THINKING OF "HOME" FOR A MUTUAL AND SUSTAINABLE DEVELOPMENT FOR THE FUTURE: A LOOK INTO AQUACULTURE ACTIVITY AS AN EXAMPLE

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Abstract - The concept of sustainable development is considered incomplete as it tends to focus on meeting our needs, this paper proposes the need to consider a *mutual and sustainable development* that build on a "home" value. Mutual and sustainable development will create a synergy of all the stakeholders and the environment. As for the value of "home", it will foster a strong bond between us and the environment.

Keywords - Mutual and Sustainable Development, Aquaculture Home Value.

I. INTRODUCTION

Aquaculture is one of the most rapid growing bioeconomy of the world (1). A growing concern has been geared towards understanding aquaculture's issues and impacts on freshwater and also marine environments (2, 3, 4).

A lot has been said that sustainable aquaculture requires good governance and also good science as a complement. For the sustainable development of aquaculture in Malaysia, a previous study has proposed a framework for sustainable aquaculture for the future (4). This framework will help the stakeholders to take action on any future environmental changes that might have impacts on the industry. Taking into account important factors and players that will influence aquaculture activities, with minimal environmental changes and healthy ecosystem services would provide the desired environment for the industry to thrive in.

In developing a good framework for sustainable aquaculture, one has to consider also other bio-based and non bio-based industries as all these play interconnected roles in the whole interplay of sustainable development.

Most often than not when we develop a sustainable framework for an activity, we will tend to zoom in to magnify and scrutinize the whole sector. We would try as much as possible to address the sector to ensure its sustainability. As with any other major bio-based industry that underpins the national and global bioeconomy, sustainable framework has been developed, however, we fail to consider the whole big picture.

In actual sense, all the bio-based industries such as agriculture, forestry and fisheries play important roles in influencing aquaculture in the long run. Hence, when we want to establish a sustainable framework for aquaculture, we need to also take into account the roles and impacts of other bio-based industries. And when we zoom out, it will go back to some very basic and sound principles and best practices. However, with all these in place, most of the time environmental issues still persist.

The inevitable future environmental changes that we will all face will be finite resources, an increase in waste, biodiversity issues and challenges, climate change and the demand for better quality of life. From the literatures, we have learnt that we would need innovation (an extension of creativity) and new technology to address the challenges.

And in all production, quality, quantity and sustainability are always the challenges. Quality would mean something that is healthy and safe. Quantity is the challenge to meet the numbers and sustainability is the challenge to ensure that quality and quantity can be maintain for an indefinite future. Thus, sustainable development is considered incomplete because it focuses on meeting needs only.

II. MUTUAL AND SUSTAINABLE DEVELOPMENT

In this brief paper, the authors would like to propose a new view to sustainable development and also a simple and straightforward value that we need to focus on to achieve this development. The Figure 1 in the following is the current trend towards achieving sustainability. We carry out sustainable development by taking into consideration good governance and partnerships, coupled with solid science and technology and creativity and innovation, and all these were done by observing and adhering to some frameworks and precautious principle and practices.
However, we still struggle and we would like to propose that this happens because we did not consider another aspect. All this while, we have focus on meeting our needs. What we need is a mutual and sustainable development that take into consideration the contribution and importance of the biological and

physical components in the environment. As all lives matter.

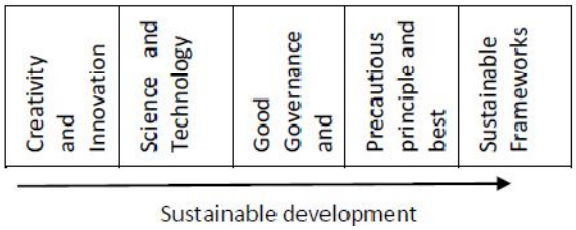

Fig. 1: Current trend for sustainable development for sustainability

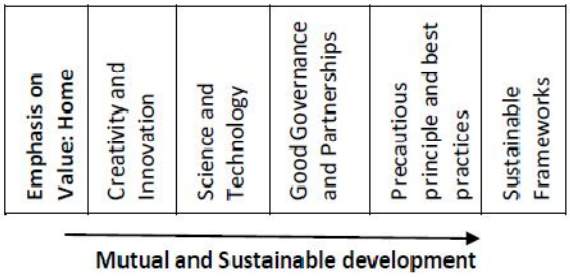

Fig. 2: Proposed model for sustainability

The idea of mutual development comes from the appreciation of obligatory relationship of mutualism in microorganisms, in this relationship, all the parties involved will benefit from one another and interact in a synergistic manner for sustainability.

Thus, the definition for mutual and sustainable development could be "development that meets the mutual needs of the present without compromising the ability of future generations in meeting their mutual needs". And the meaning of present and future generations do not just cover human beings, it also covers all aspect of life.

III. LIVING AT "HOME" WITH MUTUAL AND SUSTAINABLE DEVELOPMENT

We would like to suggest also the incorporation of an important value that will help to propel towards a mutual and sustainable development, and it is the value of "home".

In long term, it is important to cultivate a sense of "home" for all of us. Our Environmental Education tends to focus on the problem and practices and not the values. It is time to go back to values because values make a human being.

This "home" value stems from my reading of Adibah Amin's writing, she has written about the wonderful flavours and many splendid colours of the Malaysian society. In one article on "home thought from abroad", she wrote that "You remember Malaysia – her pettiness and greatness, her beauty and squalor, her din and disorder and wonderful warmth. All these you remember and you take the first flight home" (5).

We like to describe "home" as a place of refuge, as place where one will return again and again. And our thinking is that we should educate our children like that, this earth is a home for us all, and we all have a permanent home here. In an earlier study, it has also stressed that there is a "relationship" (ecology) with the environment, whereby the stakeholders and the environment are one entity. That relationship could well be referring to as "home tie", a bond with the environment (6).

If we were to revisit the meaning of ecology, it is interesting to note that the term ecology actually stems from the Greek words *oikos*, and it means "the family household," and logy means "the study of". It has the same root word as economics, meaning "management of the household" (7). Probably there are much more to ponder upon the real meaning of the word ecology as first proposed by Ernst Haeckel in 1866.

We believe we will not destroy our "own home" and we also believe for long term approach to a mutual and sustainable development for all, this is the way to begin.

IV. SOME POINTS FOR AQUACULTURE ACTIVITY FOR SABAH, MALAYSIA

Traditionally we approach decision making or problem solving by looking at the problem. Most of the problem solving approaches would like us to understand the problem or the issues clearly in order to come out with a feasible and effective solution. Our thinking is that problem solving has a purpose, ultimately it would be "problem-solved", but have we ever wonder why we want to solve problem. I believe because we have something that we want to achieve, and that would be a better quality of life.
When we put the value of Home and Quality of Life together, it will be about how to make this place safer, more livable and its occupants happier or fulfilled. And this can only be accomplished through the concerted efforts of all, when we do things for mutual benefits.

To cultivate this value of Home, we can start by instilling the idea of a global home, the sense of homecoming. In the aquaculture industry, home can be a place where all the stakeholders could interact and collaborate for mutual benefits. It is believed that with self-regulation, the stakeholders will learn to focus on edifying other stakeholders and the environment, not about exploiting the environment for own benefits.

Short term	4S (Stop-slow-simple-share)
Long term	Cultivating a value: "home"

Fig. 3: Short term and long term proposals for a mutual and sustainable development

For short term, we would like to suggest 4S: Stop, slow, simplify and share. 4S is a straightforward approach to environmental management which has been proposed in earlier study (8).

We should stop detrimental impacts on the environment, in aquaculture, this would mean stop the use of harmful drugs and chemicals. As for slow, we need to slow down because the steps forward for science in understanding environmental problem is much slower than the advancement of technology. We have to understand that there is no such thing as zero pollution because everything pollutes once we reached the threshold. As aquaculture, it would mean slowing down the intensification, and share or advocate water recycling or treatment before discharge would promote a shared partnership towards environmental protection (8).

Coming back to aquaculture and bioeconomy, I believe that we are not just creating a bioeconomy for Malaysia, but it will be a global bioeconomy. In order for it to be functional and sustainable (meaning meeting the quality, quantity and sustainability), this would mean that a sustainable production of food resources with minimal environmental footprint and a sustained ecosystem services for mutual development. This is possible when we have a shared value, and that is "home".

If this whole earth is our home, and we are all doing and managing a "family business", be it bioindustries or non-bioindustries, it is fine with all our "framework" of doing things, so long as we all have a common understanding that we are all working towards a common goal of sustainability.

Decision-making in aquaculture can also adopt this value of "home" as stakeholders can collaborate to explore possibilities to make things better for one another and also for the environment. In the business sense, this will thus become a win-win-win-win (you win, I win, the future generations win and the environment also wins) situation of environmental business that provides employment, protect ecosystem services and meeting the quality and quantity requirement. This would also mean that the context of environmental decision-making will be on mutual and sustainable development and not sustainable development per se.

CONCLUSIONS

In essence, a revolution is needed towards propagating this value of "home" and this understanding of a mutual and sustainable development towards sustainability. This idea could also be applied in environmental decision-making. This will ultimately create a 4 wins situations: you win, I win, the environment wins and the future generations also win.

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