

Chloramphenicol Resistance Bacterial associated with Aquaculture System in Thailand

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Abstract

The project “**Hazard analysis of antimicrobial resistance associated with Asian aquacultural environments**” is funded by EU to investigate the extent and nature of antibiotic resistance in ecosystems exploited for aquaculture purposes in SE Asia using Vietnam, Malaysia and Thailand as a representative countries. Standard operating procedures (SOPs) for sampling strategies, bacterial preservation, MIC and antimicrobial susceptibility testing were set up upon the agreement of all partners involved. There were 3 sites selected in Thailand, integrated Broiler-fish culture (SI); sea bass farm (CO) and black tiger shrimp farm (CI). Bacterial samples were isolated from organisms, water and sediment of each site. Six antibiotics sensitivity discs (Tetracycline, Ampicillin, Chloramphenicol, Nitrofurantoin, Norfoxacin and Trimethoprim/sulfamethoxazine) were selected for antibiogram determination harmonization. The results showed that the MIC of the isolates from integrated farms are higher than the isolates from the other 2 sites. Antibiogram profiles of the Thai isolates revealed multiresistance to six antibiotics tested. These demonstrated that Thai aquaculture system is contaminated with various kinds of antimicrobial products.