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WATER QUALITY CRITERIA FOR POLLUTION CONTROL

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Interest in control of water pollution is comparatively new to the countries in the Asian-Pacific region. Population growth, urbanisation, industrialisation, land development and increased accent on food production have all contributed to the increase in pollution of the aquatic environment. The causes, types and sources of pollution are described. The hazards caused by pollutants to the public, agriculture and fisheries and the social and economic implications of water pollution are reviewed. The paper defines water quality criteria and discusses the establishment of standards and lists the parameters that must be measured for maintaining clean water. The water quality criteria for drinking, bathing and for maintenance of fisheries are reviewed and discussed. The necessity for the participation of the governments, industries and communities in pollution control programmes are discussed. The reasons for the failure in controlling water pollution in tropical countries, even though there are public laws, are presented. The necessity for the establishment of sets of water quality criteria in these countries, taking into consideration their own particular social, environmental, and technological conditions is stressed.

The paper calls for close regional collaboration in the dissemination of both information and research on water pollution control.

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USE OF UNTREATED CHICKEN MANURE IN FRESHWATER FISHPONDS IN THE PHILIPPINES

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Tilapia nilotica, *Cyprinus carpio* and *Glyphisphalus striatus* fingerlings were stocked in 500 sq. m. ponds at approximately 20,000 fish/ha. The ponds received untreated manure from 250, 500, 750, 1000, 3000, 5000, 7500 and 10,000 broilers per ha.

After 90 days of fish culture period, average daily production increased with increasing manure load to 101 kg DM/ha/day (3000 birds/ha). At higher manure loading, fish production declined. The highest gain for tilapia was 18.4 kg/ha/day obtained in ponds fertilized with 5000 birds/ha and 4.8 kg/ha/day from the ponds fertilized with 3000 birds/ha for common carp. This indicates that *C. carpio* is less tolerant to conditions of high manure loads than *T. nilotica*.

T. nilotica survival rate was not affected by varying levels of chicken manure loads. However, survival rate of *C. carpio* was very low in ponds receiving manure from 7500 and 10,000 birds/ha. This might be attributed to high pH and ammonia levels and very low dissolved oxygen levels at high manure loading.