
INDONESIA-MADAGASCAR PARTNERSHIP IN AGRICULTURAL LINKAGES (IMPARTIAL) AIMS FOR SUSTAINABILITY

Y. Widodo^{1*}, D. Harnowo², H. Gasikara³ and A. Malala⁴

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Abstract

Starting in 2011 Japan International Cooperation Agency (JICA) through the Program of Third Country Experts (TCE) invited Indonesian scientists to be involved in the development endeavors for African Countries, including Madagascar especially in attempt to increase productivity of rice as main staple food of Madagascar. Initiation of bilateral cooperation between Indonesia and Madagascar had been stimulated from JICA-TCE, furthermore for developing Indonesian soybean to Madagascar from 2013 to 2015. Madagascar and many African Countries are grouped into the countries requesting global aid for taming hunger as declared under Millennium Development Goals (MDGs) ended 2015 that continued into Sustainable Development Goals (SDGs) 2030. Fortunately, there is a similarity of languages in Indonesia and Madagascar East and West Africa as heritage from the ancient voyage before western occupation or even Before Christ (BC) era as reflected in the relief at wall of Borobudur a Buddhist temple in Magelang Central Java Indonesia. Based on historical background, there is an opportunity to propose Indonesia-Madagascar Partnership in Agricultural Linkages (IMPARTIAL) as a new alliance for attaining sustainable development in developing countries at the southern hemisphere. Implementing agricultural innovation to provide adequate food and renewable energy for daily modern livelihood is a key to attain sustainability.

Keywords: Sustainability, Agriculture, Innovation, IMPARTIAL

¹Principal Agronomist, Indonesian Legume and Tuber Crops Research Institute (ILETRI), Jl. Raya Kendal Payak Kotak Pos 66, Malang 65101 - Jawa Timur, Indonesia

²Director of Indonesian Legume and Tuber Crops Research Institute (ILETRI), Jl. Raya Kendal Payak Kotak Pos 66, Malang 65101 - Jawa Timur, Indonesia

³Senior lecture at CFAMA, Antsirabe, Madagascar

⁴Lecture at CFAMA, Madagascar & Post Graduate Student, Dept. of Agricultural Engineering, Kobe University, Japan

*Corresponding author's email: yudi_atas@yahoo.com (Y. Widodo)

Introduction

Food Energy Water Scarcity (FEWS) was recognized as a serious agenda to be handled following sustainable development defined at Rio during Earth Summit 1992. This agenda is becoming more important after Millennium Development Goals (MDGs) especially first objective to reduce hunger and alleviate poverty would not be able to properly accomplish at 2015, therefore the agenda of Rio+20 is reinventing Sustainable Development Goals (SDGs) which will be funded by United Nation (UN) seriously till 2030 (UNDP, 2015). In which FEWS still as very important schema to be undertaken amid of climate change. FAO (2015) indicated that during last decade there was significant growing demand of food, on the other hand production and stock of food is sluggish due to climate change coincided with the alteration of natural environment. The natural environment comprises the entire basis for food production through water, nutrients, soils, climate, weather and insects for pollination and controlling infestations. Land degradation, urban expansion and conversion of crops and cropland for non-food production, such as bio-fuels, may reduce the required cropland by 8–20% by 2050, if not compensated for in other ways. Water scarcity is defined as a situation where insufficient water resources are available to satisfy long-term average requirements. It refers to long-term water imbalances, combining low water availability with a level of water demand exceeding the natural recharge. Few indicators are today available to correctly illustrate the extent of water scarcity at river basin or national level. Almost 90% countries suffering from food deficiency are located in Africa. The problem of hunger and malnutrition as well as water scarcity induced sensitivity to epidemic of various diseases including AIDS, ZIKA and Ebola. This condition worse due to socio-economic and political situation is not favorable at African

Countries to alleviate problem without external and global aids. Almost every year hugely numbers of people from African Countries try to exodus to other continents, such as Europe, Asia and Australia as well. To prevent the additional number of refugees as human-boat from African Countries, agricultural as essential instrument on natural resource management have to be improved.

In addition, climate change that was reminded by Arrhenius 100 years ago is now becoming as a serious hitch in food production. This phenomenon was experienced by global community including Indonesia and Madagascar as well. Therefore both parties aware as the member of South-South Countries want to care and share fairly their experiences and expertise to increase food production as well as to maintain the natural resource in relation with FEWS issue. Both nations had almost similar destiny that previously were under western colony, Indonesia under Dutch and Madagascar under French occupation. In accordance to establish the mutual and synergistic cooperation, Indonesia provides full bright scholarship to young people of Malagasy to complete Master Degree at several universities in Indonesia. The alumni of Indonesian fellowship are expected to assist Indonesian and International scientists to learn and identify the problem encountered in the food production and natural resource management as well. By implementing a new alliance with integration of interdisciplinary as well as inter-institutional approaches, the objective to meet the need of current and future FEWS could be gradually and sustainability attained.

From the 60th anniversary of Asia-Africa, conference in Bandung Indonesia April 18-24, 2015 indicated that on agricultural sector for attaining food security need the closer collaboration from research for development. As a commitment of South-South Countries, Indonesia-Madagascar under bilateral collaboration accentuates agriculture as the main aspect to be accomplished. Both nations aware from the similarities of native language as well as traditional practices including in agriculture, there is a need to study ancient heritages to be more recognized for proposing future better mutual and synergistic cooperation. Initiation of this work was a conjunction from previous experiences in which Ministry of Agriculture (MoA) of Madagascar via Indonesia, Ambassador requested expertise of Indonesian scientists interdisciplinary to be dispatched in Madagascar. Previously in around 2011, Indonesian scientists were requested and hired by JICA project to be involved in rice project (PAPRIZ) under the scheme of Third Country Expert (TCE). Hence, IAARD starting at 2012 give a mandate to an

interdisciplinary team to learn the possibility of agricultural production increment in Madagascar starting with rice and soybean. Furthermore the broaden aspect related to food energy water scarcities (FEWS) as international issue is also concerned for accomplishment. Besides, the archipelago countries around Africa and Madagascar are also suffering from global warming and FEWS as well. Some countries in Africa were previously under occupation of the United Kingdom, so now they are under membership of Commonwealth Countries. Unfortunately to run this program, Madagascar and African Countries are still not able to finance and therefore require serious aid from the North Countries like European Union, Japan, Korea, Canada, USA, Saudi Arabia, United Arab Emirate and Turkey as well. The success of this program in Madagascar will be multiplied and disseminated into other tropical African Countries by training and visit (TV) as well as by introducing newly agro-innovation. At the end of the project, it is expected the results are able to illuminate and to inspire that getting agriculture moving will stimulate the hunger reduction and poverty alleviation as well as ultimately the sustainable development of the regions.

Materials and Methods

To attain the objective by figuring out the past and present situation as well as future outlook of agricultural related to FEWS in Madagascar, several activities have been undertaken as follows:

- a. *Indonesia-Madagascar in historical perspective*: chronological history was collected from museum in both countries, especially Majapahit Kingdom Museum at Trowulan Mojokerto, East Java Indonesia where the Prime Minister of Gajah Mada was a central being from late 13th century to mid of 14th century in relation with the initiation of Madagasikara which then well known as Madagascar. Then museum and library in Antananarivo as well as historians recognized to the subject studied.
- b. *Baseline survey and primary data collection*: this activity was undertaken by visiting several sites especially from the north to the south part of Madagascar. Participatory Rural Appraisal was used to gather information during field survey. Secondary data available in district and region as well as national level were collected for completion and support field information. On the other hand, the second and third authors with the team were also invited to be trained and to visit several sites in Indonesia for additional knowledge.
- c. *Source of food and renewable energy*: biological potential of plant and animal as

source of food for fulfilling the need of current and future generation under sustainability for security and sovereignty as well. Conflicts the need of food and on the other side renewable energy, which stimulate the polarization of subsistence and commercial, has to be clearly described. Accordingly, there is no recurrence of mistake and inappropriate investment, which induce to instability and inscrutability. As a result, sustainable development in overall can be accomplished.

- d. *Demonstration plot of soybean after lowland rice*: to maintain fertility and sustainability of lowland as well as to improve food security the lowland after rice harvested has to be utilized, it is not to let in a fallow. Indonesian experience in growing soybean after rice can be entirely transformed into Madagascar. By producing soybean after rice at the period of April to November, seed of soybean in the upland for the period of November to May is available. The exceeding production of soybean from Madagascar can be used domestically or sell to Indonesia to meet the growing demand.
- e. Dissemination and Training was undertaken by significant support from Indonesian Ambassador. Part of activity was held for fulfilling the request from Agency of National Nutrition to provide 3 days exhibition at the square of Antsirabe Vakinankaratra region, at 2-4 September 2014. Then 2 days training followed by 50 participants from 5 regions was held in FIFAMANOR at 16-18 September 2014. Public training for soybean processing into several end product such as tempe (fermented food), tofu, soy milk, soy coffee as well as soy cacao were undertaken at CFAMA on Friday, 19 September 2014 followed by around 100 participants. Intensive communication from 2015 up to recently between three authors was very intensive, although third author then continuing Post Graduate Program at Kobe University Japan. Third author would like to complete his study to Indonesia on food crops processing especially for legume and root-tuber crops.

Results and Discussion

Indonesia-Madagascar in Historical Perspective

Relationship between Indonesia and Madagascar was initiated long time before western voyage to start colonialism and imperialism. After Columbus found new continent was so called as America and during that period Europe connection to eastern part of continent threatened by clash and war under crusade symbol between Christianity and Moslem. Previously the linking of trading between West and East was especially constructed by Marco

Polo who developed silk path from Italy to China during Kublai Khan at late of 13th Century. Due to Crusade War there was a worse connection from West to East, particularly in around Mid-East. Consequently, the western adventures tried to explore the possible of ocean path to access eastern portion. Portuguese, Frances, Dutch and others struggled to found the archipelagoes as the origin of cinnamon and other spices by exploring the ocean route. In 1500 CE Portuguese finally found San Lorenzo which than under a famous name of Madagascar (Kenny, 1982). According to Blench (1982), Kus and Raharijaona (2000), Adelaar (2006) and Crowley (2010) the early settler of Madagascar mostly came from South Borneo, Indonesia. To proof this argument could be retrieved from architectural type of bamboo house in the north part of Madagascar, which has similarities to Indonesia and Philippines. It is also indicated from similarities of the language and traditional habits. The migration of Austronesian Diasporas from Indonesia into ethno-genesis in Madagascar was predicted from 350 BC 700 AD. Entering sites of Austronesian was from the north part of Madagascar then to the center and to southern part. Indeed in the period of Before Christ (BC) the trade between Indonesia to the Mid-East till Persia kingdom was intensively undertaken. It was reported in the Bible when three Persian scholars come to honor the born of Sweetheart Christ by giving a special product from North Sumatra. Therefore, prediction of the period related to migration of Austronesian from Indonesia to Madagascar as early settler is rational and making sense. Dahl (1991), Marschall (1995) as well as Ann Kumar (2012) indicated a clear fact from the close affinity of language between Malagasy substratum Bantu with Ma'anyan in South-east Borneo. However based on the long observation by Adelaar (2006) there was the loanwords of Malagasy from South Sulawesi. Indeed before Dahl, there were two scientists Frederick de Houtman (Dutch) in 1603 as well as Luis Mariano (Portuguese) which indicated a linguistic relationship between Malagasy with Austronesian languages at Southeast Asia (Andriantefinanahary and Yanariak, 1997). Based on that evidence Dahl (1991) predicted that the migrations of people were occurred around 1,300 years ago. He also revealed that during the hegemony of Sriwijaya kingdom at South Sumatra in 700 AD was respectively distinguished until to Madagascar.

However based on the name of Madagasikara remained the question. It is suspected has a relation to a name of GadjahMada. The lost step of GadjahMada that was previously as prime minister at Majapahit Kingdom at 1364 AD is still as a big question for the historians. GadjahMada

was able to connecting all archipelagos as so called Nusantara (which is now Indonesia, Malaysia, Brunei, part of Philippines and Republic Democratic of Timor Leste) under Majapahit hegemony. Thus Majapahit territory was bigger than Republic Indonesia today, because the boundaries of Majapahit beyond to Australia. To initiate his commitment for connecting and uniting whole archipelagos from Pacific to Indian Ocean, GajahMada declared a commitment is known as Palapa Oath. He promised would not be happy before those archipelagos under management of Majapahit Kingdom.

"SiraGajahMadapepatihamungkubumi tan ayunamuktiapalapa, siraGajahMada : Lamunhuwuskalahnusantaralngsunamuktialapa, lamunkalah ring Gurun, ring Seram, Tanjungpura, ring Haru, ring Pahang, Dampo, ring Bali, Sunda, Palembang, Temasek, samanaingsunamuktialapa"

"You are GajahMada, the prime minister, appointed you will not be able to enjoy your life. Said Gajah Mada: If *Nusantara* (*Nusantara*= *Nusa antara*= archipelagoes in between continents as external territories) are lost (defeat under unity of Majapahit law), I will feel "palapa" ("*laralapa*: in Javanese is unhappy, so palapa is happy"). If the domain of *Gurun*, domain of *Seram*, domain of *Tanjungpura*, domain of *Haru*, *Pahang*, *Dampo*, domain of *Bali*, *Sunda*, *Palembang*, *Tumasik*, are lost and under unity of Majapahit, in which case I will feel happy and able to enjoy my life with leisure."

His vision was inspired by the previous king Maharaja Kertanegara at Singhasari (farther in law of RadenWijaya the founder of Majapahit Kingdom) that in 1292 AD was able to protect in opposition to Kublai Khan Grandson from Genghis Khan. In fact, in that, period almost entire Asia and Europe continents were under occupation of Mongol-China Empire. Kertanegara built the strong mariners especially for providing security of South China Sea I Indian Ocean as so-called Pamalayu squadron. His endeavor was dedicated to afford against Mongol-China Empire and protecting people from the brutal pirates. The vision of GajahMada was a continuation of Kertanegara in order to establish maritime emperor from Gurun to Aru had to become in the unity under the law and regulation of Majapahit Empire. Among the historian the name of Gurun and Aru is still as a debate till now. Gurun was suspected as Nusa Penida a tiny island southeast of Bali and Haru was assumed as Karo at the north of Sumatra. In fact, Haru or Aru is archipelago nearby Papua. There were many interpretations, among them Gurun is

Madagascar not the continent of Africa in attempt to avoid and prevent the battle between expansions of Mongol-China pursued by Tame lane (Timur Lank) that oriented to be an enormous continental emperor. Moreover, during that period the crusade war was cruelly happened in the continents of Eastern Europe and Mid East. During that period, continent oriented territory was very fragile and risky conflict, which induced to huge and long wars. Those conditions triggered Gajah Mada to have a strong commitment to his Palapa Declaration to unite and construct the archipelagos under the Majapahit Kingdom as an enormous and glorious maritime emperor.

Unfortunately, among the small kingdom under Majapahit, there was a Pajajaran in West Java that did not want to accord 'Palapa Oath' Gajah Mada declaration as well as Majapahit hegemony. Gajah Mada initiated his dedication from very young age from Kertanegara at Singhasari, then following RadenWijaya to build a Majapahit, after that to Jayanegara, TribuwanaTunggadewi, and HayamWuruk. Thus HayamWuruk still very young and need a princess. Therefore, HayamWuruk wants to get married with DyahPitalokaCitraesmi from Pajajaran. From the political status revealed that Majapahit bigger than Pajajaran, as consequence Citraesmi and her father a king of Pajajaran had to come to Majapahit. To honor the groups of wedding preparation from Pajajaran, Majapahit provided a place at Bubad (located at western of Trowulan, near Bandar Kertosono). Unfortunately during that time (1357 AD), there was a dishonest from part of Gajah Mada staff who wants to replace his position as Prime Minister. In a crucial of period, they spent this momentum to attack Pajajaran wedding groups and killed the king. It was so called as Bubad war that stimulated the princess Citraesmi went to suicide followed her father. As consequence, responsibility to this impolite and immoral accident was directed to GajahMada, which ultimately induced the king of HayamWuruk angry and hate to GajahMada. Under such situation GajahMada then resign and retreat to hidden place. Therefore, many places in Bali and Nusatenggara believed as the retreat domains. Thus, many places such as Mada at Lamongan, Madapura at Mojokerto and a waterfall of Madakaripura at the TenggerProbolinggo were supposed as the last destination of Gajah Mada. However, some assumption revealed that Gajah Mada which felt very disappoint and shy to Bubad war accident 1357, hence after resigned He was getaway and deprived from the capital of Majapahit (now in around Trowulan museum in between Jombang and Mojokerto East Java) to the most far area. He pursued by loyal followers and squadron to an

island that then called and recognized as Madagasikara, it meant Mada was earlier arrive (Gasik: Javanese) to this bare land (Ara: Javanese). The name of Madagascar is a pronunciation near to Mada and laskar with a meaning in Indonesian language of laskar is warrior or squadron, Thus, Madagascar indicated the Mada warrior or Mada squadron. Moreover, up to recently there is a similarity to articulate the number from one till ten, then tenth to hundred and thousand as well. The important word to pronounce land in Malagasy is tana, while in Indonesia tanah. The meaning of Antananarivo also indicated there was the land guarded by thousands of warriors. Of about year in Malagasy mentioned as taon, while in Indonesia tahun (Table 1). The most important word is Ari-ari that for Madagasikara used as currency, it from Javanese word means placenta. Both have a similar fundamental meaning those babies adult human cannot afford without Ari-ari (placenta and cash money). Although the ancient history of Madagascar was started from 500 BCE, however history of kingdom in Madagascar was recognized after European occupation, it was initiated that Merina as the early Kingdom in Antananarivo (1540-1897) with the famous King were Radama I (1793-1828) and Radama II (1829-1863). Up to now the use of Ra as early name (prefix) for indicating that someone as heritage holders from kingdom family. Rakoto, Raveloson, Radama, Ramada etc are the example of name in Madagascar. This type of name very similar with the name type during Singasari (1222-1292) and Majapahit (1293-1498) Kingdoms in East Java, such as Ra Kutu, Ra Semi, Ra Tanca, etc. Initiation period of Merina Kingdom in Madagascar was almost simultaneously with the fall of Majapahit as well as the initiation of Demak. In depth, study needs to clarify this suspicious hypothesis.

Indeed as a Javanese Gajah Mada very committed to hold a basic principal as pluralism as done by rule of Majapahit which allowing people to hold religions freely in Hinduism or Buddhism as well as animism or dynamism. In such condition, faiths and religions can live together under harmony without claimed that each other is the best, most accurate and proper. It was completely different with the wars in the Asia and Europe continents related to religions, especially Christian and Islam (Moslem) massacred thousands victim. Hence, East direction especially to Southeast Asia, including Indonesia was considered as the domain for expansion of Islam after India and Mongol China under Khan Dynasty founded by Tame Lane (1336-1405), due to western part resistance from Rome and Byzantium was the obstacle of Islam to campaign as the most proper religion. As consequence, the

fall of Majapahit was related to submission of authority from Brawijaya the last king to his son Raden Fatah as a king of a new Islamic Kingdom which moved the capital to Demak Central Java. Unlike in the continents of Europe and Asia, war and war were the solution to introduce religions, Majapahit wisdom was silence and peaceful. During the peak of Majapahit golden era, polytheism and monotheism were able to construct a harmony in the daily livelihood. Monotheism insists that only a single God exists, known variously as Yahweh, the Lord or Allah. Other gods are "false" or even demonic. The Monotheistic God is envious and wrathful. There is one God, and one correct method of worship. Those who deviate are heretics and may be punished, tortured or killed. In its exclusive devotion to the worship of one God, monotheism has inspired much ferocity and fanaticism (Goel, 2009). In Majapahit custom there was a principle let God and Gods decided their rule without anyone claimed take imperative to whom as selected among human on behalf Him (God) or Them (Gods). It meant that not necessary someone declared as God or Gods servant to create peaceful and harmony by initiating or promoting war to the group, which were not obey to the rule of God or Gods that was told to him. This belief style is still practiced by major Javanese who hold Majapahit inheritance. Definitely, from two loyal guards of Brawijaya namely SabdoPalon and NayaGenggong reminded that Islam in Java as well as Indonesia will be examined by 500 years starting from 15 - 16 centuries up to recently. It seems that prediction related to examination of Islam as the only trusted religion is on going under this period. Of a global stigma that Islam as terrorist, has to be wisely explained by followers with empirical peaceful and open-ended dialog. The worst situation in Mid East up to recently is a contradictory between teaching and implementation. Widodo (2012) elucidated that the basic principle of Javanese life from ancient to present future has to be committed to old traditional teaching. Undeniably from the old traditional teaching, the overall objective of Javanese that so called *MemayuHayuningBawono* with the intention of means is to generate, trigger and stimulate (*Memayu*) the beautifulness (*Hayuning*) of the world (*Bawono*) nature (including biodiversity as well as a-biotic/physical elements) under harmony. This old traditional wisdom was performed in the various ritual ceremonies and daily livelihood from prehistoric era (animism) till the last 1970, entering third millennium this teaching and its practice was really ignored by most of community, except the local community such as Badui in Banten, Suku Naga in West Java, Samin in Central and East Java, Tengger and

Osing in East Java as well as rural remote community that still hold old tradition related to sustainable forest management.

Definitely, Javanese and inhabitants of Java have similarity to act in response as a community to cooperate hand in hand (*gotongroyong*) for preventing global warming by increasing sink capacity of CO₂, if they have adequate understanding. This task was campaigned formally by government in line with several Non Government Organizations (NGOs) led by WALHI (*WahanaLingkunganHidup Indonesia*/Friends of the Earth Indonesia) which have adequate patiently to remind and invite people to aware about environment problems and related aspects. Widodo (2012) elucidated that traditionally Javanese are easy to care to each other, therefore they willing to share fairly about everything especially important matter for the progressive and dynamic of livelihood under the formation of indigenous knowledge as platform for sustainable development. Undeniably, this tradition is an instrument with fundamental strength adequately for improving the critical condition of forest due to inappropriate direction in development.

To respect the soul of forest (big trees habitat), from old traditional philosophy teaches community to provide various food regularly as so called *caosdahar / sesaji*. The foods with special prepared are left and then eaten by animals or the other living things in the forest. This kind of ceremony is still practiced regularly by the famous Tri Hita Karana Principle of Balinese till today (Global Travel News, 2013; UNESCO, 2015). From the history of Majapahit kingdom in East Java (1290-1400), definitely Balinese were came from Javanese who disallow new religion (Islam/Moslem from Arab) and still hold Animism and Hinduism. This uniqueness of local wisdom is very important to be recognized by modern community in order to generate the greener world future. As Javanese, in order to generate the harmony of the world should understand

SastraJendraRahayuningratPangruwatingDiyu, means for attaining glorious human being (*Rahayuningrat*), wisdom has to be achieved by learning knowledge and science (*Sastra*) under the name of God (*Endra*) and keep a distance far away (*Pangruwating*) from the greediness (*Diyu*). This indigenous knowledge as traditional legacy needs revitalization and implementation urgently into modern life style that tends to consumptive and careless. Holistic approaches in sustainable forest management have to be undertaken in line with community development. Some endeavors related to livelihood for fulfilling the basic daily needs especially food and fuel for

the community live around forest have to be installed its security and safety.

Lesson from Previous Experiences

There is a similarity between Indonesia and Madagascar, starting from very basic need in order to fulfill the food; they used rice as the first priority to be available (Fig. 1). Both nations are the highest rice consumer in the world with consumption above 120 kg/cap/year. As consequence, both countries imported huge of rice from global market. In fact, there is a shortage of rice stock in global market, causing the price increase (FAO, 2015; Widodo, 2013; Widodo *et al.*, 2014). Many international parties had concerned to focus directly their aids for helping people at many aspects in Africa, however so far the progress so low. Certainly from previous activities indicated that people in Africa very enthusiasm to the newly innovation introduced. Experiences from Madagascar on rice and soybean developed by JICA in collaboration with Indonesian scientists revealed that farmers willing to adopt and adapt the newly innovation into their circumstances. During field and classroom, training farmers were actively raising question and would like to share their experience for improvements. Farmers' awareness in agronomic aspect as the main key for attaining sustainability has to be respectively recognized. Food aids from outside and external circumstances have to be considered as temporal, not permanent. Therefore, producing abandon of food in diversity is the way to achieve food security. Due to water scarcity and drought calamity, cropping pattern requires to be evaluated in relation for producing, adapting, mitigating to provide food adequately in their circumstances. Mutual and synergistic component to be installed into integrated agricultural system as practiced by small scale farmers in Indonesia needs to be shared into Madagascar and other African Countries. The requirement of firewood for daily food preparation of most rural and suburban dwellers in Madagascar and other African Countries is an agenda for setting up the agroforestry system. So, deforestation, which induces to desertification, could be avoided. Consequently, shade tolerance root crops requisites to introduce and develop under trees at agroforestry system (Widodo *et al.*, 2015a & 2015b). To conserve water and to make available longer, therefore artificial ponds needs to be constructed. Subsequently, fish and or giant frog as source of protein could be cultivated in the artificial ponds, and crops can withstand from drought. This agenda discussed during the training facilitated by Indonesian scientists with supporting picture during presentation stimulates farmers to try their willingness to do. In relation with the previous Indonesian soybean,

development in Madagascar there was very success of initial results. Unfortunately, the real development stage extrapolating research results into larger domain was not continued due to budget shortage from both countries. Indeed to follow up the results, government of Madagascar by Mr. President supported soybean development from Antsirabe in the central to several regions in the north, west and south. Simple mechanical planters were also developed by Mr. Ando Malala (third author) to be distributed to group of

farmers in for above mentioned regions. It is expected by developing soybean non Genetically Modified Organism (GMO) farmers in Madagascar will have better additional income, due to its good market demand. Principally under IMPARTIAL program aside farmers cultivate divers' food crops for sustaining food sovereignty; however commercial crops required by global market have to be explored.

Table 1. Similarities of word in Java and Madagascar.

English	Indonesia	Java	Madagascar
Sky	Langit	Langit	Lanit
Land	Tanah	Tanah	Tana
Year	Tahun	Tahun	Taon
Water	Air	Ranu	Rano
Leisure	Sukacita	Palapa	Falafa

Activities Propose under IMPARTIAL

An inability to attain the MDGs the end of 2015 subsequently will be continued into the implementation of SDGs till 2030 is a lesson to be learnt realistically and carefully. Amid the endeavor to achieve SDGs, the severe of climate change as well as political conflicts inducing wars are worsening condition to be more difficult. Decreasing food production globally due to climate change and its coincided factors as well as increasing the number of refugees need international parties to work in collaboration for effectiveness and efficiency. Inducing peace to cease the wars by stimulating bilateral till multilateral collaboration on agriculture will increase the awareness of global community to be more solid and compact under unity to overcome global climate change as the main constraint and problem in the future human civilization (UNDP, 2015; FAO, 2015).

Based on facts and data for mentioned above, therefore overall objective of this proposes activities are as follows:

1. To establish a new alliance in formulating agricultural as an instrument on natural resource management in order to increase and improve diversification of food crops production and its linkages for sustainable development. This first objective is also as replication of the first objective under MDGs and SDGs as well, but it is more rational and operational.
2. To initiate and support establishment of agrometeorological station at the agricultural education center in Madagascar and African Countries as an apparatus to note and collect baseline data for improving agricultural performance in attempt to formulate the

strategy for anticipating global climate change through smart climate agriculture with instrument on adaptation, mitigation and production as well in attaining and sustaining food sovereignty by diversification.

3. To demonstrate the agricultural innovation particularly bio-industrial integrated agriculture for improving the existing agricultural practices, and to train the participants of Malagasy and African Countries as well to refocusing into agricultural innovation as basic standpoint to implement sustainable development.

This proposes activity is expected to be approved then will be executed by Atsumi International Foundation (Sekiguchi Global Research Association) in collaboration with Indonesian Agency of Agricultural Research and Development (IAARD) as well as Ministry of Agriculture Republic Madagascar. It is expected that Mauritius and several countries in East Coast of Africa will join and involve in this program with support from other international or multilateral countries such as EU, USA, Canada, Australia, Commonwealth Countries, China and Korea. This project will require four years execution (2017-2018-2019-2020) for accomplishing the objective mentioned. So far, Mauritius and several Countries in Eastern Coast of Africa also interest to initiate collaborative work with authors. Those external supports from partner's candidate in the partnership are considered as prospective opportunity to be followed up by real proposal then to be applied for approval to the donors. At least due to budget shortage under lack developing countries, hence international protocol could be used as an umbrella to shape collaborative work. All parties involved in this activity propose have to be aware and understand from rationale background,

objective targeted methodology for execution till expected output which will be accomplished gradually.

Expected output will be accomplished from these activities proposed are as follow:

1. Establishment of Indonesia-Madagascar Partnership in Agricultural Linkages (IMPARTIAL) as a new alliance for refocusing and initiating sustainable development in Indonesia, Madagascar and stimulating African Countries to do so. This alliance is in line with the spirit and objective of South – South Cooperation as well as Asia – Africa Conference in 1955.
2. Establishment of Agro-meteorological Station in Centre De Formation Et D' Application Du Machinisme Agricole Republic of Madagascar (CFAMA) as an initial tool for training and the template will be multiplied into various agro-ecological zones in Madagascar. So far in Madagascar

and several countries in Africa Agro-meteorological Station are still not adequately available.

3. Scientific and Impact recognitions from the demonstration plots indicating performance of innovation for improving the existing cropping pattern. So far intercropping was not supported by government in Madagascar and African Countries, due to complex consideration and still huge space available. Government recommendation tends to cultivate crops under monoculture. Additional knowledge and experiences of Malagasy and African Countries participants would be accomplished from the training and visit (TV) to various sites in Madagascar and Indonesia. Based on this TV, then participants will modify, improve and implement into their circumstances to establish the newly cropping pattern (Widodo *et al.*, 2014 & 2015a & 2015b).

Table 2. Approaches and methods for undertaking IMPARTIAL

Period	Endeavor	Main activity	Target
October 2016 to January 2017	Preparation	Finalizing proposal in Indonesia and Madagascar. Lobby and meeting to approach the stakeholders in Madagascar, Indonesia, Food and Agriculture Organization of United State, World Food Program and NGOs.	Final Proposal signed by the stakeholders
January to June 2017	Socialization and Initiation	Introducing and promoting IMPARTIAL into global communities with similar visions	IMPARTIAL recognized by global community
July to December 2017	Establishment and Discovery	Setting a station of agro meteorology and training in CFAMA Madagascar	Installed of a very vital tool on agricultural baseline data
January to June 2018	Discovery and Development of innovation participatory	Multiplying the station into various agro-ecology and field testing of cropping pattern	Multiplied agro-meteorological station and Identified field problems for setting cropping pattern
July to December 2018	Demonstration and Dissemination	Multiplying the station into various agro-ecology and field testing of cropping pattern	Multiplied agro-meteorological station and Identified field problems for setting cropping pattern
January to June 2019	Dissemination and Delivery	Scaling up cropping pattern into economic extent. Training and visit (TV) of Malagasy and African Countries participants to various agro-ecological zones of Indonesia archipelago	Disseminated agriculture innovation into wider domain, and obtained comprehensive knowledge & wisdom by participants for implementation
July to December 2019	Formulation and Institutionalization	Delivering the results of new innovation which was participatory developed to stakeholders in various African tropical countries	Delivered agricultural innovation into good governance of countries member, and preparing the tools & methods for sustaining the impact of IMPARTIAL with post monitoring program
January to December 2020	Recommendation for extrapolation of implemented program into Asia-African Countries	Workshops, seminars, conferences to accelerate IMPARTIAL results	Sustainability of development, particularly on agricultural environment and its coexistence

Note: This program is welcome for international parties to participate and support actively.



Fig.1. Two relief depicted in the wall of Borobudur assumed as ancient voyage from Indonesia to Madagascar and traditional farming at Antsirabe(left side).Falafa a name of hotel for leisure in Madagascar mimics with meaning of Palapa word declared by GadjahMada from Majapahit Indonesia (right side).

The appropriate approaches and methods to undertake this program effectively are procedurally considered. Many parties and stakeholders involved into a consortium have to understand from the planning into on-going execution and its progresses. To execute this project, the stepwise phase will be arranged to provide information and to gather the progress engage. Monitoring and evaluation of each step will be reflected for improving future praxis. The goal for sustainability would be seriously accomplished by welcoming and inviting feedback, suggestions and comments for improvement the progress (Table 2). So do all parties involved will feel satisfy.

From presentation and discussion on 1-5 November 2016 in Kitakyushu Japan in relation to emphasize a follow up of Asia Future Conference as well as Asia-Africa Conference indicated that Nigeria as well as Mauritius very interest to build collaboration for initiating this proposal as had been done in Madagascar since 2011/12. On late January till mid of February 2017, Nigeria will consign the delegation from Delta State to visit Malang East Java to eyewitness and decide to prepare contractual

partnership for developing food crops production and processing in Delta State. On the other hand, Mauritius is also interest to join this program by providing land and budget to initiate food crops other than sugarcane as a main earning income commodity. Mauritius will ready to initiate on April to August 2017 for preliminary study as well as field-testing. Due to budget limitation, therefore financial funding support is estimated from each country interested. However, JICA as pioneer institution and the other international agencies are still expected to sustenance this proposal into a powerful program. Intensive discussion with Prof. Saiya Takeuchi from Yamaguchi University as well as visiting Professor in Oxford United Kingdom till April 2017, indicated important and urgent follow up to be implemented by global community with regard to article message. Prof. Saiya also pointed out the important of food amidst of global change and global warming, therefore invention and innovation to provide food adequately under sustainability have to be recognized and seriously concerned. Prof. Saiya also reminded the necessity of the newly invention and innovation such as described in this article to be awarded.



Fig. 2. Familiar discussion in Kitakyushu 1-5 November 2016 with Mr. Yoshimi Tanaka and staffs as well as with Prof. Saiya Takeuchi from Yamaguchi University.

Conclusion

Regarding to explanations as well as results and discussion of previous activities, it seems in line with the continuation of MDGs into SDGs, several endeavors to initiate bilateral multilateral collaborations need to be stimulated under transparency. Thus the main objectives related to hunger reduction and poverty alleviation that were not able to be accomplished during MDGs could be approached by effective and efficient during implementation of SDGs till end of 2030. Indonesia-Madagascar Partnership in Agricultural Linkages (IMPARTIAL) is an approach aimed for attaining sustainable development, particularly on agriculture with regards to reduce hunger by strengthening diversification on food sovereignty and to alleviate poverty by triggering from small scale, medium till large scale of bio-industrial agriculture system.

By integrating bio-industrial agriculture system that means maximizing the use of sunlight and water available to produce abundance of biomass, therefore FEWS problems could be solved gradually. Indeed this innovation is not originally as new invention, because it was practiced previously by small scale farmers who grew various crops under diversification. The difference with previous existing practices was less integrative, less participatory due to farmer's apathies previously. By promoting IMPARTIAL all stakeholders and parties including farmers are supposed to be aware, understood and pleasant, so they are willing to do for accomplishing the sustainability particularly on food sovereignty as main key of civilization. Nuance and new spirit and hope to bring IMPARTIAL into implementation in several countries need high commitment for achieving the best accomplishment of success.

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