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# **MINIMIZING ALTERATION ON AQUATIC SYSTEM PLAN**

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## **Introduction**

1. An "Ecosystem" is a bubble of life made up of aquatic plants, animals, other organisms, the weather, and the physical environment. An "Ecosystem" is defined by the combined traits of all of its constituent parts. They have both biotic, or life, and abiotic, or non-living, components. Aquatic plants, animals, and microorganisms are examples of living components. Physical space, geology, and other elements are examples of nonliving components. Unfortunately, modernization is posing a danger to many aquatic habitats worldwide. Trophic cascades are being caused by species extinctions. The dynamics of the existing food web are being strained by the drastic changes in the environment brought about by global warming. Given the intricate and profound connections among all species, it is easy to see how advantageous it is for people to preserve aquatic environments. Because of this, we ought to work to preserve and replenish aquatic habitats.
2. The goal of UMT as an educational institution is to become a world-class university that has the power to profoundly alter society. The university needs to set an example in the fight against climate change by including the community in its research, teaching, and activities. Environment, Social, and Governance (ESG): When making managerial decisions, consideration of ESG factors is crucial. Measured under the environmental component are an organization's sustainability and its impact on the environment. The following aspects are covered by reporting: future environmental goals, efficiency, sustainability practices, waste management, resource management, and carbon footprint. Taking steps to mitigate climate change can lower the price of utilities, such as water and energy. In addition, teaching and research across all faculties and departments of the university can support chances for creative research as well as in the reduction of the aquatic system alteration or pollution.
3. Numerous aquatic ecosystems in our care are harmed. But each damaged ecosystem can be saved and returned to its original state through aquatic ecosystem restoration and awareness campaign. Humans benefit from healthier ecosystems and increased biodiversity because these factors increase aquaculture productivity. In order to minimize the alteration of aquatic ecosystems, the following strategies are the steps will be taken to save each damaged ecosystem and restore them to their original state.

## **Strategies for Minimizing Aquatic System Alterations**

**Minimizing physical, chemical and biological substances into ocean.**

4. We have UMT Environmental Sustainability Policies with various sections dedicated to minimizing any consequences that might change connected aquatic ecosystems. This policy and guidelines must be abided by all contractors and users for all new building construction and operations. In addition, it would minimize physical, chemical, and biological changes to associated aquatic habitats.
5. In order to guarantee the proper use and disposal of biological or chemical substances that can be harmful to aquatic life, our training methods also include regulations and guidelines. We take steps, such as health and safety training protocols, to reduce effects on adjacent aquatic habitats. In addition, all laboratories within UMT also adhere to the hazardous waste disposal guidelines set by the Centre of Research and Field Services, UMT.

### **Monitoring on aquatic systems' health**

6. At UMT, we have several research teams that carried out innovative research by tracking microplastic contamination, checking on the health of aquatic life and coral in rivers and ocean across the Malaysia. The findings of research results are currently being utilized to promote stricter regulations on waste entering urban water bodies. UMT also routinely monitor the health of our nearby aquatic ecosystems.

### **Water disposal guidelines**

7. One of the university's efforts is to monitor the wastewater disposal from our campus. All the wastewaters will be treated internally via the sewage treatment systems located at UMT before discharge outside the campus. Our university has water quality standards and guidelines for water discharges (to uphold water quality in order to protect ecosystems, wildlife, and human health and welfare). Our policy on water systems management and the control of Legionnaires disease is set out in our National Water Quality Standards for Malaysia. In order to safeguard and reduce the risks of human health, these Guidelines have been implemented.

### **Maintaining Shared Aquatic Ecosystem through Collaboration**

8. In order to preserve our shared aquatic ecosystems, we collaborate with the community. We have joined forces with the Department of Fisheries Malaysia (DoFM) to restore the coral around Kuala Nerus and Kuala Terengganu. Besides, we also collaborate with the surrounding fisheries communities to help local communities and served as a platform for disseminating knowledge about environmental conservation. We are also taking the initiative to introduce the World Oceans Day in conjunction with the Earth Summit in Rio de Janeiro

among the local community. As a feature of these, there is a coordinated effort on rebuilding and natural aquatic system conservation programme among the local community.

### **Reduce storm water run-off via stormwater management**

9. Pollutants are also being deposited in any watercourse as a result of the stormwater's discharge. The watercourse will become sedimented if there are any grit or sand particles in the stormwater. Synthetic substances present in stormwater can make harm greenery of the waterbodies and supplements and natural matter present in stormwater upset the biological system, and can prompt algal sprouts. The prevention of flooding and water pollution in the vicinity is the objective of stormwater management. When it integrates with the storm water drainage system, stormwater management is at its best. Runoff issues can be significantly reduced through the preservation of natural areas and vegetation, enabling low-impact site design. Reduced erosion and the prevention of polluted runoff from entering waterbodies are both achieved through the integration of stormwater management.

### **Task Force on Monitoring Aquatic System**

10. A task Force on monitoring aquatic system will be established to oversee the creation, execution and implementation the Minimizing the Alteration of Aquatic Ecosystem Plan. The task force's membership consists Pro-Naib Canselor (Strategic and Performance), the director of strategic, transformation and risk, head of the sustainable management centre, heads of the centre of property management, director of students 'affair, head of science officer, director of centre of academic management, JCKK member and other relevant representatives.

### **Policy Enforcement**

11. This policy is effective from March 30, 2024.