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 **SS-019 . Biocidal use and its potential risks in aquaculture in Turkey**

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Aquacultural production is a rapidly growing industry in our country, as well as all over the world. It

consisted 73.8 million tons of fish production out of 167.3 worldwide in 2014, as 240.3 thousand

tons of fish production out of 672.2 in Turkey in 2015; resulting ın an increasing impact on sea and

fresh water ecosystems.

As the sector expands, there is an increasing use of the disinfectants, chemicals and antifouling in

the production areas. Regulations have been made about these chemicals for the potential risks

upon the enviromental and human health. In order to prevent contamination, the directive 98/8 of

the European Union has permitted the use of disinfective agents (iodoforms, haloorganic

compounds, aldehydes, metal salts, hydrogen peroxide) in caviar, ponds and equipments, while the

use of other chemicals has been subject to special permission. Biocidal administrations has been

found to be more harmful in marine environment. Particularly, biocidals as DCOID, chlorothalonil,

dichlofluanid, diuren and zineb which are found in antifouling paints, used in the prevention of the

equipments in aquacultural production are considered to be highly toxic chemicals.

Three possible risks may be considered about the use of biocidals in production,

1. Biocidals accumulating in fish and shellfish may contaminate their predator and human

consumers,

2. Resistance may develop in bacteria

3. Pollution of natural ecosystem (natural resources of production: river, lake fishery, marine)

Knowing the presence of biocidals in water environments and its related risks, and ensuring the

safe use of water profile are considered essentially important for protecting aquatic organisms and

public health. More scientific research in this regard is needed.

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