

THE EVOLUTION OF POLICIES FOR MULTIFUNCTIONAL AGRICULTURE AND RURAL AREAS IN CHINA AND FINLAND

Qiuzhen Chen¹, John Sumelius² and Kyösti Arovuori³

Received 4 May 2009; Accepted 18 September 2009

Abstract: Based on interpretations of policies concerning elements of multifunctionality of agriculture and rural areas (MFA) in China and Finland (representing the EU), we apply a timetable to illustrate the evolution of these policies in the past twenty years. It can be concluded that in terms of the three elements of MFA, namely, food security, food safety and animal welfare, there are clear differences in the time and frequency of the corresponding policies implemented or amended in China and Finland. On the other hand, for environmental protection and rural viability, the relevant policies have been addressed and renewed following a similar timetable in both countries. A number of reasons for the difference in implementations relating to economic development, the supply of food products, the demand for environmental services, income level and values, and policy-making structures are given.

Key words: Multifunctionality-related policies, evolution, implementation, elements of MFA, China, Finland.

1. Introduction

The concept of multifunctionality of agriculture and rural areas (MFA) has acquired international interest in current world trade negotiations, particularly in the Common Agricultural Policy (CAP) of the European Union (EU). The basic idea of MFA is that besides tradable commodities such as food and fiber, agriculture and rural communities also provide non-commodity outputs with the characteristics of externalities and public goods. These non-commodity outputs are perceived as elements of MFA, including environmental protection, biodiversity, rural viability and employment, food safety, animal welfare, national food security, the preservation of rural landscapes, and cultural and historical heritage (European Commission 1999, OECD 2001, Randall 2002, Vatn 2002, Brouwer and van der Heide, 2009).

In spite of the large interest in MFA, the policies concerning it in developing countries and transition countries have not been much investigated, although some studies do exist (e.g. Bonnal et al. 2005, Bresciani et al. 2004). As the fourth biggest economy of the world and a large developing and also rapidly industrializing country where 800 million out of a population of 1.3 billion inhabitants are rural dwellers, China is a particularly interesting case.

¹ PhD student, Department of Economics and Management, Faculty of Agriculture and Forestry, University of Helsinki, Finland PhD student, School of Management, Huazhong University of Science and Technology, Wuhan, China; Email: cqz4617@sina.com

Professor, Department of Economics and Management, Faculty of Agriculture and Forestry, University of Helsinki, Finland; Email:John.Sumelius@helsinki.fi Corresponding author Lic.Sc. Kyösti Arovuori, Pellervo Economic Research Institute PTT; Email: Kyosti.Arovuori@ptt.fi

In this paper, we aim to analyse empirically the differences in realized agricultural policies related to the elements of MFA in China and the EU, as exemplified by Finland, a representative member country of the EU, to see which elements have been emphasized in the policies of the two countries. This is important because the different emphases in agricultural policies can partly explain why the EU and China have different standpoints on multifunctionality in international trade negotiations concerning agriculture.

Whereas the EU has adopted a clearly positive view on MFA in the CAP (EU Commission1999, EU Commission 2000; Sumelius and Bäckman 2008), China has not explicitly defined the term in MFA-targeted agricultural policies. Yet both contribute to enhancing the multiple roles of agriculture and rural areas through the implementation of polices relating to the elements of MFA; thus there is a need for a comparative study to explain the differences in the evolution of policies and the possible reasons for these differences.

Additionally, in a previous paper based on Chinese and Finnish experts' perspectives on MFA, we found that Chinese experts stressed the economic function of MFA, such as food security, whereas Finnish experts out more stress on environmental and animal welfare functions. We concluded that MFA is given a somewhat different content in China and Finland (Chen and Sumelius 2008). Thus, this paper also aims to see if we can find a connection between the two papers' conclusions.

It should be noted that China and Finland are very different in the size, structure and priorities of agriculture. The reasons for choosing these two countries as cases to compare are, besides the above mentioned, also because the resources and materials for studying these countries are easily available to us.

This paper is structured around three topics based on the five most important elements of MFA (food security, rural viability, food safety, animal welfare, environmental protection), and we have investigated how and when the policies related to these topics have been implemented in both countries. On the basis of this we have developed a timetable matrix illustrating the schedule of implementation of MFA policies. Based on that discussion, we explain the reasons for the differences between the policy foci of both countries. Finally, we make some conclusions.

2. The Development of Policies for Multifunctional Agriculture in China and Finland

2.1 Policies targeted to food security and rural viability targeted policies

Food security is probably the MFA element that has received the most attention in Chinese agricultural policies, for the longest time. Since the People's Republic of China was formed in 1949, a series of sometimes radical institutional reforms have been made, one aim being to attain national food security (MOA 1989, ref. Fan and Pardey 1995, p. 7).

The reform of the Chinese grain policy began in 1992, and the Chinese government addressed the goal of grain output growth and self-sufficiency in order to ensure food security. In 1995, the "Governor's Grain-Bag Responsibility System" was formally put into practice, which imposed pressure on provincial governments to ensure that the local grain market was in balance with their own resources. Grain-deficient provinces were encouraged to have long-term supply contracts with surplus provinces through negotiations (Tian et. al. 2003).

In 2000, due to an approximately 10% drop in grain production, concerns were again raised over, and a report explicitly addressed "ensuring national food security" at the fifth plenum of the 15th CPC Central Committee.

In 2002, the issue of food security was added to the fifth chapter of the amendment to the Agriculture Law in China.

In terms of rural viability, in late 1993, the land tenure of farm households in China was extended to 30 years, and a law on rural land tenure was promulgated in 2002, which explicitly mandated a 30-year land use right to farm households.

The policies of support for the "three rural issues", which are agriculture, countryside and farmers, began in 2000. The main measures consisted of 1) cancelling the taxes on all special agricultural products except tobacco, 2) deducting agricultural tax and livestock tax, and 3) providing a direct subsidy for farmers for producing grain, high-quality breeding and purchasing large machines and tools for agricultural production.

In 2003, the experiment of reforming rural taxes and charges nationwide was carried out. Such policies as the adjustment of the agricultural structure, the enlargement of job opportunities for farmers, and the reduction of disparity between urban and rural areas were addressed in 2004. In 2006, the agricultural tax in China was cancelled in order to balance rural development.

In contrast, self-sufficiency in food production has in Finland, as in many other countries of the EU, been one dominant goal of agricultural policy after World War II. In order to increase domestic agricultural production and thus to achieve a desired level of production, such particular measures as the foundation of new farms and clearing more fields were implemented with the aim of increasing production as rapidly as possible (e.g. Kettunen 1992). This goal changed when Finland joined the EU in 1995 and the Common Agricultural Policy (CAP) was adopted. The CAP today increasingly emphasizes environmentally sustainable agricultural production, and problems with surpluses have decreased the emphasis on food safety.

Policies targeting rural viability have been implemented in Finland since the 1970s (Kettunen 1992, 122-124). Rural development policies have been stressed more and more within the CAP, and consequently have received increasing attention in Finland. In the Mid-Term Review of the CAP reform in 2003, the aim of the modulation in the CAP reform was to strengthen rural development by extending the scope of currently available instruments.

2.2 Policies relevant to food safety and animal welfare

Food safety did not play much of an important role in China for a long time. However, in 1992 the China Green Food Development Center, which is affiliated with the Ministry of Agriculture, was established.

In 1993 the regulations for labelling green food were published, and in 1999, a system of quality standards for green food in China was established in terms of ecological environment standards, production technology standards, product standards, and package, label, storage and transportation standards.

In order to advance and facilitate the transportation of green food, the policy of a green channel for green food began in 2004.

The Law on Quality and Safety of Agricultural Products was issued in 2006 to further ensure food safety nationwide (http://www.greenfood.org.cn/sites/MainSite/List_2_1886.html).

While the Chinese laws on livestock regulate the requirements for transactions regarding livestock, the breeding and transportation of livestock, and livestock's growth environment in order to ensure the safety of animal products, no regulations or laws explicitly refer to the term "animal welfare" in China.

Since 1991 European regulations have been laying down the general principles and requirements of food law and food safety, e.g., Council Decision 2002/835/EC Sixth Framework Program: Food quality and safety (2002-2006), Council Regulation No 2092/91/EEC on the organic production of agricultural products in 1991 and its amendments in 1995, 1999, 2003, and 2004, and the European Action Plan for Organic Food and Farming in 2004.

Various directives and regulations concerning animal welfare and the protection of animals have been stipulated (Council Directive 98/58/EC, Council Regulation (EC) No 1/2005, Council Directives 64/432/EEC and 93/119/EC, Council Regulation (EC) No 1255/97, and the Community Action Plan on the Protection and Welfare of Animals 2006-2010).

In the Mid-Term Review of the CAP reform in 2003, aid was granted only where food safety was guaranteed; animal welfare and animal health were integrated into the CAP.

Starting with the reform of European agriculture in 1992, the CAP became multifunctional,

sustainable and competitive. It responded to consumer concerns and demands regarding food quality and safety, environmental protection and animal welfare. Moreover, rural development now formed the second pillar of the CAP and was essential for the balanced development of the European Community and social cohesion.

In terms of policies relating to animal welfare, European legislation has been developed with a view to protecting animals and ensuring their well-being on farm holdings, during transport and at the time of slaughter since 1974.

Council Directive 98/58/EC concerning the protection of animals kept for farming purposes in 1998 established minimum welfare standards for farmed animals. It was amended by Council Regulation (EC) No 806/2003. In Council Regulation (EC) No 1/2005 on the protection of animals during transport and related operations and its amending Council Directives 64/432/EEC and 93/119/EC and Council Regulation (EC) No 1255/97, it was recognized that full regard should be paid to animal welfare concerns when formulating or implementing policies relating to agriculture, transport, research and the internal market.

The Community Action Plan on the Protection and Welfare of Animals 2006-2010 focuses on improving standards, developing research and taking action on an international level to ensure animal welfare and protection. We therefore conclude, although EU and Finland had implemented animal welfare legislation earlier, that it was much strengthened from 1993 onwards.

2.3 Policies oriented towards environmental protection

Several laws relating to environmental protection have been issued in China since the 1980s, e.g. the Grasslands Law protecting grasslands in 1985, the legislation on wildlife conservation in 1988 and the Environmental Protection Law in 1989.

Legislation on water and soil conservation was issued in 1991. The chapter "Agricultural resources and Environmental Protection" was stressed in the Agricultural Law in 1993. The Chinese government published "Agenda 21: White Paper on Population, Environment and Development" in 1994 (State Council 1994). Legislation on preventing water pollution in 1996, the Forest Law in 1998, and the Law of Desertification Prevention and Control in 2001 respectively were issued.

In 2000, the Chinese government sponsored the policy "Grain for Green", namely, the Convert Cropland to Forest and Grassland Program (CCFGP), which mandates that in the next 10 years, a certain amount of croplands is to be converted to forest or grasslands in the upstream areas of the Yangtze River and the Yellow River. In 2002, acts on converting cropland to forests and grassland were formally implemented.

Environmentally targeted measures have been implemented in Finland since the early 1980s. These measures contain prohibitions on particular pesticides, reductions on fertilizer use, support for organic farming in 1990 and a CAP agri-environmental support scheme in 1995 (Kettunen 1992, Council Regulation EEC2078/92, EC 1999).

Since the end of the 1990s the environmental problems caused by agricultural practices and agri-environmental policies received more and more attention (Sumelius 1990a, Sumelius 1990b). EU membership in 1995 meant the introduction of a large scale agri-environmental support scheme funded by the EU and Finland. By the end of 2002, the agri-environmental support scheme covered 93% of the area cultivated by active farms in Finland (EEC 2078/92, MTT 2004). Various European Union programmes and regulations have been implemented since 1993, such as the Fifth European Community environment programme in 1993, the Sixth Environment Action Programme of the European Community in 2001, and Council Regulation (EEC) No 880/92 in 1992 and its revision Regulation (EC) No 1980/2000 in 2000.

In the Mid-Term Review of the CAP reform in 2003, agricultural support mechanisms were outlined to promote compliance with environmental standards and environmental services were developed.

3. The evolution of MFA-related policies in China and Finland

Based on the interpretations of policies concerning elements of MFA in China and Finland in the previous section, we apply a timetable to illustrate the evolution of these policies over the past twenty-three years. The exact years that these corresponding policies were issued or amended can be seen in the table below table 1.

The issuance of MFA-related policies	Country	Before 1984	1 9 8 4	1 9 8 5	1 9 8 6	1 9 8 7	1 9 8 8	1 9 8 9	1 9 9	1 9 9	1 9 9 2	-	1 9 9 4	1 9 9 5	1 9 9 6	1 9 9 7	1 9 9 8	1 9 9	2 0 0 0	2 0 0 1	-	2 0 0 3	2 0 0 4	2 0 0 5	2 0 0 6
Food security related policies	China																								
	Finland																								
Food safety related policies	China																								
	Finland																								
Environmentally related policies	China																								
	Finland																								
Rural viability related policies	China																								
	Finland																								
Animal welfare related policies	China																								
	Finland																								

Tab 1. The evolution of policies related to elements of MFA in China and Finland

From the above table, we can see that Finland has implemented and highlighted food security policies earlier than China, which began in 1992. The frequency of food safety policies implemented or amended in Finland is much higher than that in China. As for animal welfare-related policies, several specific policies on animal welfare have been carried out in Finland, especially in recent years, while no agricultural policies explicitly target the aspect of animal welfare yet in China. Policies relevant to environmental protection and rural viability have been addressed and renewed to a very similar degree in both countries.

What are the reasons for the differences in timing for focusing on different elements of MFA in China and in Finland/the EU? We offer the following explanations:

1. Economic development and the supply of food products.

It seems obvious that securing the supply of food is one reason for implementing food security policies. However, this emphasis happened later in China, whereas the emphasis on this issue has decreased in Finland. It is possible that food security receives more attention when a country is not in extreme poverty and is capable of increasing its food production. When industrialization reaches a certain stage of development, food production can become taken for granted, and the value attached to it receives less attention, which is reflected in its policies. In the same way, food safety will receive more attention when food products are taken for granted.

2. Demand for environmental services and income level

Environmentally related policies are likely to receive more attention when income levels rise. According to the environmental Kuznets curve with regard to the demand for environmental services, industrialization and agricultural modernization initially lead to increased pollution. However, when income levels grow in a country, the demand for environmental quality increases (e.g. Grossman and Kruger 1993, Selden and Song 1994). Countries with higher income levels, such as Finland/the EU, are likely to emphasize environmental quality more than low or middle income countries, such as China.

3. Values and policy-making structures

Animal welfare-related policies are vastly different between the two countries as no such laws or regulations on animal welfare exist in China. In Finland/the EU several laws and directives regulate animal welfare. It is tempting to explain this phenomenon with an economic motive, since in lower income countries the objective of food production is often considered more

important than animal welfare, whereas EU countries consider the proper treatment of animals as a precondition for food production. It could also be argued that the moral and cultural values attached to animal welfare may be connected with income level. The non-existence of these laws in connection with autocratic top-down policy-making structures in China lead to weak implementation of animal welfare practices.

As far as impact assessment is concerned, various schemes are evaluated in Finland. However, it is questionable whether the implementation of directives is monitored in China. We have not been able to answer this question.

4. Conclusion

In order to analyze and compare the elements of MFA-related policies in terms of the order of implementation and focus between China and Finland, the timetable illustrates the evolution of those policies. From sections 2 and 3, we conclude that in terms of the three elements of MFA, namely, food security, food safety and animal welfare, there are clear differences in times and frequencies of the implementation and amendation of the corresponding policies in China and Finland. As for the other two elements, i.e. environmental protection and rural viability, their relevant policies have been addressed and renewed in very similar ways in both countries. Our previous paper on Chinese and Finnish experts' perspectives on MFA concluded that Chinese experts stressed the economic functions of MFA, such as food security, whereas Finnish experts put more stress on environmental and animal welfare functions. The opinions from our previous study are in line with the implemented policies in each country.

Specifically speaking, the issues relating to food security in Finland, e.g. self-sufficiency in food commodities and securing farmers' incomes, have been emphasized from the 1950s to the 1980s. In contrast, food security in China has only become a top priority since the 1990s and was further developed in the early 2000s. As for food safety, the frequency of food safety policies implemented in Finland is much higher than that in China, largely due to the orientation of the CAP of the EU. In addition, several specific policies on animal welfare have been carried out in Finland, especially in recent years, while no agricultural policies explicitly target the aspect of animal welfare yet in China. On the other hand, the environmental aspects have become concerns since the early 1980s in the countries. Meanwhile, it is clear that both countries have paid more attention to issues of rural viability. In Finland, as a member state of the EU, rural development is the second pillar of the CAP; the policies on rural viability have been stressed and concerns have been raised undoubtedly. Because the majority of the Chinese population live in rural areas in China, rural development is viewed as one of the main objectives in terms of agricultural policy formulation or implementation.

Finally, we have offered a number of reasons for the differences in the implementation of MFA-related policies in China and Finland. These reasons refer to income level and the role that agriculture plays in the alleviation of poverty and the reduction of hunger in both countries and to moral and cultural values. The elements of MFA seem to depend on the relative income and poverty levels of both countries as well as on structures of policy making.

Acknowledgements

We wish to acknowledge the three referees for their valuable comments on an earlier version of this article.

References

- [1] Arovuori, K. & Kola, J. (2005). Policies and Measures for Multifunctional Agriculture: Experts' Insight, *International Food and Agribusiness Management Review* 8(3): 21-51.
- [2] Bonnal, P., Losch, B. & van Vliet, G. (2005). Setting up and Management of Public Policies with Multifunctional Purpose. The case of Developing Countries, French Agricultural Research Centre for International Development (Cirad), D5.1 Multagri, available at:

- http://www.multagri.net.
- [3] Bresciani, F., Dévé, F. & Stringer, R. (2004). The multiple roles of agriculture in developing countries. pp. 286-306 in Brouwer (Ed.) *Sustaining Agriculture and the Rural Environment*, Cheltenham: Edward Elgar.
- [4] Brouwer F. & van der Heide, C. M. (2009). *Multifunctional Rural Land Management. Economics and Policies*. London: Earthscan Publications Ltd.
- [5] Chen, Q. & Sumelius, J. (2008). Empirical Analysis of Experts' Perspectives on the Multifunctionality of Agriculture in China and Finland. *International Journal of Agricultural Resources, Governance and Ecology* 7(6), 469-490.
- [6] European Commission (1999). Contribution of the European Community on the Multifunctional Character of Agriculture. Info-paper, European Commission Directorate General of Agriculture. (EC DGVI A.II.1).
- [7] European Commission (2000). Europe's Agenda 2000: Strengthening and widening the European Union, draft of commission information brochure for the general public on Agenda 2000, Priority Publication Program 1999, X/D/5. Final version 31.8
- [8] Grossman G. & Krueger A.B. (1993). Environmental impacts of a North American free trade agreement. In Garber P. (Ed.) The US-Mexico free trade agreement. Cambridge: MIT Press.
- [9] He, X.R, Xiao, H.F. && Zhu, Q.R. (2003, October 20-22). Food Security in China, Roles of agriculture. International conference Rome, available at http://www.fao.org/es/esa/roa/index_en.asp
- [10] Kettunen, L. (1992). Suomen maatalouspolitiikka. Agr. Econ, Res. Inst. res. rep 185.
- [11] Lankoski, J. & Ollikainen, M. (2003). Agri-environmental externalities: a framework for designing targeted policies, *European Review of Agricultural Economics*, 30(1), 51-75.
- [12] Liu, X.M, Tian, W.M. & Kang, X. (2003). Social Viability Roles of the Agricultural Sector in China, Roles of agriculture. International conference Rome, available at http://www.greenfood.org.cn/sites/MainSite/List 2 1886.html
- [13] Lv, Y. & Guo, D.M. (2003). Willingness to Pay for Reducing Agricultural-Induced Water Pollution in Zhenjiang City, China, Roles of agriculture. International conference Rome, available at http://www.fao.org/es/esa/roa/index_en.asp
- [14] Lv, Y, & Guo, D.M. 2003, *Environmental Roles of Agriculture in China*, Roles of agriculture. International conference Rome, available at http://www.fao.org/es/esa/roa/index_en.asp
- [15] Miettinen, A. & Huhtala, A. (2004, October 28-29). *Joint production of cereals and grey partridges in Finland*, paper presented on the 90th EAAE seminar: Multifunctional agriculture, policies and markets: understanding the critical linkage.
- [16] MOA (1989). Forty Years of Chinese Agriculture. Zhanzhou: Zhongyun Farmers Press (in Chinese), referred to in Fan, S. and Pardey P. 1995. Role of inputs, institutions and technical innovations in stimulating growth in Chinese agriculture, International Food Policy Research Institute, EPTD Discussion Paper No. 13.
- [17] OECD (2001). Multifunctionality: Towards an analytical framework. Paris: Organisation for Economic Co-operation and Development,
- [18] Randall, A. (2002). Valuing the outputs of multifunctional agriculture. *Eur. Rev. Agric. Econ.* 29(3):289-307.
- [19] Selden T & Song D. M. (1994). Environmental Quality and Development. Is There a Kuznets Curve for Air Pollutants Emissions? *Jour. Environmental Economics and Management* 27, 147-162
- [20] Sumelius, J. (1990a). Environmental problems of agricultural practices and consequences of environmental policies for farms in Finland. *Agricultural Economics Research Institute*.

- Res. Rep. 154, 5-25.
- [21] Sumelius, J. (1990b). Environmental management in Finnish agriculture. *Agricultural Economics Research Institute. publ.* 61, 91-97.
- [22] Sumelius, J. & Bäckman, S. (2008). Review of studies on establishment and management of policies for multifunctionality. *International Journal of Agricultural Resources, Governance and Ecology* 7 (4/5), 386-398.
- [23] Vatn, A. (2002). Multifunctional agriculture: some consequences for international regimes. *Eur. Rev. Agric. Econ.* 29 (3), 309-327.
- [24] Yrjölä, T. & Kola, J. (2004). Consumer preferences regarding multifunctional agriculture. International Food and Agribusiness Management Review 7(1), 78-90.
- [25] Tian, W.M. (2003). *National report China*. China, Roles of agriculture. International conference Rome, available at http://www.fao.org/es/esa/roa/index en.asp
- [26] Tian, W.M. & Zhang, L.Q. (2003). Recent Economic and Agricultural Policy Development in China, China, Roles of agriculture. International conference Rome, available at http://www.fao.org/es/esa/roa/index_en.asp