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Chapter 5
Concluding Remarks and Discussion

Fitrio ASHARDIONO

At the outset, I stated that we wanted to address two vulnerabilities that are hastening the demise of rural communities. The bottom line is the ability to make a viable living from the land, and this is being threatened from two directions. The first is the inability of peasant farmers working individually with hand tools to earn a living from their harvest. The second is the increasingly apparent effects of climate change which are threatening ecological sustainability and thus further endangering their livelihoods.

This has caused the younger generations of rural families, especially those with a higher education, to seek their fortunes in the urban areas. However, as the cities expand, and the agricultural land becomes urbanized, the demand for food increases while productive agricultural land shrinks.

The popular solution is to develop larger, more efficient, mechanized, or as Corinthias P. M. Sianipar reports, robotized farming. However, this has the effect of pushing more farmers off their smallholdings into cities, while biological diversity is lost to cash crops, and excessive harvesting is depleting the land's natural ability to recover. A dependence on chemical fertilizers and insecticides is further destroying the natural ecology, agrobusinesses are consuming the natural forests, shrinking the habit of the indigenous flora and fauna, and by extension, threatening insect pollination. In our haste to fulfill the population's immediate demands, our nation's long-term sustainability is being threatened.

It is becoming increasingly clear that the present attempts to maintain a flourishing domestic economy and meet a growing demand for a more diverse, luxurious cuisine are not sustainable. However, when we read the fascinating reports of the contributors to these chapters, there is hope. The takeaway is that we do have amongst our academicians, scholars with the political, agricultural and technical and visionary qualities necessary to save the day.

Looking at the reports of my three colleagues, I could claim that we have done the research. So why then have we not come up with the solution yet? Regrettably, we also already know the answer to this question. Presently, we are all engaged in our specific fields, advancing our individual academic careers along parallel but separate lines. To fulfill the purposes of this book, collaboration is necessary. To fulfill the stated aim of this book, we must put our heads together. To achieve the Agricultural resilience and Rural social adaptation necessary for a sustainable humanosphere, scientific collaboration beyond borders is essential. So how can we work together?

Rohman Taufiq Hidayat shows us that this is possible in his chapter on spatial planning, enlightening us with an approach to local planning that combines the input from experts in a variety of fields, and consultation with all the actors involved in the designing of the plan and for its implementation.

In his work bringing the local fishermen and farmers together, Dr. Iqra Anugrah describes the political skills and strategies necessary to persuade locals of the importance of learning together the ways to adopt the efficient methods developed through Rohman Taufiq Hidayat's spatial planning.

In addressing the resilience of rural communities, what can be done to encourage the younger generation not to quit their rural towns? Employing the more efficient but expensive Smart Farming techniques

Corinthias P. M. Sianipar described can only be realized by forming the cooperatives being developed by Dr. Iqra Anugrah. Organizing cooperatives requires leadership and technical skills, and AI is the domain of bright young scientists, so there is both a need for and the promise of worthwhile careers for talented young people who would like to make a meaningful contribution to society.

Meanwhile all of these changes to the customary social and agricultural patterns should be done gradually with a wholistic vision from the seed to the table, as visualized in this editor's chapter on agricultural resilience.

As a sequel to the reports contained in the previous chapters, it is only fitting to outline some highlights from the preliminary discussion between this editor and my three colleagues.

We began by addressing urban population growth, the proverbial elephant in the room, and Doctor Sianipar pointed out that the recent data indicates that recent population flow is not that significant, but that the number of regions that do not constitute rural anymore is increasing. Physically the population may not be moving from rural to urban areas, but their homes are gradually becoming more urbanized. They may physically stay in rural areas, but their minds, their words, and their activities are all being urbanized. So the use of urbanization terminology may or may not be actual physical urbanization anymore.

Moreover, while we would like to see more income flowing into the rural areas, the growing popularity of e-commerce is causing that wealth to be diverted back to the centers of mass production. As a result people may live in rural areas, but they get an income from an urban area, and then they buy things from another urban area, and we cannot expect this causal effect anymore. Dr. Sianipar argues that if we want to make residents contribute to rural areas, it is necessary to tie them into activities that are really going on in those rural areas. So it is not

only about their needs, but how the needs of rural areas can be fulfilled by their expertise or their capabilities. But on the other side, can the needs of younger people be fulfilled by things or activities in rural areas? There are many benefits to making rural areas more appealing to the younger generation, and here the utilization of the technical skills required to employ smart farming techniques is a possible source of appeal to young college graduates.

Dr. Iqra Anugrah further pointed out that we have to understand the urban/rural distinction in terms such as smallholders, or peasants or rural communities in a more nuanced and comprehensive manner. When we think about urban-rural interaction, it is not a separate dichotomy but a continuum, a process, a flow. He stated that it is true that in rural areas across Indonesia, things have become more urbanized, perhaps not necessarily physically, but in terms of interactions in terms of the cultural imagination of the young people, in terms of the pattern of urban development in rural areas. Thus, in recent scholarship on urban studies, for example, or Indonesian politics, much has been said about the growth of provincial towns, or a professional middle class, and this is indicative of a growing trend in a positive direction.

Dr. Iqra Anugrah further explained that when we talk about peasants or farmers, these people are not the same as their ancestors of 60 years ago, or even 40 years ago. When we are talking about the peasants of the 1960s, they were basically the subsistence-oriented peasants described in a classical, agrarian literature. Today's peasants are very different. They are peasants insofar as they engage in small-scale agricultural activities, they are small holders to put it in more technical and simple terms, but these rural households engage in a variety of activities. Even the peasants themselves in off-farming seasons might work as motorcycle drivers in nearby towns, and their wives might engage in small businesses with customers in urban areas, while their

children, the second generation, certainly have a more urban-oriented outlook than their parents. This trend is not only limited to Indonesia; a similar pattern is also going on in Thailand, and by extension, must be occurring elsewhere in Southeast Asia, and perhaps globally.

A lot of literature has been talking about the growth of middle-class farmers in Thailand, and the concern is no longer about land, but concerns about STEM facilities or subsidies for fertilizers. So it leads to a different political outlook and view as well.

Dr. Iqra added that he was happy that Dr. Sianipar's report on Smart Farming answered his concerns, because having worked with community members as well as community organizers he had found that as expected, one of the major aspects that they are lacking is technical expertise. They might be really good at managing businesses, and they are pretty creative in obtaining additional capital for businesses or for their cooperatives, but technology is a major issue, and this is something that could be addressed by redirecting the educated rural youth to such activities.

Dr. Iqra also raised the issue of the changing status of young women in rural areas asking, "What is the most appropriate technology or approach to smart farming for female farmers, for women working in rural areas?" This is an important question because typically, the introduction of new agricultural technologies in rural areas tends to marginalize women workers. He asked what would be the best types of technology or the best way to approach integrating smart farming or integrating technology that at the same time would ensure the interests of women workers, or women farmers in rural areas?

Dr. Sianipar commented that it is not only about rural women who are female entrepreneurs or agricultural workers in rural areas, but also that every technological change will bring impacts to the societal structures, because technology has a characteristic to push change, to

redefine the work we have been doing, or the requirements of the work we have been doing, who is doing that work, and who needs to do the work.

So, in terms of the most appropriate technology, it will depend on the type of work. In other words, what is the appropriate technology and where or when should it be applied? So when we talk about a certain location, then we can talk about the most appropriate technology in that place and how women can be motivated and employed in these new sectors.

Dr. Sianipar mentioned that in 2013 he published a methodology to apply or recycle appropriate technology. He summarized this methodology by saying that appropriate technology is a democracy based technology, because appropriate technology should start from the people, should be worked on by the people, and should be delivered to the people. So when we talk about technologies, that is appropriate technology, we are also talking about the democratization of technology. If we need to find the most appropriate approach to deliver an appropriate technology, he said that there should be a gradual change, not an absolute change, but more about incremental changes between the type of technology that we will be applying in a certain location.

He told us that in his laboratory there is one new Ph.D. student who would like to see how smart farming can be applied in a certain location in Indonesia, and how existing technology in that area or introduced by the government can be gradually upgraded. Basically it will not be an absolute change, but an incremental change. So the capability or the knowledge or everything that they are required to have to support the technology should be developed in parallel with the stages of its introduction.

At this point this editor, as a social scientist and agricultural specialist, criticized that after listening to all the arguments, I felt no one

had touched on the issues of the environment.

While they probably did consider the environment, and they had just mentioned democratization, the truth is that in certain rural areas the populace wants new economic benefits, they want to do things, they want to produce more, but at the cost of the environment.

I asked my colleagues if, as academicians, we should just give them the technology and tell them to go ahead and cut down all the trees and make a new land, or tell them that it is destructive, and they had better not do it. There is a kind of push and pull between economics and environmental issues. This really does happen, especially in developing countries like Indonesia. It is critical because if you tell them not to do it they will complain that we are not allowing them to develop in terms of economics.

However, at the same time, I do believe from my research that the local knowledge of the environment is an essential resource that they need to keep, because sooner or later, once they start changing everything, they will realize that they have lost everything. In fact there are some cases where this is already happening, but at the same time, I think it is really hard to know how to share the right information and how to deliver the right data.

Then again this is a democratic process. So if the community wants it, then it must be right. These were just some of the impressions that this editor has encountered in agricultural and rural studies. When I asked my colleagues for their comments, Doctor Sianipar admitted that we had largely missed what we call the nature carrying capacity, that is the ability of nature to cope with everything we have been doing to exploit it.

He thought that our approaches were divided into two larger paradigms, environmental power economics and ecological economics. He asked us a question. “Should we exploit and then do reappropriation?

Or do we need to slow down to make sure that the nature can keep up with the changes we are making?"

He agreed that the environment is the missing link in every discussion, because we usually talk about money and people while we forget the environment that has been bringing us to life.

Dr. Sianipar then turned to Dr. Iqra Anugrah, whom he conceded had much more experience in dealing with people directly, and asked him whether in his experience he had encountered some rural people who thought that whatever they had been doing was good for the environment, while we know that some of the activities they have been doing for so long are detrimental to the environment. They have been using these practices for hundreds of years, but they are harmful to the environment. He wanted to hear Dr. Iqra Anugrah's opinion on how we can introduce a new perspective without blatantly confronting what they have been taught to believe in, how to make sure that when we introduce a new perspective to conserve the environment, we can persuade them to accept new ideas and change their destructive behavior, but without triggering their stronger resistance.

Dr. Iqra Anugrah agreed that the environment is the missing link. In the literature on political ecology, for example, and agrarian studies, and also in recent anthropology, people have been talking about the rift between society and nature. He called it an ongoing, fascinating conversation and agreed with the points that we had both raised. He thought it was important to mention that the biggest polluters are the biggest actors, but having said that, as someone who has worked pretty closely with rural actors, with farmers and with activists in rural areas, he didn't want to romanticize their world, as much as he respected them.

He went on to say that there are so many blind spots that they do not recognize, in terms of the region, in terms of environmental protection, and so on. He said that some of these issues cannot be resolved

through academic conversations alone. They require us to act within the community, but at least from anecdotal evidence from observation, the interaction between rural actors and non-rural actors, should be democratic and based on dialogues.

For example, there are lots of people with goodwill, middle-class activists, or researchers, but we all have our own blind spots. So we just need to listen to our counterparts in rural areas, but our rural friends also have their own blind spots. So, in research and in community activities, it is a matter of dialogue and democratic collaboration between these people.

Dr. Iqra Anugrah went on to say that he has had positive experiences and feels hopeful about the younger generation from rural areas. While none of them seem to be particularly interested in farming they do take leadership roles in peasant unions. They do take managerial roles in businesses like coffee cooperatives, for example. So they pick up the administrative roles in these community organizations. He told us that he had met a man who was around his age or slightly older, who was the current headmaster of a vocational high school that he visited, in Garud, West Java. He is comparatively young, but he knows how to handle staff, and importantly he knows how to politely challenge the older generation.

It is clear that there are some very interesting developments in the field. Some pieces are missing unfortunately, because at present, due to the pandemic we cannot see them. It does appear that a gradual change is taking place in the older generation's potential to accept change and in the younger generation's willingness to play a part in implementing change.

As the editor, I would like to conclude this short book by underlining the need to push for more collaborative exchange between, rural actors and non-actors, scholars and entrepreneurs, and especially

to exchange views and establish some grounds for cooperation with the rural youth. I would like to thank each contributor for their inspiring reports, and for their valuable insights in the ensuing discussion.

There are many things that we still need to discuss, and lots of important questions have been left unanswered, and we have only touched on rural issues, while there is a great need for integration in the planning of cities, future industrial development, and important social issues such as wellbeing and education.

This, in fact, is the focus and concern of our sponsor, Asia-Japan Research Organization, which has facilitated and supported the publication of this work. There is much to be done, and plenty of room for all of us to collaborate in the future. It is my hope that our readers will be inspired, wherever they are, to join this important work.

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Chapter 2: Strengthening the Resilience of Rural Agricultural Societies in Indonesia: Agroecology with a Terroir Approach

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