Keynote Speech by Rayner Stuel Galid, Director of Fisheries, Sabah Delivered at the 7th Sabah Inter-Agency Tropical Ecosystems (SITE) Research Seminar, 2-4 November 2002

Bridge over Troubled Waters: Research Should Underpin Public Policies and Advance Public Interests

Distinguished speakers, seminar participants, ladies and gentlemen:

Good afternoon. I am honoured to be one of the keynote speakers in this seminar. There is an old saying about how the best audiences are intelligent, well informed and a little drunk. Since I did not see beers being served during lunch, we're up by two-thirds. And that is not too bad, right?

Let me first start by saying thank you to SITE for giving the Department of Fisheries the honour to host this year research seminar. This year's seminar has the following theme focus: "Management Of The Aquatic Environment In Sabah: Issues, Challenges And Future Directions." As the main government institution entrusted with stewardship of the management and development of fisheries resources in the State, we have a vested interest in the sustainable development of the fisheries and aquatic resources of Sabah.

Fisheries production is one of the pillars of the State's food production drive. Fisheries and aquaculture production has always been a major component of Sabah's agriculture sector output. If we add Labuan fisheries production to Sabah's output, we are presently the number one fisheries state in Malaysia. In terms of value, fish and fisheries products account for close to a billion Ringgits yearly in the last 4 years. Of course, fishing and aquaculture are only two of the benefits accruing from the marine and freshwater sector. The state enjoys a lot of foreign currency earnings through marine eco-tourism, diving tourism and recreation. In addition to the usage of water as a resource for domestic and industrial uses, aquatic structures and ecosystems provide ecological services: physical structures (for example, shoreline protection), biotic services, and biogeochemical services.

In the last 10 years our state has made significant strides in promulgating environment-centric legislation and undertaking plans and programs to protect and conserve our natural wealth including our marine and freshwater resources. In recent years the general public has also taken up the challenge to influence the shape and form of our public policies on the environment. Sustainability and conservation have become today's watch words. Here a few examples. Just a few days ago, the State Legislative Assembly passed a much-improved and focused Environment Protection Enactment. We enacted the Water Resources Enactment and the Sabah Biodiversity Enactment in the last 3 years. The Town and

Regional Planning has completed its integrated coastal zone management project and incorporating the findings in integrating environmental spatial planning in the creation of its Local Plans. The Department of Drainage and Irrigation is working towards a state-wide watershed and water resources management plan. The Department of Fisheries is targeting to enact a state fisheries enactment next year that embodies many environment-centric principles. The government is also working towards the creation of 3 new marine parks or sanctuaries in Langkayan in Sandakan, Semporna and Kudat-Banggi.

Yet, ladies and gentlemen, a short ride around the state will show us the harsh reality that many things are not well - our environment, our marine resources and freshwater bodies are in real danger of horrible degradation. If all roads lead to Rome, then every day our waterways and rivers collect and lead our garbage and pollutants to the giant sump we call the sea. Many of our rivers that course through our towns are in fact giant sewer drains. If you fly by air from Kota Kinabalu to Tawau or Sandakan, you will see most of our rivers in the uplands are yellow with sediments. UMS (Universiti Malaysia Sabah) has reported that large expanse of our coral reefs are damaged due to fish bombing. Our beaches and seaside near towns are also chock-full of rubbish and solid matter pollution.

As our state population grows and as our economy developed, pressure and more pressure will be brought to bear on our natural resources by way of exploitation and by people simply being there. There is the real danger that the environmental impacts of our development will undermine the purposes of development and exacting a heavy cost in terms of impacts on our natural wealth, human health and productivity. We will face an ominous paradox as the evidence of our destructive impacts on the environment and life-support systems become more compelling while our commitment and our endeavors to deal with them are outpaced.

Sustainable development rests on three pillars: economic growth, social progress and protection of our environment and natural resources. The triple-bottom line approach is simply an acknowledgment that the decisions we make either as a company, an industry sector, a community or a government not only have an economic implication but also both a social and environmental dimension. This approach demands that we consider the social and environmental impacts of what, to date, have been solely economic decisions. The costs of our actions can no longer be judged simply in terms of ringgits and sens - we must also factor in the social and environmental costs. We must have a more dynamic approach based on sustainable development that would look to exploit positive synergies whereby the environment is protected while at the same time promoting tourism, encouraging, for example, environmentally-friendly

aquaculture, stimulating the local economy, creating employment and enhancing regional and social cohesion.

In his keynote address in last year's SITE seminar, my colleague and friend, Datuk Eric Juin, the Director of the Department of Environment Protection, touched on the importance of enforcement in realising the objectives of existing legislation as regards the environment. This is true; we need to enforce these laws to weed out hardcore offenders. But cooperation based on coercion will not long be effective. Long-term success of environment protection initiatives will rest on compliance rather than enforcement - that willing stakeholders are happy to assume ownership of noble goals. Sustainable cooperation requires a true sharing in the decision-making, and in responsibilities on the part of the majority of stakeholders which can only be achieved if such communities take the lead.

If we look at examples in developed countries, environment movements originate from the concerns and initiatives of people before these move on to the agendas of governments. In other words, the primary impetus to environmental action and responsibility comes from civil society, with the support of scientists, and the increasingly constructive engagement of industry. As far as our State is concerned, government is still the originating force for many environment-related legislation and legislation although the public is slowly realizing that people power should matter. The recent cancellation of the Likas Bay Reclaimation project shows that strong and persistent public opinion can sway political masters and policy makers alike.

We have to draw on the strong support of citizens for progress in this area. We have to involve citizens, business and NGOs in a dialogue on sustainable development. If people are convinced about the need for, and the value of, sustainable development, they will be much more willing to accept measures that may impinge on their lifestyles and economic endeavors in the short term. And if policy-makers create the right conditions and encourage citizens and businesses to integrate environmental and social considerations in all their activities, policies for sustainable development will create many win-win situations: good for the economy, employment and the environment.

Sustainable development strategy depends critically on people's behaviour, and governments and policy makers must do more to educate and inform citizens. It is important that all stakeholders have the requisite knowledge and appraised fully of the situation at hand. Half-baked ideas and the inability to see the issue from all relevant facets and without proper knowledge will lead to misunderstanding, misconception and ultimately, dissatisfaction. To travel this road, one must start with figures and scientific facts and this where scientists and researchers, much like you all, must play a role.

Scientists are best placed to provide the much needed support to the metaphorical 'bridge' between current practices and those needed to ensure a sustainable future. This is the bridge over our troubled waters. Researchers should be the nexus between the way in which politicians and civil society perceive sustainable development and acknowledge gaps in their knowledge.

Policy makers rely on research for factual information that will provide the basis for future decisions. Research is needed in order to identify problems, find solutions and constantly put these solutions and established goals to the test. Research must be sound and robust and focused on our state's priority issues. Researchers should also ensure it is widely and disseminated and reaches its target audience, and at the same time moving markets towards production and consumption of environmentally friendly goods.

Let us take an example. Do you know that there are chemicals in your shampoo? In fact, 268 chemicals are used in hair products such as shampoos and gels. These chemicals may not only pose a direct risk to your health, but also to the environment. Should such chemicals also be bioaccumulative, they can return to the consumer via the food chain and become a public health hazard. Several of these 268 odd chemicals used in hair products are persistent or bioaccumulative.

There are currently some 20,000 existing chemical substances on the market. About 2,500 of these are so called high production volume chemicals, representing over 90 percent of the production. Studies show that only 3 percent of these chemicals are adequately tested and that a further 14 percent have basic test data only. This means that the majority of these substances are poorly tested.

Many of you have heard of the precautionary principle. The precautionary principle is included in the Rio Declaration from the UN Summit on the Environment and Development and in many conventions and national legislation governing protection of the environment. Application of the principle ensures that preventive environmental policy requires that nature's resources are protected and that they are used cautiously. An environmental policy is incomplete if it only deals with the great dangers and eliminates damage that has already been inflicted.

The decisive factor in the application of the precautionary principle is objective scientific data. Scientists are the best bets as to who can tell policy makers that, for example, what or at what level a particular substance become hazardous to the environment.

An International Conference was held in May, 2001 in Stockholm with theme "Bridging the gap: Sustainability Research and Sectoral

Integration." The following are part of the conclusions of the Conference that are relevant to my topic today:

- Research on sustainable development must be proactive; it should include research on driving forces, scenarios and prospective studies, and underpin the basis for early-warning and identifying new problems. The research must set long-term goals and provide timely responses to policy needs.

- There is a need for research underpinning environmental objectives and target setting, and assessment of the effectiveness of policy measures.

- Integration of environment into policies needs support of research in developing indicators, monitoring, integrated assessments and sector-specific instruments for internalisation of external costs and other measures.

- A greater awareness among researchers of those areas in which decision-makers need help, as well as a better understanding among decision-makers of the conditions and restraints on researchers. The regulatory authorities and research institutions should have sufficient independence from producers, consumers and political influence. Transparency is necessary but not enough.

- Sustainability objectives must influence science policy by selection of topics, forcing integrated approaches and introducing new instruments of co-operation, engaging stakeholders in R&D agenda definition.

- New ways of communication are needed.

Our efforts to promote aquatic environment conservation and protection should not be limited to national boundaries. We should be crossing borders in a more literal sense. Science is becoming a science of communication and collaboration - especially international collaboration. Increasing complexity, the need for multidisciplinary approaches, and the trans-national and global nature of many research problems, require that we draw on different perspectives to solve common problems.

The Sulu-Sulawesi Marine Ecoregion, of which we are part of, is of enormous ecological and economical importance. Its marine biodiversity is second to none on this planet. The ecoregion also serves as an important source of food and livelihood fishermen, as a tourist destination of wide appeal and as a living laboratory for research and educational purposes. My fellow keynote speaker will have more to speak on this. For such a wide and important ecosystem, we need ideas not only from a broad

range of specialties, but also from different geographic regions and from all cultures. Building bridges across borders requires the efforts of many people working together.

Local scientists have the opportunity to leverage the knowledge of their counterparts from the Phillipines and Indonesia (and I do know they are advanced in many scientific fields in marine conservation) in this region. Why is this important? About 2 years ago I had the privilege to attend the workshop to formulate the biodiversity vision for the SSME. I would like to repeat what were my closing remarks at that workshop in support of the SSME conservation initiative.

“If you would see the whole map of Sulu-Sulawesi Marine Eco-Region, Malaysia has the shortest perimeter, the smallest marine real estate of the three countries. We, Malaysians, could see this in two ways: one, that our piece of seas is too insignificant to bother about this project and two, that we have vested interests to ensure that the two larger areas (in the other two countries) are managed and conserved, for losing these to degradation and everything else will definitely impact what little we have, what small resources we have in Malaysia. I would like to think to that the latter choice is no-brainer choice.”

We in Sabah are custodians of still one of the most precious biodiversity resources in world. We do we go from here? As we commence this seminar to address the issues, challenges and the future of our marine and aquatic resources, allow me to share a thought by the famed management guru, Peter Drucker who said, “The best way to predict the future is to create it.” This creation should be a joint-venture initiative between government institutions, scientists, private citizens, commercial interests and NGOs.

In conclusion, I leave you with another thought. This is a lament by a Native American chief when in 1854 George Washington pressured him to sell tribe lands.

“How can I sell this land?” he cries with great anguish. “How can you buy or sell the sky, the warmth of the land? The idea is strange to us. How do you own the freshness of the air and the sparkle of the water, how can you buy them?”

“Every part of this Earth is sacred to my people. Every shining needle, every sandy shore, every mist in the dark woods, every clearing and humming insect is holy in the memory and experience of my people.”

“Whatever befalls the earth befalls the sons of the Earth. Man did not weave the web of life; he is merely a strand in it. Whatever he does to the web, he does it to himself”.

Well may we do by just taking to heart Chief Seattle's sentiments about our own environment.

I wish you all a fruitful and enriching seminar, and thank you for your kind attention.