Chapter 12: A Synthesis of Findings and Prospects for the Future

12.1 - Introduction

This final chapter is a synthesis of the work carried out during the four stages of this project as defined by Collomb (1998). The first stage highlighted the current situation in reference to land tenure and the degree to which the various manifestation of tenure are adapted to the population structures and dynamics at the macro or national level as discussed in Chapters Two and Three.

The second section of the book was more condensed and pertained to the designation of study areas in which to address the themes explored nationally at a meso village level and micro household level. Definitions of the type of data required at the meso and micro level were defined by Collomb but not the methods required to collect nor analyze the information, with the exception of the index for cross-comparison with other nations.

The third stage of the book delved into the analysis of similar themes to stage one but at a much more detailed village level where the interactions of the variables became more apparent and more easily disaggregated and articulated. The third stage also incorporated special topics such as the impact of malnutrition and the issue of access to land for the youth and women in society and was addressed in detail in Chapters Seven through Ten.

The fourth and final stage of the book, is based on the findings of the second and third stage and explores the acceptability of potential changes in the land tenure system and their likely effects on the local population, and also the acceptability of the changes to the local population. This was discussed in the penultimate chapter and leads logically to this concluding chapter whereby we address the questions posed in the introduction in light of the findings at the macro, meso and micro levels.

In writing this final chapter we adopt a case by case method, whereby different scenarios are introduced and the likely
interrelationships between land tenure, food security and demographic change are addressed for the Philippine case. This is then followed by a section reviewing the policy implications of the findings and where future research may be most fruitful in this important transdisciplinary field.

12.2 - What constraints are preventing an increase in agricultural productivity?

There is an on-going debate between the role of population growth, related land inheritance patterns and unsustainable exploitation of natural resources that then leads to land degradation. In the case of the areas studied, population growth is continuing at a modest to high rate. In all the systems studied degradation of the environment has and continues to occur in one form or another. In the sloping and marginal uplands of Leyte and the similar environments of peri-urban Cebu land degradation is more apparent in that soils have been eroded over many years and production is exceptionally low (by national standards). In the case of the two lowland systems degradation is primarily evident in the level of soil demineralization stemming from the overuse of inorganic fertilizer. Soil erosion is not a major problem but the lowland soil’s capacity to hold moisture and its natural fertility and soil biological organisms are extremely impoverished. The link between population growth and this level of degradation is weak. In many cases the degradation was initiated many generations ago and followed the initial opening-up of the land. Population growth rates are in part, implicated as an underlying cause for new, fragile lands being opened for agriculture. However as our case studies have shown, the stronger link is with land tenure regimes and the inequality in access to land and other problems rooted in an ineffectual industrialization policy for the nation as a whole.

12.3 - Population growth prevents increasing yields and long term investments?

Investments in infrastructure and so-called landesque capital can have a positive impact on agricultural productivity by lessening the impacts of droughts and floods and longer term effects of things
such as soil erosion on sustained yields. In the Philippines, landesque capital, such that it is, has been largely invested in the country’s wet lowlands at the expense of the majority of the country’s other cultivated lands, such as the dry lowlands which are unsuited to rice, and the sloping uplands. This wet rice focus has in itself been fostered by those with a vested interest in the success of the lowlands. In part, this investment in lowland infrastructure is to be expected as the lowlands are typically held by persons with some security in tenure. It is in the uplands, with their very weak tenure security, that the greatest problems lie. Few if any farmers or tenants invest in longer term infrastructure work or remediation strategies to ameliorate the impacts of land degradation when they lack clear security in tenure. Even in cases where tenure is secure, the marginality of the land obviates the benefits in over investing in works to maintain soil fertility and productivity. Moreover, the opportunity to secure capital for such works is rare. Thus in this case population growth is less of an issue than land tenure security, and the latter is the main focus of current government programs.

12.4 - Is it the case that in low population density areas, away from urbanized areas, productivity is generally kept at modest levels, but with increasing population, agricultural intensification ensues to feed the increasing population?

The scenario outlined above does not pertain to the Philippines i.e. there is contradictory evidence. The land base in many areas that currently experiences (or in the past has experienced) population growth is often highly degraded and the potential to increase production with only modest improvements in infrastructure and technology is not perceived by the farming population. In the Philippines, the response under such situations is to invest not in the land but in human capital. Education is purchased, with a focus on women, so that a growing part of the rural, once agricultural dependent population can secure urban-based jobs and which require them to secure their sustenance from the marketplace rather than the farm. There is also a long seated inequality in land holding patterns and while population pressure rises there may actually be a disintensification of agriculture. This occurs if there are owners of large tracks of land who do not rely upon them for their principal income. In these cases, land can be taken out of grain production
and placed into a pasture system for cattle or other grazing animals. This strategy may avoid agrarian reform by removing tenants who could be cultivating the land and could lodge claims to the land. Similarly, land can be absentee-owned and intensification may not proceed at the necessary pace to keep up with population growth as incentives to increase yields are lacking. There is, however, a significant caveat to the latter situation. If a formal leasehold contract is signed between a landlord and tenant a fixed rent is agreed upon. Under these conditions any increase in production from either intensification or productivity gains will accrue directly to the tenant. While this may be the case, there are few examples where this is the motivating factor behind a tenant’s increased productivity.

A final scenario in this section relates to land fragmentation and its links with population growth. In the Philippines there is a clear relationship between population growth and land fragmentation. Inheritance patterns are critical to this issue. All lands are, at least in theory, equally allocated to all siblings with the death of the parents. Population growth rates are thus a very real and serious concern in that a farm that in one generation was adequate to support a family can rapidly leave all the siblings with uneconomically-sized farms (in just one generation). This is managed in various ways in the Philippines. The most common adaptation is for family members to migrate either to the cities or overseas, thus reducing the pressure for production. Yet they maintain a tie with the land and still consider themselves to be owners of a share of the land. Typically, one or more family members remain on the farm to cultivate. In the Philippines this form of fragmentation has in many cases reached a terminal point, in that families recognize the inability of an inherited area to support another family and they adapt by ceding the land to a sibling and moving away. Therefore fragmentation, at least in terms of family farming units, is unlikely to proceed much further.
12.5 - To what extent do individuals engage in agricultural activities (in particular, heads of domestic production units, the young of working age and women)?

It is thought that rural production units experience a high degree of mobility of the youngest members of their labor force. This labor force is often engaged in several economic activities, frequently undertaken in different geographic areas. This may constrain household productivity. The aforementioned is of great importance to the Philippine rural, agricultural scene. There is a sifting out of the rural population occurring at this moment. Men in rural areas are primarily engaged in agricultural activities where they represent the household. These men are often married and their wife is an equal partner in the agricultural endeavor although the systems of enumeration used at the national scale do not reflect this partnership. Generally, this population active in agriculture is aging slightly as the young are educated and see little future in agriculture. They seek to migrate away from the isolation of the rural areas to the larger towns and cities of the country and the world. The movement of this active, educated population out of the area can deprive the rural areas of a population that could be adding value to locally produced agricultural products. In this study, the weavers in Matalom are a case in point. It was the only study area where women were staying in the rural areas as they had access to an alternative source of income, other than agriculture.

In all the other villages, local, short-distance movement was an important process and in the case of two of the peri-urban villages, some male heads of household were working outside their barangay and outside of agriculture. In these cases, the spouse of the head of household assumes the role of the primary agriculturalist. Underlying all these movements are the perennial problems of a lack of resources (land) to support more family members, and the lack of perceived return on investment if a young person were to stay on the farm and invest in methods to improve productivity.

Where populations are some distance from markets, the mobility of population results in a feminization of agriculture and an aging of the active population at the point of departure.
There may be a concentration of new agricultural settlements of young men and young women on the periphery of urban areas and various agricultural and non-agricultural lands. However, a feminization of agriculture is not taking place in the Philippines. If anything the migration induced changes are gender neutral, or biased in favor of males, as females migrate. There is, as noted, a propensity for young families, without education and prospects for urban-based employment, to deploy even further to the periphery in State-owned and highly marginal lands. These areas are also the repositories for the ill and infirm, widows and widowers and other people without firm attachment to place.

In the Philippines the population dynamics, land tenure modalities and agricultural production systems are becoming less stable. There is ample evidence to show that the young population is highly mobile and the swings both urbanward and rural-ward can be dramatic and of a large scale. The various boom and bust cycles in the urban economy are largely responsible so that when the economy performs reasonably well the young and educated literally flood out of the rural areas to the urban in search of wage employment. However, this same flood of people quickly returns to the rural areas when the urban economy collapses. The Philippine population has experienced two of these cycles in the last 15 years. Currently, the population is beginning the swing back toward urbanward movement as the impact of the Asia Crises weakens. When the youth return to the rural areas they rarely find employment. Rather they ‘tread water’ spending time living in the family home and being supported (with food, in particular) by the rural family members. This is not an insignificant process. More research needs to be done on how these rapid fluctuations of population impact on food production and intensification of agriculture, even if only for the short term.

12.6 - Are land tenure systems an obstacle to increased productivity?

The level of land tenure security is a major factor for the continuous exploitation of farm tracts and the intensification of agricultural production. This interrelationship was analyzed at the level of the household unit and especially at the level of the farm
itself through the study of a composition of the labor force and the level and nature of participation of its members in agricultural production.

Overall, activity in agricultural production is limited to the head of the household (typically male) and his wife. Children are rarely reported as being engaged in the household agricultural production unit. While men are generally thought of as being those who control land, there are no limitations in Philippine law to exclude women or young people from holding rights to land. Generally, if a person did not have access to land before they left to migrate (even seasonally) to the urban areas in search of work when they return they will not have access to land. This is of course not the case if they can secure some land from a direct or sometimes more distant relative. More often migrants are forced to the periphery to acquire land if that is their desire.

While we have mainly focused on the theme of migrants and circular migrants and their direct impact on agricultural intensification through their absence, there is also the impact of remittances that must be addressed. From the study sites it became apparent that investments in the intensification of agriculture are rarely the direct outcome of remittance from a family member residing in urban areas of the Philippines or overseas. Money is more likely to be spent on housing and education. The primary point of intersection between remittances and agriculture is the possible purchase of land thus expanding the family’s land base. This does not presume that intensification will occur. Rather it is more likely to perpetuate disintensification or at best, the status quo. In the case of the former, purchased lands may be taken out of grain and other crop production and converted to pasture. In the latter case a tenant may be engaged to operate the newly acquired parcels and they will have little incentive to intensify, although this is dependent on the tenure agreement they are under.

With heavy out-migration occurring, a sense of fatalism exists over the state of tenure relations in the rural Philippines. The potential body of disaffected people that may push the government to change its policies is fractured and has lost its rural base owing to out migration.
Overall, the private ownership of land is not a necessary condition for the intensification of production and concomitant increased productivity. There are cases to support a wide range of tenure/productivity scenarios. What appears to drive innovation in the Philippines and the case study sites are two things. Firstly, innovation to maintain the status quo, meaning that farmers innovate in order to not slip further behind in their production and so as to avoid even greater poverty. As lands degrade and farms get smaller some level of innovation or intensification is required to just maintain the status quo. However, this is a losing game as eventually an upper limit of intensification will intersect with a declining resource base potentially resulting in a catastrophic collapse in the rural production system. Secondly, farmers respond to market incentives. In the case of grain production, incentives are non-existent. Guaranteed prices barely cover production costs and in some cases do not even cover expenses i.e. the farmer is losing by producing a crop for market. The only reason to cultivate land under these conditions is for the family table. In other commodity sectors price is a great motivator and can lead to the rapid uptake of new ideas and production systems (for example mango production in peri-urban Cebu). These incentives are yet to have an impact on the rice and corn markets of the Philippines.

12.7 - What is the capacity of the population engaged in agricultural activity, for intensifying their production and increasing their productivity?

The issue of the short-term or long-term participation of populations in agricultural activities is a central element for the study of the links between population dynamics, changes in the agricultural production systems and the adaptation of land tenure systems, since very important options, such as investments for intensifying agricultural production, the choice between owning land or simply having a guarantee or being able to exploit the land during one or more production cycles all depend on it. In reference to the studied areas there is a clear distinction, once again, between the flat wet and dry lowlands and the upland environments and populations. In the case of the lowlands, these are prized lands for which ownership is much desired. In the case of well irrigated lowlands, even a tenancy on
such lands is of great value versus insecurity in the marginal uplands. In the case of the former plantation lands there is a strong desire amongst the former laborers on the plantation to secure a piece of land through agrarian reform. For some they may never cultivate the land. Simply, having land is as prized as owning it and actually cultivating it. Generally speaking, the lowland areas with potentially greater productivity are subject to more long-term planning in their use. However, this must be put into context. Many of the agricultural systems being developed on the former plantation land are exactly the same ones used when the land was under one owner—sugarcane cultivation. The claimants of the former plantation soon realized that the best return on investment was obtained by cultivating sugar cane and selling to the local mill. Therefore the theory that an increase in tenure security might lead to a new and more sustainable farming system has not been played out in Boroc, Leyte. What will happen in the long term is probably more likely to be influenced by commodity prices than by demographics and tenure. Although the latter two variables might become more important as inheritance patterns lead to a fragmentation of the holdings, and as population pressure builds with both fragmentation and poorly managed urban-based industrialization.

In many places, the Philippines included, agriculture is no longer the main activity. Neither is it the first and only source of income for inhabitants. Given the importance of food production for a place like the Philippines with its high population growth rates, there is an urgent need to understand the links between population changes and agrarian changes, the effects of the demographic transition on the structure of the labor force, the linkages between security of land tenure and the proportion of the population engaged in agriculture.

In all the case studies the current land base cultivated by the resident population could not support the families in terms of their daily food needs. Supplemental incomes are thus integral to all the systems studied and we would argue this is the case throughout the country, in nearly all environments and in all family farm-based food production systems. This is critical to any understanding of where the food production system of the country may head in the
future. We have already established that there is a flight of young people away from agriculture, those left in the countryside tend to be old or unable to compete in the urban labor market where a high school graduation certificate is needed to secure most urban employment. Generally, the rural agricultural economy is not very diversified. Primary commodity production is commonplace but without locally-based secondary processing. The opportunities for the labor force to be absorbed locally are thus lacking. The one case we had where this was not the case was in the upland environment of Matalom where weaving was occurring. This was having a clear demographic impact with women staying in the community.

Agricultural value-adding is not commonplace in the rural areas but a whole host of service-related jobs have evolved and these engage more and more people part-time in agriculture but, who also derive an income outside of agriculture. These people are bus drivers, bus conductors, pedi-cab drivers, motorcycle drivers (for hire), they may work at a local rice or corn mill or may be a carpenter. All these jobs supplement the meager farm income. Under these situations the farm becomes more important as a source of sustenance than of income, with more and more of the produce being consumed in the home rather than being put on the market for sale. The question then becomes one of where the food will come from for those that wish to purchase it with the cash gained through off-farm laboring. With more and more of the rural agriculturalists engaging in off-farm income generating activities the time spent on the farm, assisting crop production diminishes and crop yields decline (losses from pestilence and disease increase). Similarly, the engagement needed to innovate and intensify may be lacking simply because they cannot afford the time to invest in such activities.

12.8 - Which changes in land tenure systems should be proposed?

The study of the relations between population migration, changes in the landuse modalities and changes in agricultural production and productivity will give indications as to how well adapted are the interventions of institutions, of those who own land rights or of those who work the land. Where interventions are ill-adapted, these must be called into question.
It is widely acknowledged in the literature, and is confirmed in this study, that the land tenure reforms both historically and currently are failing to address the perceived needs of the country. Rates of release of land have been slow, especially of the large landholding elite. A sizeable amount of the State’s lands have been allocated in critical watersheds and other upland environments to the detriment of lowland environments reliant on the hydrological resources emanating from upland catchments. There is currently a bill being prepared for Congress which could end the allocation of State lands to private ownership. This is a long overdue bill but one that has yet to be read and passed by government. The outcome may be somewhat different from the original bill as on subsequent readings it is open for negotiation and manipulation.

Suggested changes to the land tenure system would allow for a better preparation of the soil, increased investments, changes in the ways parcels are used, leaving more room for longer plant cycles and further productivity increases. Subsequently these would be continued exploitation of land and intensification of agricultural production. A better security of land tenure is believed to be an essential element for adapting conditions to reach such objectives. The problem in the Philippines is that we have very few examples of expertly executed land reform from which to draw examples of the positive social, ecological and hence sustainable changes that can in theory occur. The example of the inefficient allocation of lands at the former sugar plantation in Ormoc is indicative of the general trend in resource allocation procedures. The well-connected and the peasantry claim land destined for reallocation before the State is organized to formally reallocate holdings. By the time the State is prepared, families have claimed land and made investments in it. If the State wishes to remove them and allocate land in line with the laws of agrarian reform they face enormous hurdles. In the past it was just one large landowner they needed to deal with but, with land seizures by those reclaiming the land, there are many more people to interact with and this increases the complexity and cost of running agrarian reform. In the end, a compromise is often struck and it is back to ‘old wine in a new bottle’ as Peter Krinks so aptly described the settlement of the frontier of Mindanao in the 1960s: old cultures of settlers brought all their old problems with them when they settled
the frontier. Breaking this cycle of corruption and inefficiency is daunting and may be impossible.

Changes in the systems of land tenure should occur particularly in new poles of development such as in the peripheries of big cities and around major food markets. The large poles of development set up new demands for agricultural produce and hence the opportunities to exploit new agricultural demands and intensity of production to satisfy the growing urban population. The case study of peri-urban Cebu is an excellent example of just such a phenomenon occurring. Vegetable farming and cut flower production has grown in the peri-urban environments we have studied. So too has mango production for export from the trade entrepôt defined by the emerging second major city of the Philippines (Cebu). This important and developing market is, unfortunately, not surrounded by flat, featureless plains that Von Thünen used to such great effect in his theories.

Cebu is wedged between the sea and steeply sloping mountains of marginal agricultural potential. The problem of topography is compounded by the juxtaposition of the city’s key aquifers and watersheds being in the same place as the land being exploited to satisfy the special needs of the emerging market. To date it has been the environment that has suffered the greatest injury. However the social cost is also mounting as tenure arrangements support the rich and powerful over the more numerous poor and landless. It is our contention that the peri-urban area of Cebu represents one of the most intractable land tenure, population, and production problems in all of Southeast Asia. All the ingredients are in place for a very contentious showdown. How it will all end is anyone’s guess.

Agricultural development of new land areas and the use of land belonging to the State may provide solutions to situations of economic crisis or to difficult demographic challenges, but this can also lead to conflict. The allocation of new lands was the hallmark of Philippine land policy until the early 1970s (and the imposition of Martial Law). Up until that point the southern and largest island of Mindanao was the golden land which gave relief from the population pressure in the middle islands and Luzon. This came to
an abrupt end with the outbreak of civil war in Mindanao in the mid-1970s. This ushered in a new period of settlement redistribution with a more urbanward focus, but this did not materialize immediately. In the interim period a great deal of pressure for new land built up in the old settled areas in the middle part of the archipelago. This led to widespread incursions into fragile and protected upland areas managed by the State. While not actively discouraged, the impacts of this incursion would be long-felt and have serious longer term consequences for the lowland economies. The State then chose the easy route out of this cul-de-sac by allocating the newly cleared land to the cultivators on long term leases.

At this point in time it is safe to say that the Philippines has reached its limit of areas that can be cultivated effectively (Jackson 1992). This is not to say that new areas will not be opened for settlement or at least cultivation, but these remaining areas will be extremely remote, and fragile, and will also be the sites of some of the last remnants of the country’s extremely rich and diverse flora and fauna. The question thus remains: what is the next step that government should take in the management of the State’s lands? As already mentioned a bill is being prepared that will close the frontier from further settlement. If this bill is passed without substantial amendments then either widespread industrialization will have to occur to absorb the youth bulge in population currently being experienced, or there will be an exceptional pressure placed on already weakened rural production systems.

Similar to the question posed above with regard to State lands is the issue of the alienable and disposable lands for which the State also determines policy. Earlier policies regarding land reform have been largely ineffective. There appear early signs of a corporate farming structure emerging with large Philippine-based grocery and commercial chains developing their own production units by contracting for the production of goods from landowners (who then have tenants actually cultivating the land) or actually purchasing the lands themselves and hiring labor. Regardless of what system is to evolve in the private realm, in the future the government will need to play a role in protecting the weak and the vulnerable from chronic exploitation, extreme poverty and
malnutrition. This is a political necessity that each administration has recognized. As a final statement we wish to offer an alternative to the top down, Manila-based approach to land tenure reform and suggest that local leaders, responsible to their constituents, be vested with more responsibility in making decisions regarding land tenure in their jurisdictions. They know which land has been left vacant for many years, they know where the pressure points of population, land tenure and food security are most acute. They can then, with the local population, develop local solutions that will be of benefit to a greater number of people and enhance the productivity and food security of the nation as a whole.

These systems would therefore recognize the socio-cultural intricacies of local land holding and resource allocation practices. There is a paucity of such studies in the Philippines. The tradition has been to focus on the legal aspects of land ownership and reform and that drives the entire research agenda into the realm of the formal, State-defined and bureaucratic systems imposed by colonial powers. Moreover, there is also a bias toward the study of these elements in Luzon and often within a 100 kilometer radius of the primate city of Manila. The intricate systems of resource allocation, which are linked with land tenure and population change have resisted, to a large degree, the overriding goals of private ownership of land and the development of the independent, isolated, autarkic and presumably economically efficient family farms—a model imported from the United States in the early twentieth century. What is in place is a complex web of perceptions about the control of land and its products that are culturally mediated and locally derived and perpetuated. Future research needs to uncover these relationships and within them the points of contestation with the state-led bureaucratic model of reform. From this, perhaps a more locally-led and acceptable range of options for improving land management and food production could emerge with concomitant impacts on a range of population issues.