle and never completely use it in practice. Which is why future development should be based on the following basic ecological policy principles:

- Not analysis, but an action oriented program must be the final product of ecologically sensitive development planning.
- Priority must categorically be attached to programming and to scientific studies more closely related to activity and activity types studies, in the first place, programming and organizational management.
- Changing city facilities and structure with an orientation on scientifically based resource saving, wasteless technologies, which solve the ecological crisis. No matter how many treatment facilities we build, commissioning them behind by 10-15 years we only enlarge the polluting of the environment.
- Rebuilding of city facilities should be based on new value systems: scientific, religious and artistic. Only new, ecology-based value systems can ensure a radical rebuilding and only such rebuilding is capable to lead out us from the ecological dead end.
- Transition from natural prevention to activist approach in forming ecological policy.

Programming regional facilities with ecology-based technologies are much more effective, than attempting to build large-scale often delayed and of poor quality-treatment facilities.

- It is necessary to change the basis of our activities, rather than helplessly fight with the mounting environment pollution.
- It is necessary to do more programming and less building.
- It is necessary to think on a global scale, but act locally.
- It is necessary to change our environmental strategy, based on a natural approach, on activist strategy.
- Ways of ensuring of Sumgait ecological safety with the account of prospect and nature of development of industrial production complex should be a result of ecological safety concepts. Guidelines on how this complex can work are as follows:
 - Priority capital investments, as well as foreign investments should be directed to the reconstruction and technical renovation of operating industries for a maximum renovation from main funds.
 - Further specialization of enterprises on the basis of local raw material resources using modern technology in combination with integrated processing to avoid product wastes.

- Realization of measures on the environmental protection, ensuring major improvement of ecological situation, including mainly development of processes with technological recycling etc.
- The ecological concept under development must be targeted on the struggle with causes of disasters, rather than with disasters themselves.

Causes are to be eliminated in time to avoid consequences. This process should be thought-out, unceasing and systematic, rather than be dictated by emergency and be forgotten in regular conditions. The only thing is clear that, demolition and transformation of what we got in inheritance is a rather complex task, which will require from us a new thinking, patience, hard and purposeful work.

