

POST CONFERENCE REPORT



This is the first time I'm attending such an international event, and what I got there is beyond my expectation. First of all, when I got the scholarship and invitation my excitement is soaring beyond my belief. And then, come my responsibility to be a speaker in such a big event, this really frighten me because I don't have enough confidence and experience to be a speaker. Plus, after I knew the other grant recipient, I realize they were fisheries specialist and most of them are Phd or bachelor student. Meanwhile, I'm just a second year student who haven't finished my undergraduate yet in agribusiness study which learn very broad agricultural courses

and I learn aquaculture autodidactly because of my passion toward aquatic creature and environment sustainability, so this quite intimidating.

In the midst of academic assignment, I read a lot of journal and scholarly articles to determine my oral presentation topic. My meeting with my lecture became much more intense than before. This is good on the other hand because this burden and responsibility is pushing me to reach a new level where I never tried before. However, this process to learn a lot of things in a short time is really stressful. Finally, I choose to discuss about the overview of Indonesia aquaculture issues because I realize with my limited knowledge it will be easier for me to discuss a broad topic. After the topic is selected, my mental burden is a bit lighter, I can be more focused to gather data and materials for my presentation. And yet, I still feel scared and very nervous to predict what will happen to me in the conference because the reason I don't have any idea about international conference looks like.

However, in the end of the conference, the result was outstanding. It feels like when you're playing an online game and fighting a final boss together in a hard mode where it can be really frustrating and difficult but after you beat it, you can gain a lot of experience points (exp) that can raise your character level and obtain plenty of great items or weapons. Yet, the most exciting thing is the feeling of relief and satisfaction, that's what makes it addictive.

Personally, I divide the lessons I obtain from APA16 into 2 groups: experience development and knowledge expansion.

1. Experience Development

Experience development is the process where I learn that can improve my character, upgrade my skill, and change my perception toward myself. This includes:

- a) Seize The Opportunity & Endure Your Fear

In my experience, every great opportunity always aligned with great responsibility which can bring doubt into yourself about your capability, competency, and particularly you will questioning your caliber when you try to break your limitation barrier for the first time. But instead of being stress and doing nothing, make this pressure to be your motivation to do more effort. Personally, the proper amount of pressure is the best stimulus to boost my productivity to learn and obtain more compare than in the ordinary circumstance.

After you capable to conquer your fear everything will become much more clear and the option will be more varies. The notable question is how can I handle my worry and fear? My trick is simple, don't be shy to consult and share you trouble with people around you, it's better if they have been in similiar circumstance, ask them for suggestion, tips, and feedback to your thoughts. Their information will widen and change your perspective, eventually reduce your worry and give you more confidence. Because your worry is cause by lack of information and nescience.

b) Prepare And Mastered Your Material Very Very Well

I believe whenever it's success or failed, it will never be wrong to try your best and optimize your dedication to prepare and plan your material. Although, this make me sacrifice a lot of my "happy time" to read a great deal of book and scholarly articles that I never read before.

There are abundant information and update available at APA16, unfortunately due to coincide schedule of the topic, you can't attend all of the session. That's why you need to consider carefully the topic that interest you to utilize your time efficiently. After recive the session schedule, I

immediately mark the topic and make my own schedule. This take time but help me a lot to organize what to do during the event.

c) Practice, practice, and practice

Practice will relief your anxiety level. There are two important lesson I got from Mr. Guillaume before my presentation, first one is always keep the microphone close to our mouth. When your hand gesture keep the mic away, your voice will reduced so do the attention of the audience. And the second one is always practice at least five times before your presentation.

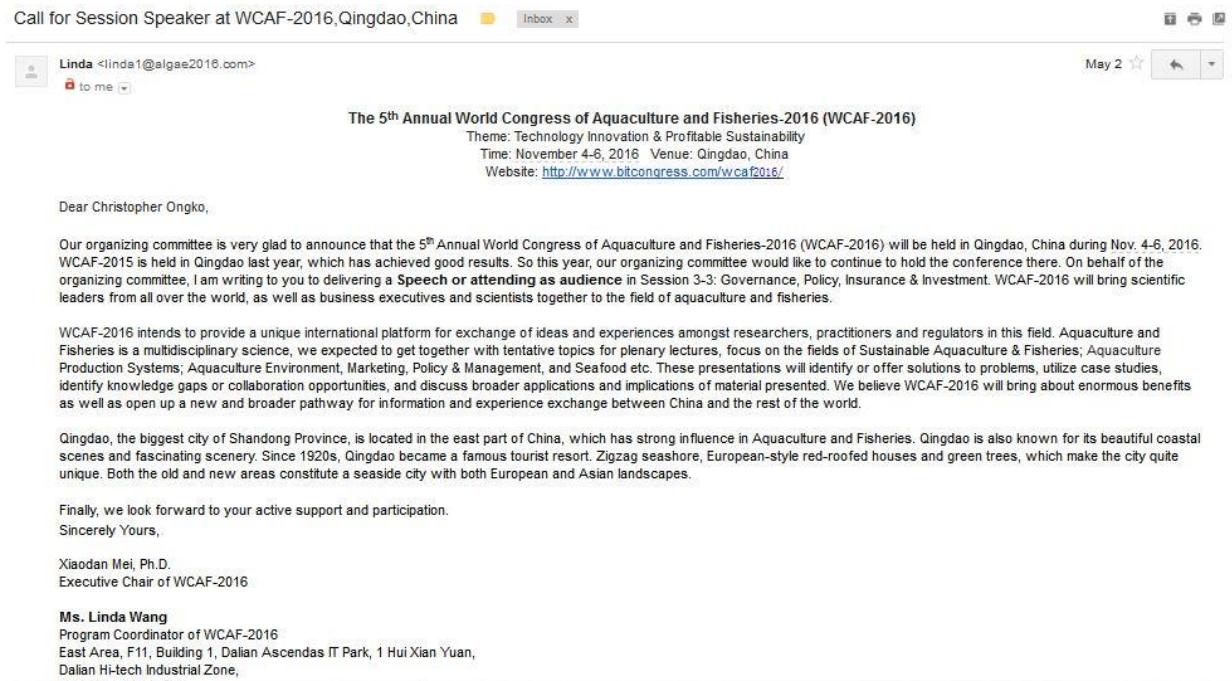
This is what I did at the night before my presentation, I went into the rooftop at my hotel and practice my presentation 12 times. I calculate the time of my presentation, I thinking every word, every gesture, expression, and my voice intonation. It will make me more ready, that's mean it will reduce the risk of panic attack and speaking acceleration rate during my presentation.



d) Measure Your Performance, Be Proud, And Stay Humble After Achieve The Fruit Of Your Effort

This is important to yourself, because doing something without knowing your progress is frustrating and will agitate yourself to evolve your skill, action, and outcome. The easiest measurement method is asking for critique to your audience and take a note for it (date and topic of your presentation, the audience, and the critic). By knowing your deficiency and weakness, you can fix the issue critically.

A week after the conference, one of my audience is asking me to be speaker at another conference in Qingdao, China. It turns out, my presentation about the aquaculture issue in my country is interesting for people outside Indonesia itself, this is totally beyond my prediction before.



At this point I start to think what if I consider to cancel my invitation. What will I lose? How much great opportunities will I miss? When will I get the chance like this again? So the most important thing I learn is don't be

afraid to try and achieve new thing, don't be afraid to take more responsibilities, and don't be afraid do more than the others because that is the moment that you get forged. Thing doesn't get nice when you are only hearing and doing sweet thing. You will improve by hear the feedback, especially the criticisms.

e) Link and Relation With Aquaculture Expert and Practitioner

APA16 is a opportunity to meet aquaculture specialist who can provide abundant information. There you can hear opinion and story from practitioner, expert, bussinessman, government, and the other aquaculture stakeholder. They can provide abundant information and excellence for consulting your though.



2. Knowledge Expansion

a) Sustainability of Business can be Profitable for long term

Sustainability can provide several benefit both for the farmer and the environment. My highlight is the benefit that perceived by the farmer by applying sustainable aquaculture. Here is several things that I learn:

- Reduce operating costs by undertaking initiatives that reduce waste, water and energy consumption.
- Encourage investors interested in companies with long-term sustainability; Plans that minimise operating risks in the future.
- Manage environmental risk and ensure compliance.
- Gain government support and resourcing.
- Connect/gain access to new market.
- Use resources more efficiently by engage and train staff.

b) Knowing the trend and current condition of Indonesia potencial species

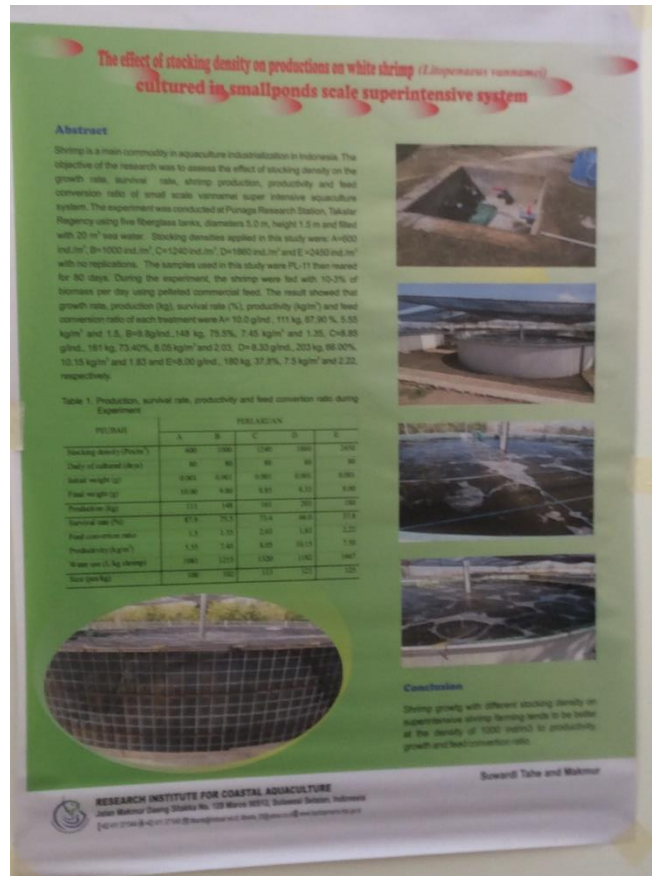
The farming of aquatic animal and plant has become the world's fastest growing food sector for 30 years & considered as an important weapon in global fight against malnutrition as a much need to provide high quality protein & essential fatty acid, mineral and vitamin. In recent year, the contribution of aquaculture toward Indonesia fisheries sector is increasing every year.

The condition of Indonesia aquaculture is divided into 1)for export orientation and 2)for national food security. Condition of Export orientation commodity are (Endhay Kontara, 27 April 2016):

1. Shrimp (Black tiger shrimp & pasific white shrimp)

Main problems: 1) WSSV, 2) Availability of good seed quality, 3) IMMNV

Prevention: 1) Implementation of GAP, 2) Polyculture, application of probiotic, 3) Implementation of biofloc technology, 4) domestication of broodstock and selective breeding.



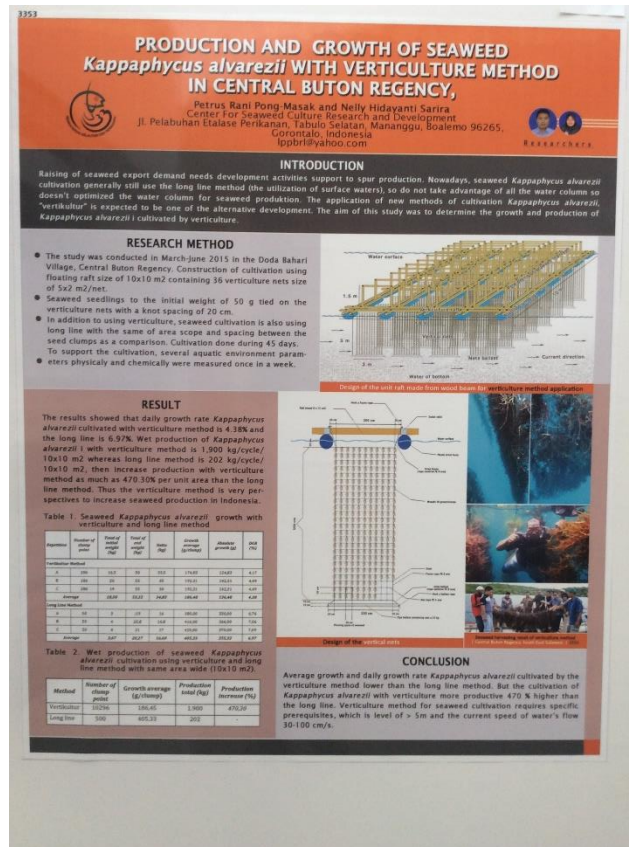
2. Seaweed

Indonesia is world largest seaweed producer but mostly exported as a raw material without added value.

The benefit of using strain selection: 1) Increasing daily growth rate up to 5%, 2) Selected strain of seaweed seed is increase production 32-40%, 3) Method are easily

adopted by seaweed farmer, 4) Relatively more resistance to extreme environment.

Verticulture Technology: 1) Increase seaweed production up to 780% compare to longline method, 2) Area for seaweed culture can be used efficiently and optimally, 3) Minimize conflict of area use, 4) Easy to be adopted and applicable.



3. Grouper

Exported as a live fish to China, Taiwan, and Hongkong. Indonesia is the only country that can produce seed of humpback grouper which is the most expensive grouper in international market.

Main problem: disease (irridovirus and VNN)

Possibility to increase production: 1) Increasing production of humpback grouper as comparative advantage, 2) Producing seed at small scale backyard hatchery for

export orientation, 3)Vaccination of seed to prevent viral diseases.

4. Seabass

Seabass is a potential species for export orientation and intensive culture in brakishwater and floating netcage. Currently, only few company are doing seabass farming in Indonesia because access to international market is limited

5. Milkfish

Indonesia is number one producer of milkfish in the world, the culture is mostly conducted traditionally at the brakishwater pond. Milkfish that cultured from floating net cage has a higher EPA and DHA compare than traditionally farmed.

6. Ornamental Fish

Indonesia has about 1.600 indigenous ornamental fish species, about 750 species are freshwater. In the market, approximately 90% of ornamental fish are produced from culture and the rest is from wild catch. 5% of marine species has been succesfully produced from culture.



Condition of species for local food security:

1. *Clarias* catfish

Indonesia is number one producer of *clarias* catfish in the world due to high demand from local market. Development potency is high by the reason: 1)domestic demand is still high, 2)Easy to develop in small scale culture, 3)Intensive culture by applying biofloc technology, 4)Most suitable freshwater species cultured at high density in aquaponic system, 5)Availability of seed in adequate number, 6)Diversification of product.

2. *Tilapia*

Indonesia is number 3 producer after China and Egypt. Tilapia is species that has high demand both for domestic and international market and can be cultured in pond, cage, and integrated with rice farming. Some strain such Larasati can be cultured in brackishwater (polyculture with shrimp). Currently, Indonesia has wide good quality of tilapia strain such BEST, GESIT, Nirwana, Jatimbulan, Larasati, and Srikandi.

3. Macrobrachium

Macrobrachium aquaculture only developed only in certain area in Indonesia, usually with rice-fish system. The production can't meet the demand of local market due to inadequate and unreliable good seed supply.



c) Fish Feed is Crucial Issue In Indonesia

The finfish & crustacean production sector in Indonesia is still highly dependent upon the use of aquaculture feed . With the significant development of aquaculture in Indonesia that means there are significant escalation of wild fish catch for feed ingredient. Currently, Indonesia feed production is very dependent with imported ingredient. In order to resolve this dependency, Indonesia must develop feed based on local ingredient. Especially, for freshwater fish have a low profit margin. Due to limitation of feed source, Indonesia also need alternative for the source. Fish meal replacement are only viable if they meet these following criteria (Albert Tacon, 26 April 2016):

1. Available in commercial quantity & scaleable to more than million tonnes.
2. Need to have similar nutrition content & digestibility to fish meal which means it's not likely to be terrestrial plant based protein unless there is a cost effective way to eliminate antinutrient & make phosphorous bioavailable.
3. The cost needs to be in the range of fishmeal, at least 15% of the fishmeal price.

There are several alternatives that are highly available and potential to be developed in Indonesia such as: insect larva, farming waste (bone, fur, blood), and aquatic plant. The projection estimate in the future that material for fishmeal are generated by farming low quality fish because wild catch is insufficient anymore.

d) Integrated Aquaculture Zone Concept (Melissa Mary, 28 April 2006)

Semporna Island at Malaysia is an excellence role model as an integrated aquaculture zone. Despite Indonesia is an archipelago country, Indonesia doesn't have integrated zone for aquaculture like Semporna island. The concept of Semporna Island is based on UNESCO ecosystem approach. The farmed commodity at Semporna island is lobster, seaweed, pearl, and finfish by using large scale integrated system for reducing the environmental effect. The farming location is selected using mapping zone for nutrient absorbing and releasing organism, numerical model (MAW), spatial mapping to obtain optimal productivity, and spatial tool for calculate production and spatial tool for calculate potential production and carrying capacity. The highest risk at Semporna island is algae bloom, which occur during extreme flood where nitrate content is increasing.

e) Small Holder Farmer Development (Albert Tacon & Patrick Soregloos, Student forum)

90% of world aquaculture production is in developing country. As a developing country, fisheries is one of the economy prime mover in Indonesia and has a important role for source of income for livelihood of Indonesia society. Hence, small holder farmer have a great contribution toward Indonesia Fisheries, including aquaculture. There are great potency of development in Indonesia aquaculture, especially for mariculture due to very vast coastal area. As an example, Spain aquaculture production is 80% mussel because cheap and mussel doesn't need feed. Indonesia have been applying seaweed for the similiar reason to develop small scale farmer, what need to be consider is about giving more added value to seaweed instead of exporting it

as raw material. However, the development must be considering water use of the other sector (tourism, maritime, conservation area, private, etc).

Small holder farmer need financial aid and guidance to develop their business. By the reason, processor can help by giving loan to small farmer by act as guarantor to the financial institution and how the input is made. They must take active role to the farmer by building trust and relation, after that they can establish a contract to ensure sustainability (much better chance to securing the input factor).

My heart is really gracefull and satisfied to experience such a great event. I have been richly taught and mentally enchanged by attending APA16 and met great people there. I hope in the future I have similiar opportunity in broader context in marine fisheries especially mariculture that feed in into my passion, knowledge, and experience. Terima kasih!!!

Special Thanks

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Hope someday we can meet again.

