

# Panel Discussion

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**Speakers:**

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**HAYASHI Keiichi:**

Good afternoon. Once again, my name is Hayashi Keiichi, Program Director of Environment in JIRCAS. And it is my pleasure to moderate this session for the next half an hour.

We had two keynote speeches and three presentations in each session to understand the current issue on how to realize coexistence of robust tropical forests and sustainable industry. To begin this panel session, I'd like to ask some questions to the panelists.

So firstly, to Prof. Kitajima, on the conservation and sustainable use of forests, whose multiple functions remain an important issue in the forest industry. In the academic context, some articles pointed out that afforestation, which focuses on GHG sequestration in forests, is biased towards species with high commercial and carbon credit value. Against this backdrop of this global debate, could you once again, share your views on the approach that should be taken to halt the decline in forest area and maintain the ecological functions of the forest?

**KITAJIMA Kaoru:**

I think the key is to understand resilience in proper terms. And the way to manage, I mean, forests recover. I mean, we all agree, those of us here, that ultimately, trees can be grown again. At the same time, we need to realize there is no one solution. I think this is something Sonya said that there is no one solution that fits, you really need to think about the landscape context and think about the best. I think, I totally agree with what other panelists said. We need to have, forest itself needs to keep its value, whether it's biodiversity or timber production, providing resources to local people. So how do we actually maximize these multiple functions of forests for people in general? And so we really need to think about how we can actually have proper governance.

So, and the answer can be different. I was very pleased to see for example, enrichment planting in Indonesia has been producing, some, you know, successful regeneration of high value timber. So, I think we really need to be thinking of solutions together. And so, there's no one right answer, but resilience means not necessarily resisting changes. From changes, impacts and disturbance, what do we want to recreate and what is the best answer? It may change as the environment changes, climate changes, and our societies change.

**HAYASHI Keiichi:**

Thanks so much for your view on the conservation and sustainable use of forests framed against the backdrop of the global debate on coexistence.

And taking off from Prof. Kitajima. I have some questions to Dr. Shukri, and then Dr. Miyamoto.

Firstly to Dr. Shukri. In Malaysia, each state has established its own timber legality assurance system for forest management. Could you please explain the impact of these state laws and the role of research institution or institutes such as FRIM?

**Wan Mohd Shukri Wan Ahmad:**

As I said just now there are a little bit differences between each state in order to manage the forest, but we are bound with the same basis of the system of sustainable forest management. Of course, the system is based on analysis and based on some projections. The enactment and procedures between states are not much different but slightly different. I don't see any impact because all the state leaders in Malaysia sit in one council; they call it the National Land Council. So, everything is

agreed and the National Land Council must be followed by the state government.

In terms of FRIM research, we did a lot of research actually in terms of sustainable forest management, for example, research on the optimum cutting cycle. As I said just now, the optimal cutting cycle for peninsula Malaysia is 30 years, but we see a little bit of problem to achieving that 30-year cycle. Research says that maybe 45 or 60 years is the optimum, not 30, because 30 is so short.

Other than that, research on the silviculture and management, even I myself lead one of the expert groups to modify SMS (selective management system). Currently, we apply a selective management system since 1978 (almost more than 40 years). So now we have to relook the system. So, we have so many experts in this group and suggest to the policymakers what is the best system now, for example, we have to do retooling. For the longest time we used and still use a bulldozer which for the earth is very damaging. So, we have to change the system. Probably we use we call it a log fisher. So, this is one of the methods we proposed for the new system.

And FRIM is also involved in the expert committee in joining all the three policies between Peninsular Malaysia, Sabah and Sarawak. And now we have a Malaysian policy on forestry. No more three different policies for three regions but only one policy for three regions. So that I think is a new theme for Malaysia to support sustainable forest management.

**HAYASHI Keiichi:**

Thanks so much for sharing the knowledge and the importance of the role of FRIM to implement and sustain state laws.

So now, the question goes to Dr. Miyamoto. In your presentation, you talked about the relationship between poverty and deforestation. You mentioned that poverty reduction measures are highly effective in reducing deforestation and that these measures are highly sustainable. In many developing countries with tropical forests, long term policy implementation is needed to effectively put poverty reduction measures into practice.

Could you please share your insights on the role that Japan and international research institutions should play in this context?

**MIYAMOTO Motoe:**

I would like to respond in Japanese. Now from my point I have talked about the solution for reducing deforestation. And in that sense, I proposed the reduction of poverty and showed the direction going forward. Now, in implementing this measure in developing nations, we have to be more specific in outlining the measures which will be useful in each country in terms of poverty reduction, we have to have clarity on this.

With scientific evidence, effective measures should be clarified. By so doing, the government as well as the related organizations will be able to implement the measures with confidence. Therefore, the national organizations and international research institutions should lead such research. For example, the successful cases in the world where they have been able to reduce poverty should be taken up.

And also, the countries that have been successful in reducing poverty reduction and unsuccessful countries should be subject to comparative analysis. What is important in this analysis is to obtain reliable data over long term. Now, this is first and foremost in research of the impact on poverty. It should not be viewed in the short term; we have to look into long term implications.

And also in the relevant countries, in order to collect such reliable data, we need cooperation from the counterparty in the countries. Their research methods and inclusive data will become very important to ensuring scientific evidence.

Therefore, the national research institutes and international research institutions are important, and they have good environment for research. And they have also very good environment for researching, and the preceding research can be subject to literature search as well. They have a good environment to do this. Therefore, scientific evidence-based quality should be provided in assessing poverty reduction measures. So, we hope to see leadership from developed nations.

**HAYASHI Keiichi:**

Thank you, Dr. Miyamoto, for your thoughts about the role of Japan and international research institutes.

So, I would also like to look at current forest-related issues from the forest industry's point of view. And then I would like to hear from Dr. Dewi. According to FAO statistics, global demand for timber has increased significantly, and it is expected to continue to increase in the future. While various efforts are being made around the world to halt the decline in forest areas and preserve the ecological functions of forests, the supply of timber to the market is also increasing, making the sustainable development of forests increasingly important.

In timber-producing and -consuming countries, the introduction of forest certification and due diligence is helping to curb illegal logging. In addition, ESG investment in forests have recently attracted attention. While these global trends promote the sustainable development of forests, it is also risking the development of monocultures in the forest industry. Could you please explain what international organizations such as CIFOR-ICRAF are doing to address these issues?

**Sonya Dewi:**

It's very difficult to answer. So basically, CIFOR-ICRAF looks at the timber sustainability issue through a systemic lens, looking at the green value chain at the multiple levels. So, we do many different things, but at least I would like to highlight three things. One is on policy analysis. The second one is on the governance and the third one is about small holder capacities strengthening as Dr. Samejima mentioned, and its growing importance regarding smallholders.

So, the first one, the kind of things that we did is like looking at the analysis comparing the FSC which is a widely used certification for timber with EUDR for example, because there are differences in terms of cutoff date. FSC cutoff date is 1994, while EUDR's is 2020, meaning that timber that cannot be certified by FSC can still be accepted under EUDR. So, we are now looking at a remedy framework, like for example, restoration, so that this gap can be filled.

Secondly, regarding governance, actually there are a lot of areas that have been given as a concession to production forests. In Indonesia, I think in total is 11 million hectares, but only 3 million hectares have been planted and managed sustainably. So, in terms of meeting the demand that is increasing, this sort of things can be addressed. And why actually there's this big gap, why there are 8 million hectares that cannot be planted or managed sustainably, it's because of the conflict with IPLC that is in the surrounding area.

So, governance is very important in terms of really also giving some access to the local community

to manage as well to reduce the conflicts. And also, partnership of course is very important, the partnership between smallholders and the companies as well. And then, this social forestry has been a big vehicle. And within that, agroforestry is being seen as the, you know, measure with the most potential. This is also addressing the issue about monoculture in the big forest plantation thing.

And on top of that, I think another thing that we have done or we are doing is that the timber supply is not only coming from forests. When we talk about timber, it is only forest, forest, forest that we think. So now, especially in the dry part of the tropical world, we are now working on trees outside forests. So, in India, for example, we target huge ambitious areas and tree planting, including for timber. So not only for timber, but including timber. So, all these options, I think, we can explore and depending on which context and what option will be suitable.

So, I think in answering your question, I think we can actually be optimistically addressing those issues in the future, if governance is improved, and if policy is, you know, developed in a way that is really suiting the context, and the third one is if the smallholder producers are raised in terms of their capacity.

**HAYASHI Keiichi:**

Thank you so much for your thoughts in terms of the role of CIFOR and ICRAF for government and policies on smallholders' function in line with the forest industry.

So now, taking off from the thoughts and the views from Dr. Dewi, I have some questions for Prof. Na'iem and Dr. Samejima.

**Mohammad Na'iem:**

Okay.

**HAYASHI Keiichi:**

So, I have some questions to you. Indonesia is one of the world's leading timber producers and exporters, and the work through forest certification programs ensures that timber is produced with minimal environmental impact.

The country continues to face challenges related to sustainable industry, such as illegal logging, and negative environmental impacts.

What do you think are the root causes of these problems and what initiatives are needed to address them?

**Mohammad Na'iem:**

Right now, Indonesia has taken a strategic step to combat illegal logging, reduce deforestation and also the degradation of tropical forests through at least two approaches. One is by law enforcement and the other is by signing the Paris Agreement, as well as the development of Indonesia FOLU NET SINK 2030. This FOLU NET SINK is a strategic plan to reduce emissions in Indonesia.

On the other hand, the fundamental issue of unsustainable tropical forest management is actually due to the low productivity of natural tropical forests in the second generation. As I mentioned in the video, the growth rate is at the average of 0.2 to 0.6, but by intensive silviculture approach, we are also doing species trial of 30 species of dipterocarps. We have a good result at least, we found five

first green Meranti: *Shorea leprosula*, *Shorea hepeifolia*, *Shorea johorensis*, *Shorea platyclados* and *Shorea macrophylla* that have very good growth rates, and they can then be used for enrichment planting.

So, right now, we have many concession holders, many forest companies that work with us especially, for example, Sari Bumi Kusuma Company in Central Kalimantan. Now, this company already has implemented the line planting or gap planting method on 50,000 hectares of land. So, I think based on that result, intensive silviculture actually can enhance the productivity of natural forests, preserve native species from extinction and efficiently support sequestration of significant amount of carbon from rainforest.

**HAYASHI Keiichi:**

Okay, thanks so much, Prof. Na'iem for your information of what Indonesia is doing to tackle the causes of the problem.

So, now I would like to ask questions to Dr. Samejima. First, certification plays an important role in the sustainability of timber production. And there seems to be an opportunity to introduce due diligence on deforestation, in addition to the legality of harvest. Do you think this will promote the prevention of forest functionality?

**SAMEJIMA Hiromitsu:**

Yes, in general, since legality is required, it means compliance of the law in producer countries. In case the law on producing companies allows land conversion of forests for example for oil palm plantation, the requirement of a timber legality itself is not enough to conserve forests. So, requirements for forest certification can guarantee the maintaining of forests.

However, as I already mentioned in my presentation, and also by Ibu Sonya, sometimes supply chain, promotion of certified products which creates traceability can have a risk to exclude small holders or undermine local government control or trial of jurisdictional approach, so, we need to consider what efforts have been made in the sourcing region.

**HAYASHI Keiichi:**

Thank you, Dr. Samejima for your comments. And once again to all panelists, thank you so much for your thoughts and valuable comments which will stimulate us for more discussion.

I think I better open questions from the floor. Please let us know who you are, and to which panelist your question goes if you have a question.

**Questioner (FFPRI):**

My name is Toma, I have a question to Dr. Kosugi. The use of a trunk of oil palm, I think many efforts were made so far. And I have seen many trials, but it's not yet being commercialized, that's my impression. And you have mentioned that a marketplace test plan is now under operation. If what you're doing becomes a success case, in other places like Malaysia, or Indonesia, Sarawak, do you expect that this technology can be expanded into these countries?

**KOSUGI Akihiko:**

Yes, I think you can expect that. This research has been going on for maybe 15-16 or even 18 years. And depending on the situation, I think you know that the background is quite different. The

present background and restoration five years ago or 10 years ago, are entirely different. I think that is the point. So, I think what is important is to be able to continue. Continuation is important.

**HAYASHI Keiichi:**

Thank you for the question and the answer. Is there any other question from the floor? Yes, please.

**Questioner (JIRCAS):**

I am Tsujimoto from JIRCAS. As an agronomist, I feel like I'm kind of out of the league from the topic of this symposium, but I was happy to hear in Dr. Miyamoto's presentation, that the provision of profitable agricultural land and technologies can be one key to reduce poverty, and then stop deforestation. And then personally, I'd like to believe in that story, and many of the presentations supported that story. But if I'm allowed to play a kind of devil's advocate, that kind of profitable agriculture technology can be a factor in increasing the agricultural rent, if I borrow your word, and the von Thunen model that motivates farmers to explore more lands, use those agricultural technologies, and explore more profits. And the paper that I recently read was a case in the Congo. The paper indicates that the provision of improved seeds of corn maize actually accelerated primary forest loss because farmers explored seeds for fertile soils under the primary forest.

So, I believe that improvement of agricultural technology is important. But sometimes human beings are very greedy and unstoppable. So, my questions are: what is the key to not letting agricultural technologies go into that kind of negative end in forest management and how can we harmonize improved agriculture management practices and forest management, so maybe my questions are directed to Dr. Miyamoto, but I would also like to hear the view of the keynote speakers. In this kind of harmonization how to manage both agricultural improvement and forest management.

**HAYASHI Keiichi:**

Thanks so much for your question. And so firstly, answer from Dr. Miyamoto and then followed by answer or comments from our keynote speakers.

**MIYAMOTO Motoe:**

I think that is a very important question. To improve profitability of agriculture, land could be used only for that purpose and it may lead to reduction of forests.

Yes, I hear such voices. Is it better to improve product profitability or not? There were a lot of such discussions, but according to many empirical studies, by improving profitability, the area of farmland conversion, at first, more forests will be converted into farmland, so at that time forests will decline and be converted into farmland, but if profitability is high, then that trend stops faster. In the case of Peninsular Malaysia, in the 1980s, poverty ratio went down by 20%. And then forest reduction stopped.

In the case of Indonesia, profitability is low, so farmers, there are no means for farmers to overcome poverty other than shifting forests into farmland, because there were no subsidies from the government as well.

So, if profitability is low, people will keep converting forests into farmland. So, we do see such empirical studies. And currently, the majority of views is that if agriculture is highly profitable, that will lead you to reduction of poverty and stop deforestation. That trend has been demonstrated.

**HAYASHI Keiichi:**

So next to our keynote speaker, Prof. Kitajima, yes.

**KITAJIMA Kaoru:**

We all have to eat so we have to have cropland. I think it's not just the profitability of land. Two things must be considered.

One is a sustainability of existing food-producing land. If they become degraded, people look for additional land. So yes, it's important to have a good, efficient and productive system, but it has to be sustainable. You know, when we talk about nature-positive production landscape and nature-positive production, we really need to be thinking about not to let soil degrade. So, I think the new technology must be sustainable. That's the key.

Two, governance is important. Forested lands are ultimate common that are controlled by government, whether it's national level, or local, or regional government. So, if we allow people to have no rules, then there is no stopping of forests being converted. So, governance is a key.

And so, when I talked about the example of how Japan actually recovered forests, I think we recovered forests during the Edo era, it was governance. And I think currently, oil palm moratorium is ongoing, but it's not effective to regulate small holder farmers in Indonesia from cutting trees to start producing oil palm. So how do we actually deal with governance? I think it's actually perhaps the most important thing, yes, we need to have poverty reduction, we need to make use of agricultural technology. And we have to increase the crop yield per unit area of existing agricultural land, but how do we actually govern the ultimate common, forests and grasslands that are not currently under, you know, managed land.

**HAYASHI Keiichi:**

Thanks so much. And now Dr Dewi.

**Sonya Dewi:**

Yeah, this is a very valid question. We have seen also a lot of examples that it happens in Indonesia, like, you know, when one particular land use or agricultural practice is very profitable, then not only the local people, but other people coming from far away grab the land and encroach the forest.

So, I agree with Prof. Kitajima that yeah, governance policy is very important. Policy and management are very effective policies that can really be implemented. Yeah, sometimes policy is there, but the government doesn't really understand or anticipate what it entails. Yeah. So, policy can be good, can also be bad, like, for example, just to give you an example, when there was forest fire in 2015, huge forest and land fire because of El Nino, and huge area of peat was burned, was on fire, and then the government really stopped and banned the use of fire for land clearing, while actually fire is the most efficient, the cheapest way to prepare land. And when the government blocked that, yeah, and with the severe punishment, the farmers couldn't do that, and they did not, they don't do that. I see myself in the field, what happened is, they start going back to the national park close by and do the illegal logging. So, unless sustainable options for agriculture are there, you know, policy cannot be really implemented. Policy can be there and it's well intentioned, but cannot be implemented. But I think, you know, economic only is not enough, profit only is not enough. We need to understand the political economy and also, you know, generating good governance in terms of implementing effective policy.

**Mohammad Na'iem:**

Related to the green plantation between crops and trees, I have an experience in Indonesia. Actually, if we make plantations, we have to use a wider distance among forest trees. For example, in Indonesia, I have what we call selected trees, I planted 6 by 8 or 10 by 5, that means in one hectare, the number of trees is around 150 to 200 trees. And in between trees, we can plant crops, any kind of crops including cajuput for example. So, after harvesting about 15 or 20 years, we will harvest the wood. Teak wood, you know, has a nice performance because it is a selected tree, comes from cutting material, but annually we can also harvest many kinds of crops, and additionally, the kind of crop can also be selected. We only use the best one. For example, if it's paddy rice, we use the variety of situ patenggang that grows very well and also the taste is like Japanese rice.

I think I agree with Ibu Sonya and Ibu Kitajima that the policy of government is very important. Like what has been mentioned by Ibu Sonya that we have 12 million hectares of timber estate areas but only 3 million that is already managed. I think it is quite bad, and I hope the government can also see what happened in the field.

**HAYASHI Keiichi:**

Thank you, Prof. Na'iem for your comments based on your experience in Indonesia. So, one question from the floor, I think.

**Questioner (FAO):**

My name is Mitsugi from FAO. I think because many audiences in person are Japanese, I will be speaking in Japanese.

First, I thank you very much for organizing this very nice symposium. And I have a comment and also one question.

My comment is, as the other person who asked a question mentioned, perhaps approach in communities other than forestry communities, is very important going forward. For example, in relation to agriculture that was mentioned, my expectation is that we would like to have crosscutting sessions, including people from outside of the forestry community. That will be very useful.

And about land use change and shift, I'm very interested in that topic. And this is an area where it is difficult to implement solutions only with the forestry sector and community. So please consider such a cross disciplinary gathering. And this is not a question specifically addressed to anyone; please select the appropriate person to answer. To halt deforestation, we are struggling and SDG targets' achievement may be difficult, and oftentimes people use the word transformation, but to halt deforestation, what will be the transformation?

It doesn't have to be a logical question, but I would like to invite your ideas on what kind of transformation we can have.

**HAYASHI Keiichi:**

Thank you for your question and comment. So, let's invite our panelists for the response to this question.

Prof. Kitajima first, some comments or response to this question. Is that okay?

**KITAJIMA Kaoru:**

It's very difficult. There is no one single transformation that can affect but I am glad you started Mitsugi-san, you started your question from saying that, in order to solve sustainable forest management, we need to see the whole package; I think Miyamoto-san talked about poverty reduction. Sonya talked about legal systems.

And I think actually, I like what you suggested that we need to be talking, crossing the sectors within the so-called AFOLU – agriculture, forestry and other land uses, because I think we have different emphases in education and we don't necessarily understand like, what trees to plant where, what is the best species. I think even within those of us working in forestry, our knowledge is often limited. We really need to be sharing more information. And I think basic science and problem-solving skills are so important. We need to see not just what we learn from a textbook, but see the situation and think adaptively. Sometimes local people have the answer. Some of the traditional ecological knowledge has a very good scientific, you know, reasoning, that others don't. But how do we actually see and find solution?

Transformations perhaps don't come in just one magic bullet. So how do we actually have a good solid scientific foundation so that we actually see what is the best local solution? And that is very important to keep in mind. I think the best solution comes from scientists and next generation of managers, government employees who actually understand that there is no one magic bullet.

**HAYASHI Keiichi:**

Thank you for the comment. Dr. Dewi, sure yes, but please make it short.

**Sonya Dewi:**

I thought I was expected to. Okay. Yeah, it is a very big question. But to me, you know, in terms of transforming that system, the whole system, I think one single thing that I think could push us through is, you know, going into our mindset, the common but differentiated responsibilities. So, this is really, between the global north and global south, you know. The global south keeps on pushing, producing, because the consumers or the market is demanding more and more, and vice versa.

So, I think, among the SDGs, this sustainable production to consumption is very important, and it can start from ourselves. And the young generation actually is very good in taking up. There are many more, now, changing their lifestyle, they become vegetarian, I think the percentage of young people becoming vegetarian is much bigger than in the older generation. And sustainable clothing, things like that. They are very savvy about that.

So, I think, you know, from our own, in fact, we cannot transform the whole world, at least we can transform, we can start it from ourselves first. And I think by changing lifestyle, you know, being wiser in terms of this production to consumption thing, I think, and be mindful about having a common responsibility to the planet and to the people. But it should be differentiated, yeah, between the global south and global north and wherever we are in the society.

**Questioner:**

Thank you for the opportunity to ask my question. My name is Mahmuda. I'm an agricultural economist from Bangladesh, and I'm doing my PhD at Rissho University. Today, I am here and I have known a lot of information about sustainable development and forestry. And I'm particularly interested in Dr. Kosugi Akihiko for the oil palm trunk high value technology for tropical forest conservation. I think we have seen the production of oil palm trunk into pellets through a process

that can produce byproducts like artificial wood. And that is, I think, in Malaysia, and it is going on in a project.

My question is, what is the economic value of this process? Because this seems a little bit complicated as agricultural process does have a byproduct, various byproducts of wood, because there are also sap and other products from the oil palm trunks. But it seems that it cannot be inclusive for small or medium entrepreneurs to invest in this kind of businesses.

So, my question is, how can we include the small and medium entrepreneurs into this kind of sustainable value product businesses, for the afforestation or reforestation in the ethnic groups?

**HAYASHI Keiichi:**

Dr. Kosugi.

**KOSUGI Akihiko:**

I think it depends on the demand. So, actually, our produced pellets, as you know, are not cheap. I mean, so yeah it has a high value. That's why it depends on the price to sell from our producer, but now the situation, as I already told someone, the situation does change. Yeah, environmental protection has a set of barriers. That is why, I think 10 years ago or 15 years ago, the situation has quite changed. So, actually, at the time, economic motivation is of high priority. But now, not only that is the motivation, but also environmental motivation and society's motivation, you know, are necessary to realize this. That's why, I actually don't know what this business is going to do in the future, but I think, you know, situations change, and also, it depends on the demand. That's my answer to you.

**HAYASHI Keiichi:**

Thanks so much for the answer to the question from Dr. Kosugi.

So, now, since this session has come to an end, let me summarize this session.

So, among the multiple functions of forests, the GHG absorption function is crucial to mitigate the climate crisis. And it has become clear that the introduction of certification systems and due diligence measures is essential to strengthen this function.

On the other hand, we also found that prioritizing tree species with high commercial and carbon credit value puts other vital forest functions at risk and prevents the realization of sustainable use.

We also found that poverty alleviation efforts are also important in preventing forest area reduction. Thus, we gain a deeper appreciation for the importance of collaborative efforts between companies and governments, to conserve, and for sustainable use of forests, as well as the importance of providing scientific evidence for production sites, and certification systems.

In order to strengthen tropical forests, it is necessary to understand the physiological characteristics and the environmental adaptability of individual tree species, improve breeding and silvicultural techniques and develop such as resource management strategies within the landscape to support a sustainable industry. The combination of these research results will generate innovation and enable governments and companies to respond flexibly and appropriately to the dynamic environmental and social context surrounding tropical forests.

So, to all panelists, and everyone in this venue, thank you once again, for your cooperation and active participation to make this session fruitful and meaningful.

Let us give a round of warm applause to all of you.