USE OF BIOLOGICAL INDICATORS IN MARINE POLLUTION MONITORING OF THE BLACK SEA COASTAL ZONES

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Biological indicators are effective tools for screening, monitoring and identifying environmental stress on marine organisms. Various methods and organisms have been used to evaluate or predict the effects of pollution. The most common approaches are laboratory test of toxic effects study and measurement of stress response on some physiological or biochemical parameters. But environmental stressors are more complex and they effect on different parameters. Thus it is very important to select organisms (biomonitors) and their parameters for detection the toxic response of contamination.

Toxic effects of domestic sewage in different concentrations on marine microalgae *Platymonas viridis*, *Tetraselmis suecica*, *Dunaliella viridis*, *D. salina*, *Prorocentrum micans*, *Sceletonema costatum*, *Stichococcus bacilaris*, crustacea *Artemia salina* and fish larvae *Atherina hepsetus* were studied. The different sensitivity of microalgae species to domestic sewage were demonstrated. Effluents in high concentrations decreased *Artemia* nauplia hatching and their heat production, led mortality, modified of the growth rate and behaviour. Comparative study of fish larvae habited in the pollution and non-polluted bays was demonstrated the induction of antioxidant enzyme activities and decrease of heat production in fish from highly contaminated regions.

Thus all studied marine organisms (microalgae, crustacea and fish larvae) are sensitive to contaminants containing in domestic sewage and could be used as biologycal indicators for evaluation and prediction of Black Sea environmental stress and for ecotoxicology laboratory studies.