Introduction

There is an old Chinese saying that ‘food is the first necessity of the people, and food security comes first!’ However, today in China, food as the basic necessity is no longer safe (Zhang, 2011; Yan et al., 2016). In recent years, the mass media exposed many food scandals. To local Chinese people, food safety has become a major concern (Liu and Ma, 2016). Recently, food security has been listed as the first major issue to be tackled by the Chinese government at the Chinese Communist Party (CCP)’s Economic Work Conference, the Central Rural Work Conference as well as in the published No. 1 Central Document (Ghose, 2014). At the CCP Economic Work Conference which was held 10–13 December 2013, ensuring effective food security was listed as the top of six major tasks. The CCP has come up with a slogan to illustrate its goals – ‘guan ji ben ziji, kouliang juedui anquan’ (‘grain self-sufficiency, absolute security of food rations’) (China Daily, 2013). What happened to Chinese food security? What caused this problem and how have Chinese people responded to this food security crisis?

Since 2006, collaborating with a local social work organisation in China, author Hok Bun Ku has had the opportunity to participate in rural community development using participatory action research (PAR) in Chinese villages in Yunnan Province. During this period, the research team began to understand how the market economy and the industrialisation of agriculture influenced China’s agricultural development and caused the food security crisis. In facing this situation, the research team organised a movement of Community Supporting Agriculture (CSA) in Yunnan. Social workers worked together with local community residents in the villages to form production cooperatives and encourage them to return to organic farming. In the city, social workers developed consumer networks to support producer cooperatives. For both authors, CSA is one of many kinds of green social work practices responding to environmental and agricultural crises (Dominelli and Ku, 2017). The idea of green social work has been developed by Lena Dominelli. She explicates the links between the social, economic and environmental dimensions of sustainability. She explores the concept of ‘green social work’ to address poverty and other forms of structural inequalities in the context of global environmental and
Food security crisis and CSA

Food security crisis in China

Food security issues in China relate to food self-sufficiency and safety

Although the CCP media stated that ‘China’s grain output has risen for the 10th consecutive year’ and ‘China can achieve grain self-sufficiency’ (The Economic Times, 2013), the situation on the ground is not so optimistic. The director of the Crop Cultivation Department, Zeng Yande, said that although grain production has risen for the 10th straight year, tight food supplies will persist with the increase in grain demand, which is now at 100 million tons per year due to expansion in animal husbandry. In 2011, the State Council Development Research Centre had predicted that Chinese grain imports would increase to 22.24 million tons by 2020, up by 416 million tons since 1997. China’s total grain imports reached over 70 million tons in 2012. Finance magazine pointed out that based on imports of cotton, oil and grain in 2010, the number of China’s agricultural imports is equal to the use of 700 million mu’s (1 mu is equal to 0.1647 acre) of foreign cultivated land, or the whole land mass of Heilongjiang Province. In October 2010, the China Food Science and Technology magazine reported that not only have CCP central granaries been virtually emptied, the state-owned granaries and the privately owned granaries in the northeast, which is a major grain production region, are also nearly empty (NTD TV, 2014). In the article titled ‘China’s Largest Catastrophe Cannot be Avoided’, academican Yuan Longping (2014) said a food crisis cannot be avoided and a social crisis could erupt at any time. His article revealed that China’s grain self-sufficiency rate is only 80 per cent and China imports more than 80 per cent of its edible oil. In 2012, the US Department of Agriculture said that drought would cause a decline in US corn and soybean production (Science Daily, 2014). This will impact China heavily because imports of this type were more than 6 million tons in 2011.

By using soybean production as an example, Chen et al. (2016) discovered that China is experiencing a food crisis around self-sufficiency and safety. China is the place where the soybean was domesticated and emanated from (Wang and Li, 2000). Until the mid-1990s, China was not only self-sufficient in soybean, but also a net exporter (Wang, 2013). However, in 2000, China surpassed Europe as the biggest soy importer on the global market. Its imports, over 70 million tons in 2014, accounted for 57.7 per cent of global soybean trade and about 80 per cent of China’s soybean consumption (BBC, 2015). In 2012, China imported 44, 41, 10 and 5 per cent respectively from the US, Brazil, Argentina and other soy-producing countries (China Soybean Industry Association [CSIA], 2014: 49). Soybean has become a key crop implicated in the changing political-economic relations between China, the US and South America (Oliveira and Schneider, 2014). Soybeans, not aircraft, are now the US’ top export to China (Global Post, 2014). As the US was already a major producer and exporter of soybeans before 2000, China’s growing imports are in tandem with South America’s fast expansion in soy production since the mid-1990s. In Brazil, soybean export serves as an instrument to balance the country’s booming imports from China. China surpassed the US in becoming Brazil’s largest trade partner in 2009 (Oliveira, 2015: 17). Some observers in China, aware of the dominant role played by US-based transnational corporations in the global soy complex, perceive the situation to be that ‘South
America produces soybeans, China buys soybeans, and the US sells soybeans’ (Zhou, 2014; Guo, 2012).

Importing soybean is not only an issue of food self-sufficiency, but also a question of food safety because the massive import of soybean is genetically modified (GM) and patented by Monsanto and a few other transnational companies. The massive import of GM soybeans, in the context of China’s entry into the WTO (World Trade Organization) and the growing presence of global agribusiness in China, has challenged the long-held principle of self-sufficiency and food safety. It has opened up heated debates about food security, consumer rights and inequality, scientific authority, the relationship between corporate interests and science, food as commodity or public good, the paradigm of development, socialism and capitalism, issues highlighted by green social work.

China’s food safety problem is no longer news for the public. In 2008, the Chinese mass media exposed the scandal of poisoned milk powder after 16 infants in Gansu Province were diagnosed with kidney stones. The babies were fed infant formula produced by the Shijiazhuang-based Sanlu Group. The scandal involved milk and infant formula along with other food materials and components being adulterated with melamine. China reported an estimated 300,000 victims in total. Six infants died from kidney stones and other kidney damage with an estimated 54,000 babies being hospitalised. In a separate incident four years earlier, watered-down milk had resulted in 13 infant deaths from malnutrition. The issue raised concerns about food safety and political corruption in China, and damaged the reputation of China’s food exports. At least 11 countries stopped all imports of Chinese dairy products. Not only poisoned milk powder, other food scandals (e.g. clenbuterol), lean meat powder, and fake eggs are reported by mass media from time to time and such occurrences have become a social fact of Chinese society.

Social economy, food production and green social work practice in China

The social economy provides us a new framework to rethink economic development and think about alternatives to capitalism, as recommended by green social work (Dominelli, 2012). The concept of the ‘social economy’ is an option which has a clear vision ‘to put the economy at the service of human beings, rather than putting human beings at the service of the economy’ (Neamtan, 2010: 241), and emphasises social justice, democracy and collectivism. The social economy highlights links to the well-being of different economic subjects (e.g. producers, consumers), inhabitants of a local community, and humankind; for example, impacts on cultural or environmental commons. It enables practitioners to understand the structural factors causing environmental disasters and their significant social consequences. It also gives local NGOs insight into searching for emancipatory alternatives which can inform their practical strategies for social transformation. In contrast with the market economy, the principles of the social economy should be people centred, community based, cooperative and democratic, as well as uphold a vision of a pluralistic society in which production is not for consumption but for servicing the needs of people (Wright 2006) and the flora and fauna of planet earth (Dominelli 2012).

Unsustainable development in China

Currently, China is at the crossroads of its second revolution. Confronted by the social issues and ingrained social contradictions engendered by the development of the market economy in the past 30 years, the 12th five-year plan of the Chinese government proposes to maintain the rapid development of the economy, while strengthening social development. Emphasising the needs
of the people, focusing on the co-ordination of sustainable development, and protecting and improving people’s livelihood are proposed as measures to promote social equality and justice. However, the chasm engendered by rapid industrialisation and urbanisation through large-scale migration within China has, for a long time, made more than 250 million migrant labourers, rural to urban migrant workers with ‘quasi-complete’ statuses and identities. Consequently, these migrant workers are left with precarious working and living rights, and their well-being and dignity become a distant dream. How to resolve the migrant labour and *sannong* problem (i.e. ‘three rural problems’ of peasants, villages and agriculture) is now a focal point in the process of social development (Pun and Ku, 2011).

Rapid urbanisation became Chinese government’s strategy to remedy the chasm between the rural and urban areas. The principal goal of this urbanisation was to gradually transform the rural migrant population into urban citizens, and thoroughly transfer the right to land and its management to the market. In other words, urbanisation will soon be brought into full throttle to complement the process of industrialisation. The curse which has been cast on to the migrant population will disappear in a blink of an eye, as they are granted liberating urban citizen status through urbanisation. To one author, this way of transforming a village into a city has become an effortless feat (Pun and Ku, 2011).

How can farmers live fulfilling, dignified and self-sufficient lives when land is rapidly encroached upon by capital? As China’s agricultural reality suggests, the identity and spatial transformation that has accompanied the changes brought about by industrial and real estate capital cannot solve the *sannong* problem. On the contrary, the means of production for farmers’ livelihoods may be lost and the basic protections of farmers further degraded (Ku, 2003, 2011).

Behind the expansion of industrial parks is the bitter life of migrant workers and peasants. Rural reconstruction and urbanisation, in the name of ‘city and countryside integration’, continue the miracle of transnational capital dominance. But this process has brought about the process of proletarianisation of farmers and migrant workers in China. Not only do they lose their community lives and connections to wider society, they are also placed in incredibly difficult living conditions. It is impossible for rural migrant workers to ensure employment and secure other forms of social security under such circumstances (Pun and Lu, 2010).

The process of urbanisation also renders people who depend on the land homeless and dispossessed. Furthermore, older farmers, stripped of their means of production and subsistence, do not have the opportunity to sell their labour power, since factories and other relocated manufacturing corporations refuse to hire them due to their age. The impenetrable alliance between industrial and real estate capital facilitates further land enclosures rather than truly unifying villages and cities. A mode of industrialisation that is not driven from the needs of rural communities or initiated by the farmers themselves can neither solve the *sannong* problem nor the predicaments of migrant workers. Instead, it further dismantles rural society, creating mass dislocation among farmers.

Capitalist development is not people centred and environment friendly, but instead relies on corporations and capital maximising profits as their sole goal, and ultimately creates disjunctions among other forms of local socio-economic development. Thus, this mode of production hampers social development and cannot resolve the deeply embedded contradictions of contemporary Chinese society. Worse, this market-driven development model has caused environmental crises in China.

The food-security crisis of China caused by unsustainable development has diminished China’s farmland through a large number of land acquisitions, ecological restorations, agricultural structural adjustments, natural disasters, pollution and other issues. A significant amount of farmland was requisitioned and overexploited. There are increasingly fewer farmers. Many heavily polluting enterprises relocate to rural areas from big cities and discharge large amounts
of industrial wastewater without treatment. This industrial waste threatens the safety of the drinking water, enters the food chain via irrigation, greatly reduces grain production and continues to reduce self-sufficiency rates. The food problem will not be solved if soil and water pollution are not eliminated. To end soil and water pollution, the state environmental supervision and inspection departments have to inspect polluting enterprises. However, the CCP’s environmental protection department has not done anything regarding this during the past decade. By the end of 2013, an investigation by the Ministry of Land and Resource showed that about 3.33 million hectares of agricultural land are unusable due to heavy pollution (Duggan, 2014).

**Participatory action research in a Chinese village**

In 2001, Hok Bun Ku began a cross-disciplinary participatory action research project involving an anthropologist, agricultural specialist, natural scientist and social workers in a Zhuang ethnic minority village named Pingzhai which is located in the northeastern region of Yunnan Province in southwest China. Pingzhai has a 300-year history and is currently an administrative village, which comprises eight natural villages and covers an area of approximately 23 square kilometres. Its residents belong primarily to the Zhuang minority group and include some Han people from China’s majority ethnic group. There is only one tractor-ploughed road connecting it to the outside world. According to the census carried out in 2000, the entire village contains 347 households comprised of both Zhuang and Han groups, and a population of 1469. Pingzhai was officially classified by the Chinese government as a ‘poor’ village because the villagers were unable to support themselves in meeting basic needs for food and clothing.

The project team’s chosen method was participatory action research (PAR), which has been used by community workers to strengthen and support the capacity of communities to grow and change (Zuber-Skerritt, 1996; McTaggart, 1996). The primary goal of PAR is to create a more just society through transformative social change (Small, 1995; Park, 1993; Vickers, 2005; Reason and Hilary, 2008), and is consistent with the participatory coproduction approaches of green social work (Dominelli, 2012). Research is no longer seen solely as a means of creating knowledge; it is also a process of education, a development of consciousness, and a call to action (Small, 1995; Park, 1993, 1999; Reason and Hilary, 2008). The fundamental principles of PAR are: 1) participation wherein peasant/poor/marginalised people who are often regarded as ‘knowers’ and their knowledge and experiences respected; 2) researchers temper their own ‘expert’ status, while not dismissing their own specialist skills and do not presume to have a superior perspective; 3) the agency of participants is recognised and encouraged as integral to them and researchers; and 4) participants enter into a reciprocal relationship in the research process (Kesby, 2000: 424).

Guided by the action research method, the research team initiated by Hok Bun Ku used different skills at different stages to implement action and record the processes of engagement. To learn about the needs and assets of the community, the team employed participant observation, in-depth interviews, and asset mapping methods. Focus groups were used mainly to facilitate group discussions, explore ideas, and find strategies for action. When implementing community activities, participant observation and informal feedback were recorded as field notes. Sometimes public meetings were held to encourage participants to articulate and share their sentiments. In-depth interviews were also conducted with local officials, community leaders and selected representatives of various age groups (children, young people, adults and senior citizens). All members of the research team were required to keep notes and record their reflections in journals. Women from the community were also recruited and trained to help with data collection. One characteristic of action research is that data collection and analysis cannot be separated. The research team analysed data on an ongoing basis and had group discussions with the women’s
group at each stage to plan and consider actions. The data presented in the following section are based primarily on our field notes and journals.

In the first stage of action research – identifying problems, undertaking needs assessments, and employing the oral history method – the research team found that in villagers’ life stories, many households in the village regularly suffered food shortages of four to six months yearly. The research team also discovered that many villagers, especially those living in mountainous areas where the soil is poor, had to pay exorbitant rates of interest on money borrowed to buy food. Additionally, many children in Pingzhai village were also denied educational opportunities because they could not afford to pay school fees. Without the green social work perspective developed by Lena Dominelli (2012), social work practitioners would have easily adopted the conventional view that the local government had attempted to combat poverty. For example, local officials had encouraged farmers to grow high-tech crops, engage in agricultural development in winter and make structural adjustments. However, the commercialisation of agriculture and its integration into the global capitalist market made these farmers more vulnerable, getting themselves deeper into financial hardship alongside losing their ethnic and cultural identities (Ku, 2011; Ku and Ip, 2011).

The project’s research team also discovered that the mainstream agriculture development in the village was unsustainable in three respects: a) economic dependence; b) environmental degradation; and c) cultural loss:

a) **Economic dependence.** When farmers shift to producing commodity crop, they depend on the market to get high-yielding seeds, chemical fertilizers and pesticides that increase their production costs, especially when the market price of these production inputs rise every year. The monopoly of big capital, fluctuations of market price and exploitation by middle-men also make farmers’ livelihoods unsustainable – high production costs versus low market prices for food crops.

b) **Environmental degradation.** The heavy use of chemical fertilizers, pesticides, weeding liquids and genetically modified seeds cause water and soil pollution which threaten food safety and people’s health. Also, mass mono-crop production affects biodiversity.

c) **Cultural losses.** Culturally, farmers lose their traditional skills and confidence through the modernisation of agriculture. In this village, the most drastic change came from the local government’s ‘green revolution’ initiatives. Driven by good intentions and conceptualised as a strategy to assist local farmers to generate more income and reduce poverty, the local government strongly encouraged villagers to switch from growing rice to growing ginger because ginger was able to fetch a much higher market price. Consequently, virgin forests were cleared for producing ginger, causing much ecological damage. Worse, the ginger market collapsed during the following year as there was an oversupply nationally. Prices dropped dramatically to a level where farmers could not even recoup production costs, let alone generate sufficient income to pay for food and basic daily expenses. In short, they were let down by the promises of the new market economy; made to feel that their traditional values and life skills were irrelevant; and having lost confidence in controlling their livelihoods in agricultural production, they also lost their self-esteem and cultural identity (Ku, 2011; Ku and Ip, 2011).

**Food production and green social work practice**

Green social work practice goes beyond the logic of capitalism and emphasises social justice, democracy and collectivism. It connects social work practice to fighting for environmental justice (Dominelli, 2012). When the team read Dominelli’s work on green social work in 2012, we
suddenly found our alternative rural social work practice which started in 2007 in China and echoed the emphasis in green social work of challenging capitalist models of industrialisation that treat the earth as a means to be exploited primarily to meet neoliberal industrialisation’s end of producing profits for the few (Dominelli, 2012). These insights led to our green social work practice of encouraging villagers to return to organic farming, producing arts and crafts, using local resources for urban green consumption while simultaneously helping local people in generating additional income, preserving and revitalising their cultural pride and identity, protecting soil and seeds, fostering community participation, strengthening community life and cohesion, and buffering the corrosive forces of globalisation.

The predicament faced by the villagers first came to social workers’ attention in 2002, but no project related to economic development or income generation was launched then. In 2006, inspired by the idea of social economy, the research team set up six essential objectives for the project: to search for alternative ways of development; reclaim food sovereignty; promote organic farming and green consumption; protect traditional peasant agriculture and rural environment; promote the idea of Community Supporting Agriculture (CSA); increase producers’ income with equal exchange via fair trade; and promote cooperation between peasants and consumers to resist monopoly capital and exploitation.

For achieving these objectives in this rural setting, the social workers first had to foster community participation. The social workers organised villagers’ group meetings to enable them to understand the importance and value (economic and cultural) of organic farming and traditional agricultural skills. After many years of planting hybrid rice with chemical fertilizers and pesticides, the villagers no longer believed in the feasibility of planting traditional rice. As transformation of the villagers’ consciousness was critical for this project, the research team invited an agricultural scientist to train the villagers and convinced them to do the experiments. At the beginning, only three households were willing to try. Because they had already lost their traditional seeds, social workers and villagers went to remote mountain villages to search for traditional rice seed. Finally, 12 kinds of old seed were found and the old villagers certified that xiangmi, hongyou, babao, hongmi and heinuomi were the traditional seeds of Pingzhai village. In 2007, these three households used one mu of farmland to experiment with organic rice planting. They adopted their traditional way of farming including seeding, irrigating and ploughing the field, and harvesting. These villagers totally replaced the chemical fertilizers and pesticides with farmyard manure and natural pesticides which were made by using different types of herbs. The young villagers interviewed old farmers and learned the local knowledge of preventing and controlling insect pests of rice. Together, they produced natural pesticides by using herbal medicine and other natural materials. They also tried different ecological forms of production, like raising ducks in paddy fields because ducks could kill insect pests and weeds, and their dung provided manure for the paddy field.

After several years of returning to organic farming, the research team found that soil fertility level was greatly enhanced by the long-term addition of local farmyard manure. Evidence of returned fertility to the land was that the four-leafed grass was growing in fields again. The old villagers explained that only fertile fields grew four-leafed grass which had disappeared after using a lot of chemical fertilizers and pesticides. Its reappearance meant organic farming practices had restored land fertility.

To help producers promote organic rice at fair prices in urban areas, the research team went to the city to connect them with consumers whose consciousness of food security was high. Collaborating with a local university, the project team met members of the property management company and house-owner committee in a middle-class housing estate in Kunming city. Natural scientists from a local NGO were invited to give public health talks on the harm
caused by food pesticide residues. As Chinese consumers paid more and more attention to food safety, these talks raised consumers’ consciousness of green consumption. After the rice harvest, the next important step was to promote the idea of fair trade and connect rural villages with urban communities to rebuild cooperative relationships between producers and consumers. To promote mutual understanding and create a fair-trade relationship, social workers organised exchange meetings between urban consumers and villagers. The urban residents came to taste the organic rice and set the price together with the farmers. Following the principle of fair trade, the price needed to be fair to the producers (Zhang, Yeung and Ku, 2008). At the beginning when consumers found the price was triple that of the market price of non-organic rice, they showed their disagreement. It was a normal consumer reaction because they had never before participated in the price-setting process. They had no idea about the unfair practices of mainstream markets. The authors concluded that fair trade is important for this initiative because it changes the unfair practice of the mainstream market economy. It rebuilt cooperative relationships between producers and consumers. Social workers invited village representatives, introduced labour-intensive processes of rice production and explained how consumers could calculate the price to include their actual labour input in production. This promoted mutual understanding between producers and consumers. After listening to the villagers’ explanations, some older urban residents empathised with the villagers and claimed that the price was fair because they had participated in the movement of “up to mountain, down to village” (shangshan xiuxiang) during Mao’s period and knew the rural situation well. They knew the practice of planting rice, supported the price set and convinced other urban consumers to follow this path. The process revealed a transparent and democratic practice within the social economy.

The experiment’s first year was very successful and all the organic rice was sold out within one month. This strongly motivated other villager households to participate in organic farming. In July 2009, the production cooperative was formally registered. Fourteen households joined the cooperative. In 2014, the cooperative had expanded to 50 households and the total area of production reached 150 mu.

For sustaining the consumer network, social workers invited urban residents to participate in a harvest festival organised by the rural cooperative and visit the land that produced the rice they consumed. Urban residents’ purchases not only supported the agriculture development, but also benefitted from safe food. The urban residents had become friends of the villagers and accidentally became the quality controllers of rice production as they frequently visited the village. This provided the basis for a rural–urban alliance that protected the interests of both groups – income generation and retaining traditional agricultural skills for the villagers, and food security for the urban residents.

Conclusion

In the authors’ view, no matter whether in China or the world, economic development must return to society and gradually shift away from a market-driven development to a people-centred and environment-friendly development. Instead of allowing capital to intrude freely into rural society, commodifying farmland and subsequently dispossessing agricultural producers/rural residents from their means of production and livelihoods, a pluralistic green economic model, which takes into account the realities of rural areas and builds upon the foundations of rural society alongside the food needs of urban residents, must be promoted and implemented in the process of rural development. This case demonstrates the possibility of green social work in responding to agricultural crisis and food safety. In contrast with the market economy, green social workers promote the social economy which is people-centred, community-based,
cooperative, and democratic, as well as being defined by harmony between people and the environment, and providing a societal system in which production is not for commodified consumption but for servicing the needs of the people (Dominelli, 2012).

This case also demonstrates that green social work practice includes macro-critiques of the structural causes of environmental crises and micro-interventions in responding to these crises. The social economy is an important social theory that can guide green social work practice. It helps to understand that the problem of market-driven development lies in its inevitable domination by capital, commodification of people and land, and the destruction of society and the environment (Dominelli, 2012). It also envisions an alternative economic development which embeds the economy within sustainable social relations. It is pluralistic, bottom-up, democratic, non-monopolistic, and truly prioritises the developmental needs of communities and individuals while respecting the environment. Cooperatives of producers and consumers, social enterprises, fair trade, a community economy, and a collective economy are all concrete examples of the social economy in practice because it intervenes to protect the environment and enhance people’s well-being by integrating people and their socio-cultural, economic and physical environments within an egalitarian framework that addresses prevailing structural inequalities and unequal distribution of power and resources (Wright, 2006).

The model of rural–urban alliance constructed through ongoing experimentation and participatory action research in a Yunnan village proves it is an effective model of green social work which connects producer and consumer through the CSA and fair-trade network to tackle the crisis in food security. This case has implications for government policy and sustainable agricultural development. After 30 years of the planned economy and another 30 years of the market economy, China is facing the huge simultaneous pressures of developing economically and socially. The rural–urban alliance and CSA could be a new route for China’s sustainable development which will change the pathway of forms of economic development that cause inequality and undermine people’s livelihoods, and provide for the holistic, resilient, sustainable future green social workers advocate.

Acknowledgement

The research was funded by Hong Kong Research and Grants Council (Project No. B-Q39N). Acknowledgement is also given to Li and Fung Foundation’s financial support for our social economy research in mainland China.

References


Part V

(Hu)man-made disasters