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Responsibility and policy relevant aspects of ecological interests in the activities of different social actors: sociological point of view

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Water problem issues is too important for Ukraine that caused not only by the state of water supply resources, technologic regimes of water treatment, the number of emergency and regular pollution source but the attitude of population towards this problem, the dominance of economical and ecological priorities in mass consciousness, the users' mood of the citizens. Sociological researches show the stereotypes of ecological consciousness of population can be determined as principle factors of human behavior regarding different spheres of the environment including the hydrosphere. They are also important for finding out the causes which have to be taken into the consideration by other social actors during decision making. At that time the change of stereotypes of ecological consciousness is considered as the level of real change of situation within political and social negotiation process. In this context policy relevant aspects of ecological interests of the social actors (political parties, NGO, business) are investigated.

On basis of empirical research the estimation of ecological perception and behavior of different

social groups, willingness to cooperate is conducted. The results of issues demonstrate that the division of population only partially depends on occupation and residence of population. The main factors are the formed stereotypes among which the most spread aspects are the following: 1) the necessity of environment renewal; 2) the determination of the role of social actors participated in this renewal; 3) the readiness of the citizens to the individual participation in corresponding ecological activity. The sociological indicators were used: the public trust to the ecological information received from the bodies of various levels executive power; individual people participation in environmental activity; the role of different social subjects in solving of ecological problems and individual readiness of citizens for cooperation with them. These data opposes to the indices of satisfaction/dissatisfaction of Ukrainian population by the ecological situation residentially, the disquietude of water supply, soils, air and other components of environment; evaluations of its influence on the health and migration behaviour of anthropogenic factors. The determined stereotypes of ecological consciousness limits largely the successful achievements of political decisions and support of effective social dialogue between various part of society engaged into the solving of water issues. To solve this problem it is necessary to change, firstly, the opinion of population about the factors of rehabilitation and environment protection, increasing of individual interesting of the citizens in development of successful strategies regarding the environment.

Influence of phytoplankton bloom and heterotrophic bacteria on dissolved organic matter in coastal water

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Dissolved organic matter (DOM) in the sea, one of the largest reservoirs of organic matter on the earth's surface (Ogawa and Tanoue, 2003), plays an important role in the global biogeochemical

cycles and microbial loop (Pomeroy, 1974 and Azam and Hadson, 1977 in Hedges, 2002). Although phytoplankton has been identified as one of the autochthonous DOM sources (Nagata, 2000) but the lacks of significant correlation between phytoplankton abundance and DOM were reported. In addition, DOM supply would activate microbial food webs by means of heterotrophic bacteria (Azam et al., 1983). This study was conducted in Yashima Bay, Seto Inland Sea to clarify role of phytoplankton on DOM formation. Monthly samplings or more were conducted and determined the concentration of chlorophyll *a*, phytoplankton and bacteria density and DOM included dissolved inorganic nutrients and fluorescence excitation emission matrix (EEMs) during February 2005 to August 2006. The correlations between phytoplankton abundance, DOM concentration and characteristic and also bacteria density during blooming and non-blooming periods were evaluated.

Good relationship between chlorophyll *a*, bacteria density with DOM concentration and characteristic was observed. During the both summers, DON, DOP, CDOM fluorescence, UV₂₆₀ formation and EEMs corresponded with the onset, development and decay of phytoplankton bloom. High DON, DOP, CDOM fluorescence (Ex/Em 350/400-600 nm) and UV₂₆₀ were observed only summer during blooming periods. Moreover, high peaks of DOM were observed after the peaks of chlorophyll *a*. Significant positive correlation between DON ($r^2 = 0.66, p < 0.01$), CDOM fluorescence ($r^2 = 0.67, p < 0.01$) with chlorophyll *a* were observed. DOM characteristic also corresponded with the development of phytoplankton bloom during the both years sampling. When phytoplankton biomass was low, the aquatic DOM pool was dominated by humic-like substances presumably by-product of bacterial degradation. In contrast, dominant DOM pool was tyrosine-like substances, exuded by phytoplankton in exponential phase, during phytoplankton bloom periods. Closely or similar to Redfield ratio of DON/DOP molar ratios during phytoplankton bloom confirmed our conclusion on phytoplankton is one of the autochthonous DOM sources in Yashima Bay. However, there was no correlation between DOP and UV₂₆₀ with chlorophyll *a*. During the sampling period, bacteria density in the surface water corresponded with DOM formation. Significant positive correlation between DON ($r^2 = 0.51, p < 0.01$), DOP ($r^2 = 0.32, p < 0.05$), CDOM fluorescence (r^2

$= 0.63, p < 0.01$), UV₂₆₀ ($r^2 = 0.54, p < 0.01$) with bacteria density were observed. Thus, supply of high DOM concentration, released from phytoplankton, affected on the increasing of bacteria as a food source. Namely, the increase of bacteria density during blooming period corresponded with DOM may show another role of bacteria on new organic matter producer in the aquatic system.

Concept of integration in shoreline management

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The significance of integration in coastal zone management has been the topic of various issues and comments and the investigation in this variety expresses each commentator's span of vision. Governments, private organizations, national institutions, scientists and researchers, experts and professionals have explained "integration" from their own point of view and each explanation can be an exact description in the related specific situation. For instance, although in some Pacific or Asian countries this word has been utilized in a vast extent as an indicator to a suitable policy from cultural and executive point of view, the authorities in Australia do not agree with the utilization of this word as they believe it might not be in coordination with the fragmented Australian official and governmental system. Perhaps this disagreement is due to the difference between "integration" and "coordination".

An integrated system is a complete and comprehensive system, although it may have subordinate components. But a coordinated system owns independent and usually equivalent components working for a common purpose. On the other hand, a kind of spatial point of view governs the meaning of integration in integrated coastal zone management. Spaces considered in the integrated coastal zone management are as follows:

Coastal zones, near shore waters, offshore waters and open seas Although the natural phenomena in these four zones are similar, the integration of management systems in these zones faces different obstacles due to the various differences in the nature of possessions, governmental revenues and organizations ruling them. (Table no. 1)