Dilemmas of Ecological Modernization in China

The Case of the Loess Plateau Watershed Rehabilitation Project

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Abstract

Inspired by research on rural sustainability and development in China, this thesis presents a case study on The Loess Plateau Watershed Rehabilitation Project (LPP), a state-led, World Bank-funded environmental improvement and development project in northwestern China initiated in 1994. The focus of the study is on ecological modernization in the Chinese context, seeking to develop a better understanding of the Chinese discourse of sustainable development. Qualitative research methods were employed in situ in rural area of Ordos city in the Autonomous Region of Inner Mongolia, with data from local institutions as well as individual project staff and farmers. This study offers a micro-level perspective, investigating the project's local planning and implementation processes, in particular the interaction and communication between local stakeholders, as well as long-term effects of the project on local farmers and their villages. Three main interventions, as the result of institutional operation and planning, were identified: land tenure contracts, integrated watershed planning and grazing management. These were implemented through the LPP at the local level, contributing to the project's success and sustainable development of local communities. The World Bank was a main actor influencing policy-making during the project. However, as this thesis demonstrates, the World Bank's requirements and rhetoric were translated into Chinese terms and adapted to local practical conditions. Local governments played a crucial role in implementing the project's policies and practices on the ground. In particular, there existed a gap between the World Bank-required 'participatory approach' and the actual version of this utilized at the local level. Problems were found in terms of limited empowerment in local village communities, especially regarding gender equality and the empowerment of women. This may result from the political nature of participation with its constraints for achieving true bottom-up development, as well as the Chinese interpretation and implementation of western ideas and practice within their development context. The thesis argues that the LPP can be treated as a microcosm for understanding the tensions that persist in the Chinese discourse and practice of ecological modernization.

Key Words: China, The World Bank, Ecological Modernization, Rural Development, Participation, Empowerment, Environmental Conservation and Policy

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Abbreviations and Equivalents

CAS Chinese Academy of Sciences Institution

CCP Chinese Communist Party

CPMO Central Project Management Office

EEMP Environmental Education Media Project

FAO The Food and Agriculture Organization of the United Nations

HRS Household Responsibility System

IEMP Internationl Ecoloigcal Manamger Project

LPP The Loess Plateau Watershed Rehabilitation Project

MDG(s) Millienum Development Goal(s)

MWR Ministry of Water Resource

PRC The People's Republic of China

PMOs Project management offices

PLGs Project Lending Groups

UNEP United Nations Environmental Program

UMRB The Upper and Middle Reach Bureau

YRCC The Yellow River Conservancy Commission

1 *yuan* (元)= 1/8 US dollars (from 1994 to 2005)

1 *mu* (亩)=1/15 of a hectare

1 *jin* (斤)=0.5 kilogram

Glossary of Chinese terms

Latin	***Chinese***	***Meaning***
cunming xiaozu	村民小组	village small groups
dadui	大队	brigade
de	德	virtue
e'xing xunhuan	恶性循环	a vicious cycle
gaige kaifang	改革开放	opening-up reform
huangshan chengbao	荒山承包	wasted mountain contract
handi	旱地	dried land
hexie shehui	和谐社会	harmonious society
jinmu duchadui	禁牧督察队	an inspector team for illegal grazing
kaihuang	开荒	the opening up of wasteland or land reclamation
laotian	老天	the Heaven/the god's will
meili xiangcun	美丽乡村	beautiful countryside
nengren	能人	competent people

niannian zaolin bujianlin	年年造林不见林	Year after year planted forest doesn't see any forest
nanzhuwai, nüzhunei	男主外，女主内	men take care of outside business, women take care of the household
renkou suzhi	人口素质	population quality
rendingshengtian	人定胜天	man can conquer nature
shehui zhuyi xin nongcun jianshe	社会主义新农村	building a new socialist countryside
shengchandui	生产队	production teams
shaji	沙棘	seabuckthorn
shuijiaodi	水浇地	water-harvesting farmland
shui chengbao, shui zhili, shui shouyi	谁承包，谁治理，谁受益	who contract the land, who manage the land, who will get benefit
shuitu liushi	水土流失	water and soil loss
tuigenghuanhu	退耕还湖	returning previously reclaimed farmland to lake
tianren hexie/yi	天人和谐/一`	Heaven/nature and human beings in harmony
xianjin dianxing	先进典型	pioneers for experimenting with the project introduced practices

xiushen	修身	self-cultivation
xiaokang	小康	to live a relatively comfortable life
yibayitang	一坝一塘	one dam one pond
zuo gongzuo	做工作	doing the work

1 Introduction

Ecological modernization is a concept entailing the possibility of combining environmental protection and economic growth, a critique of the traditional view that environmental protection limits economic growth (Dryzek 2013). Hence, ecological modernization emphasizes the perspective that environmental protection can generate long-term economic benefits (Dryzek 2013). Ecological modernization addresses the development of market-based instruments for environmental protection, industrial and technological innovation as well as resource efficiency (Baker 2007). It also requires political commitment to take on board environmental values, as the state authorities play an important role in creating standards for and providing incentives to industry (Dryzek 2013). However, markets and the state are not the only actors in the growing green economy movement. There are many other multinational and bilateral mechanisms in existence that stimulate action and create incentives for industry. Ecological modernization originally started especially within developed countries suffering from environmental crises (e.g. pollution, ecological degradation, climate change) arising as a consequence of modernization (Dryzek 2013).

Western-style modernization has been a dominant development discourse with its emphasis on economic growth from heavy industrialization since the industrial revolution. However, it separates the human and non-human world, viewing "nature as a force to tamed", and seeking to "master nature through technological innovation" (Shapiro 2012:88). This has negative effects on the environment. According to Shapiro (2012), China has started to apply western-style modernization since the Maoist period from 1949 to 1976. Mao's famous slogan *rendingshengtian* ("Man Must Conquer Nature") supported this modernization ethos, causing human suffering and destruction of the natural environment (Shapiro 2012:89). The past three decades of the modernization process has led to rapid economic growth in China, but at the same time has precipitated severe ecological crises and widespread environmental pollution. China is currently shifting from traditional to ecological modernization, following the global trend of environmental protection for sustainable development. The '*China Modernization Report 2007: Study on Ecological Modernization*' shows the attempt of the Chinese government to "insert ecological rationality into the modernization discourse, policy-making, and practice in China" (L. Zhang, Mol, & Sonnenfeld, 2007:

662). The report officially stated China's sustainable development strategy and vision in terms of ecological modernization, advocating a technocratic approach to crucial environmental problems (L. Zhang, Mol, and Sonnenfeld 2007). Although the ecological modernization development strategy and vision was officially announced and has been publicly known since this 2007 report, China's ecological modernization took off already in 1998 according to the report (L. Zhang, Mol, and Sonnenfeld 2007). This thesis views the Loess Plateau Watershed Rehabilitation Project (LPP) as a state-led early experiment of ecological modernization approach to sustainable development during the 1990's. As we know, past experiences often can influence and shape future development direction and operation. Thus, the case study of the LPP can contribute to a better understanding of the Chinese State's vision and strategy of sustainable development in terms of ecological modernization as announced by the above-mentioned report.

The Loess Plateau Watershed Rehabilitation Project (LPP) is a state-led, World Bank-funded project in rural areas of northwestern China. The project lasted from 1994 to 2005, and involved ambitious goals of achieving sustainable development through improving ecological conditions in tributary watersheds of the Yellow River, as well as improving local agriculture output and income on a large scale (World Bank 2003; World Bank 2005). No previous studies have drawn a connection between this project and ecological modernization – a link which this study attempts to establish. This will hopefully result in a richer understanding of the Chinese discourse of sustainable development in the local, rural context.

In this chapter, I will introduce the main research questions and the rationale, followed by a background report of contemporary environmental issues in China. I will first provide basic background on the LPP, and of the Loess Plateau in the following section. A summary outline of the thesis is provided at the very end of this chapter.

1.1 Background Information of the LPP

China's Loess Plateau, with a size of 640,000 square kilometers, is located in northwestern China, along the upper and middle reaches of the Yellow River. The Loess Plateau region has a typical continental monsoon climate, where winters are cold and

dry, and summers (June to September) have the most rainfall during a typical year[1]. With its particular climatological characteristics, the Loess Plateau is characterized as semiarid (Kimura and Takayama 2014).

The plateau, as the name implies, is widely covered with loess soil, a fine-grained, wind-deposited, yellowish silty sediment, which and is prone to wind and water erosion (Yan et al. 2014). This region is considered the largest area of loess-soil in the world and also one of the most severely eroded. The center of most severe erosion is located in the "wind-water transition zone"[2] at the juncture of Shanxi and Shaanxi provinces and the Autonomous Region of Inner Mongolia (Inner Mongolia), which has experienced notoriously dramatic climate changes and frequent natural disasters, such as flooding, torrential rains, droughts and sand storms (F. Zheng and Wang 2014). In addition, the upper and middle reaches of the Yellow River flow through the region, carrying in turn a large amount of suspended sediment. The discharged sediment in the lower reaches of the river has caused the riverbed to be raised far higher than surrounding fields over the centuries, which can lead to frequent, severe flooding, affecting the lives of local communities (Yan et al. 2014).

Many studies have indicated that the Loess Plateau, in ancient times, was highly fertile and easy to farm, which contributed to the development of an agricultural civilization. However, a fragile natural environment and long-term human activity have drastically degraded the environmental and agricultural conditions (Liu 2011; Tsunekawa et al. 2014). Particularly during the second half of the 20th century, large areas were converted to cropland (including areas unsuitable for cultivation), which later resulted in severe land degradation and soil erosion. This further caused reduced agricultural productivity and a shortage of food supply among local communities. People living in the region suffered from a harsh environment and extreme poverty for decades (S. Chen, Wang, and Wang 2004; Liu 2011).

Historically, the Chinese government attempted to control water and soil loss and develop sustainable agriculture in the Loess Plateau (An et al. 2014; S. Chen, Wang, and Wang 2004). However, results were not promising, nor effective, both in terms of

[1] Annual precipitation is around 400 mm, with a minimum of 150 mm and maximum of 750 mm (Kimura and Takayama 2014).

[2] In this area, wind and water erosion both exist and contribute to intense soil erosion (F. Zheng and Wang 2014).

the environmental and economic impacts, exacerbating the problem further, rather than reducing the severity of environmental destruction (S. Chen, Wang, and Wang 2004; Economy 2005).

With this backdrop, the World Bank-led rehabilitation project of the degraded Loess Plateau was undertaken with the purpose of erosion control, particularly, reducing sediment flow in the upper and middle reaches of the Yellow River, and disaster prevention. In the meantime, the village communities at project areas were suffering extreme poverty during the early 1990's. With the World Bank's human-centered development ideology, the project also aimed to alleviate poverty through improving local agricultural productivity and boosting the local economy. In 1994, The LPP was initiated by the Chinese Ministry of Water Resources (MWR) with a credit of $150 million from the World Bank. The project included two phases: LPP 1 (1994-2002) and LPP 2 (1999-2005). The project was implemented in 48 counties, located in nine tributary watersheds in Shanxi, Shaanxi, and Gansu Provinces and the Autonomous Region of Inner Mongolia, with a total area of 15,500 km^2 (the size of Belgium). The project divided this large area into 1,100 smaller micro-watershed areas ranging from 1,000 to 3,000 ha in size (Darghouth, Ward, and Gambarelli 2008; S. Chen, Wang, and Wang 2004). The counties and micro-watersheds were selected for the project according to a variety of project criteria.[3] The project was designed to have two main components: 1) land development and erosion control work, and 2) institutional development. Land development and erosion control were further divided into several sub-components: terracing; afforestation; orchards; grasslands; sediment control dams; warping land; irrigation; gulley control and complementary livestock development[4](World Bank 1994; World Bank 2003). Institutional development encompassed three programs of training, research and technology transfer (World Bank 1994; World Bank 2003; World Bank 2005). Three new institutional practices, with land tenure contract, grazing management and integrated watershed planning, were implemented as crucial factors of the project success, transforming traditional bureaucratic management practices and traditional

[3] The criteria include severity of soil erosion, poverty level, experience with soil and water conservation work, leadership and commitment at the local government level, development potential and loan payment capacity, and proximity to science and research organizations involved in soil and water conservation (World Bank 1999).

[4] Complementary livestock development was added later at the mid-term review as an evolving priority of local farmers, while the dam construction, grassland development and shrub plantation were adjusted according to local conditions (World Bank 2003).

water and soil conservation work[5] in the region (World Bank 2005; CPMO 2010)[6]. Consequently, farmers' participation was increased, with a change of local unsustainable farming practices and the development of a more sustainable way of living (S. Chen, Wang, and Wang 2004; Fock and Cao 2005; World Bank 2005; Liu 2011). The project was considered one of the largest and most successful conservation works in the world, as well as one of the most successful rural development projects implementing poverty reduction (S. Chen, Wang, and Wang, 2004; Fock and Cao 2005).

1.2 Research Questions and Rationale

The questions below are central to my study:

- What were the mechanisms of the success of the project at the local level? How were the key institutional arrangements implemented through the LPP at the local level?

- What influenced the implementation of 'participatory approach' at the local level by local officials and villagers?

- How have local farmers and their villages been affected by project interventions driven both by the World Bank and the central and local Chinese governments?

The project planners and designers assumed that environmental conservation and agricultural development for economic growth could mutually reinforce each other, leading to sustainable development. In addition, the project was initiated and carried out at a time when China's political economy was in a transition from a centrally planned economy to a market-driven economy. The project utilized and promoted a market system in project areas, both facilitating the economic reform and the project implementation. These very ideas corresponded to a certain claim in ecological

[5] Traditional conservation work only paid attention to conservation of the physical environment, ignoring local people's livelihood (CPMO 2010).

[6] A Chinese official document published by the Central Project Management Office (CPMO) of the LPP. The CPMO was established in The Yellow River Conservancy Commission (YRCC) that was under the administration of the Ministry of Water Resources.

modernization theory, that there exists a synergy between environmental protection and economic development, addressing market-based policy instruments (Fisk 2008) [7].

The success of the LPP appears to be due to an effective management structure contributed by a strong political commitment, with efficiently functioning government, and an improved market mechanism (S. Chen, Wang, and Wang 2004; Fock and Cao 2005; World Bank 2005). In addition, the success of the LPP was partially due to its serious approach to sustainability, by implementing the three institutional interventions of land tenure contracts, grazing management and integrated watershed planning, with inclusion of local village communities in the process, and enhancement of human capacity for future environmental conservation and livelihood development in the region (World Bank 2003; World Bank 2005; CPMO 2010; Liu 2011). However, no previous studies yet found have conducted research on how the above-named macro-level factors were applied in a local context and how they contributed to the alleged success of the project. Furthermore, previous studies have not provided detailed observation of, and investigation into the local level planning and implementation process, particularly the involvement of local governments and participating villages. This thesis therefore intends to fill theses gaps by studying the implementation process at the local level. How were the three institutional interventions of the project implemented in a local context? How did local stakeholders communicate with each other during the implementation phase? What specific channels and strategies were used for delivering the development intervention? How did the project intervention influence local farmers? By exploring answers to these questions, this thesis will attempt to explore how the ecological modernization process has taken place in local community villages that were part of the LPP, and what consequences this project intervention has brought to the lives of local villagers since the implementation of the project. To do this I will use data collected from fieldwork, World Bank reports and related external resources. Thus, this study will help obtain a better understanding of how local stakeholders were involved and interacted at the local level implementation process. A micro-level perspective of the project interventions will be gained through addressing

[7] Robert Fisk, "Ecological modernization theory and the challenge to radical green politics," published 13 September, 2008, https://wellsharp.wordpress.com/2008/09/13/ecological-modernisation-theory-and-the-challenge-to-radical-green-politics/ accessed on 25.10.2015

local people's experiences and perspectives, providing a fuller understanding of the 'success' of the project.

This thesis also examines the LPP in relation to the concept of a so-called 'participatory approach' to development introduced and required by the World Bank. Such an approach was thus emphasized by project authorities as a key to the success. Some studies have made positive judgments on this project component, specifically regarding an increase in farmer participation and their sense of ownership (S. Chen, Wang, and Wang 2004; Liu 2011; Liu and Hiller 2015). However, a question mark may arise over the concept of 'participation' in a Chinese government-led project, due to a common impression of a Chinese authoritarian/top-down administration system. One study pointed to the limitations of the 'participatory approach' in the LPP (Dalton and Cai 2007:35-36). In particular, participatory community development and institutional capacity building were criticized (Hiller 2012: 72). However, neither of these previous studies conducted a detailed investigation of the project's success in terms of 'participation', or provided a detailed explanation of the problem of 'participation' in the LPP. There is evidence that gaps existed between the western-based project rhetoric of participation and the practices on the ground in China. This thesis will elaborate on this question, and I hope to shed light on the reality of participation as applied in a Chinese local context. In recognition of the complexity and dynamics of 'participation' in the LPP, this study is not going to give a determined definition or claim about 'participation' in the LPP, but rather keeps an open attitude for inquiry into problems and limitations, testing the feasibility of the concept of 'participation' in the Chinese context given the harsh restrictions the state authority is known for.

In addition, this thesis is inspired by ongoing research on rural sustainability and development in China. More specifically, it is inspired by research regarding how the global discourse of sustainable development, with its advocated ideologies and practices, has shaped China's conservation policy and action on the ground. More broadly, the thesis fits into studies on local impacts of global processes and changes. And further, this thesis is inspired by research into how sustainable development operates as a discourse in China, and what impact it has had on local communities. I hope the knowledge generated from this study can shed light on the local reality of rural development and sustainability in China, following the global pursuit of sustainable development. This thesis may inspire reflections on the challenges and problems of

local development strategies and practices, thus informing and contributing to improved environmental policymaking and governance in China in the future.

1.3 Background on Sustainable Development in Post-communist China

Since the 1970's, the world has been in search of sustainable patterns and approaches to development. This global action has brought environmental issues on the international development agenda, as well as an awareness of, and response to, the 'grassroots realities' of the most impoverished groups of people, particularly those inhabiting rural areas in developing countries (Chambers 1993; Potter et al. 1999). Both international and national development agencies and governments have followed the largely Western-inspired development discourse and rhetoric of sustainable development for rural development, in terms of environmental protection, poverty reduction, as well as community participation, integrating them into their institutional agendas and practices at different levels (Potter et al. 1999). As defined in FAO's working paper, rural development is "development that benefits rural populations; where development is understood as the *sustained* improvement of the population's standards of living or welfare"(Anríquez and Stamoulis 2007:2). Consequently, according to *The Millennium Development Goals Report 2015*[8], great efforts have been made and significant results have been achieved during the past 15 years. However, challenges still remain, and are, to some extent, getting worse, such as the ecological crisis, climate change, food and water scarcity, and natural disasters. Thus, a post-2015 development agenda maintains a call for sustainable development through a set of Sustainable Development Goals.

As the most powerful developing country, China plays an important role on the global stage, with its direction of development having a crucial influence on tackling the global environmental crises. At the same time, China has its own environmental and development problems, and thus its own unique search for solutions towards sustainability under equally unique political, economic, social and cultural contexts. The state economic transition since 1978 has brought certain changes to rural organizations of the Mao period. Since then, the Chinese Communist Party (CCP) has gradually paid

[8] http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf accessed on 10.07.2015.

more attention to environmental protection for sustainable development with supporting polices.

1.3.1 Impact of Post-Maoist Economic Transition on Agricultural Development in China

During the era of Mao's rule, China followed the Soviet Union's development model for industrialization through collectivization and public mobilization. In 1958, a central policy intervention on land tenure brought all land into collective ownership. In addition, the establishment of the People's Commune in the same year marked the agrarian reform, with the implementation of a planned agriculture economy (UNEP 2012). Since 1978, Deng Xiaoping, at the time, leader of the communist party, initiated *gaige kaifa*ng (the 'opening up' reform) with the introduction of free market theory.

The introduction of the household responsibility system (HRS) in the 1980's started economic reform in the organization of Chinese agriculture, from a collective-based production system to a family-based system (Tilt 2007; UNEP 2012). Under this system, farmer households were granted land leases with five-years terms, extended to 15 years in 1983 and 30 years in 1993, through which they were able to make their own production decisions and receive any profit from selling their agricultural products in growing markets (Tilt 2007). This system started a change from a centrally planned agricultural economy to a market agricultural economy, leading to another round of agrarian reforms characterized by privatization (UNEP 2012). The household responsibility system brought many opportunities as well as challenges to rural communities and farmer householders (UNEP 2012). According to Tilt (2007), this system has made China into the world's largest smallholder farming system. On the other hand, with the backdrop of economic liberalization, smallholders face great challenges, including privately purchasing all farming equipment and services, and a pressure to grow cash crops. These economic pressures are even greater for smallholders in the less developed regions of the country (Tilt 2007). In addition, Tilt (2007:197) views that this land tenure system functions "somewhere between state-controlled and market-oriented", creating an ambiguity that causes farmers' uncertainty of their specific rights in relation to farmland.

According to Williams (2002), Mao attempted to insulate the economic development of the nation from the influence of capitalism, maintaining self-reliance and isolating itself from inegalitarian influences. However, Deng had a very different approach to China's development, following development models of western industrial countries by promoting privatization of agricultural development, ending the egalitarianism of the Mao era, and trying to integrate further into the world economy (Williams 2002). Since the 'opening up' policy, China's modernization has coincided with the forces of globalization (Williams 2002). Despite the changes to state development strategies and practices, the Communist Party and the state government has inherited the characteristics and ideologies left over from Mao, especially concerning the promotion of industrialization, the advocacy of a national development campaign, mass mobilization, and collective action by the state government (Shapiro 2001; Williams 2002; Tilt 2009).

1.3.2 Continuity and Change of Rural China's Organization

Since 1949, China has been under Communist Party rule with a top-down administrative system, operating from the central government down to the provinces, cities/prefectures, counties, rural townships and villages. The lowest level of government is township, directly organizing and governing the countryside. The movement towards de-collectivization, and a market-driven agricultural economy was accompanied by rapid industrialization and urbanization. Although there have been great changes in rural society, the organizational framework of rural China's governance has hardly changed since the period of Mao's rule (Unger 2012).

During Mao's rule, there were three basic forms of rural organization below the county government: commune, *dadui* (brigade) and *shengchandui* (production) teams. Commune was a bridge between the rural communities and counties normally containing over 100 villages. A *dadui* was assigned in each village, controlling all organized activities within the village, including political campaigns. *Shengchandui* teams were the grassroots level of rural organization. Each *shengchandui* normally consisted of some 10 to 15 households, who collectively owned a plot of agricultural land. Its member households worked the land together as a group, and shared in the harvest proceeds. Thus, farmers were bound together economically in production teams, and shared a common interest in their team's economic success (Unger 2012). The team

leader of a *shengchandui* was usually chosen by team members, though there were a few cases where the team leaders were chosen by the Communist Party directly. The CCP extended its political reins to the rural grassroots through this system of organizing the farmers into *shengchandui*, *dadui*, and communes (Unger 2012).

With post-Mao reform, the titles of 'commune' and *dadui* were abolished and replaced by the titles 'township' and 'administrative village' or 'village committee' during the first half of the 1980's. Production teams were renamed *cunming xiaozu* (village small groups). The county government remained the most powerful actor at the local level in terms of rural governance (Unger 2012). When comparing the conditions of rural governance under and after Mao, Unger argues that under Mao, these rural organizations were Communist Party machinery, pushing a radical political and social transformation; while after Mao, rapid economic development became the singular goal, driving the county-level leadership towards "acting in the fashion of a small-scale developmentalist state" (Unger 2012:25).

1.3.3 The Changes of Environmental Policy and Practices

China's environmental policy and practices shifted at the same time as the transition of the political economy, and in line with the global trend of seeking sustainable development. UNEP (2012) defined three phrases of China's ecosystem management, highlighting the major policies and practices since the founding of People's Republic of China (PRC):

Phase 1 (1949-1978) adopted a grain production-oriented policy leading to ecosystem degradation. As food security was the top priority for national development, forests, grasslands, and wetlands were all converted to cropland. Particularly forest resources were over-exploited under the planned economy. Several national movements and related polices such as The Great Leap Forward (1958-1961), The People's Commune (1958-1982), and The Cultural Revolution (1966-1976) caused great ecosystem degradation, as well as destruction of people's livelihoods, particularly in rural areas (Shapiro 2001). These polices exacerbated the environmental crisis in China, especially with regard to deforestation, desertification, and soil erosion (UNEP, 2012).

Phase 2 (1978-1998) started a change from grain production-oriented policy to natural ecosystem conservation. Besides prohibiting the conversion of wetland, forests, and grasslands to cropland, the central government made efforts to control water and soil loss, in order to improve the environment. Several regional ecosystem restoration projects were carried out, including the Three-North and Changjiang River Shelterbelt Protection Forest Program (UNEP, 2012).

Phase 3 (1998-2010) defined by UNEP as the period in which sustainability has taken a greater role in national development strategy. In practice, a series of environmental programs and policies were implemented, including the Grain for Green Program, the Natural Forest Protection Program, and the Returning Farmland to Lake[9] Program, as well as land tenure reform of grassland and woodlands in pastoral regions and collectively owned forest regions (UNEP 2012).

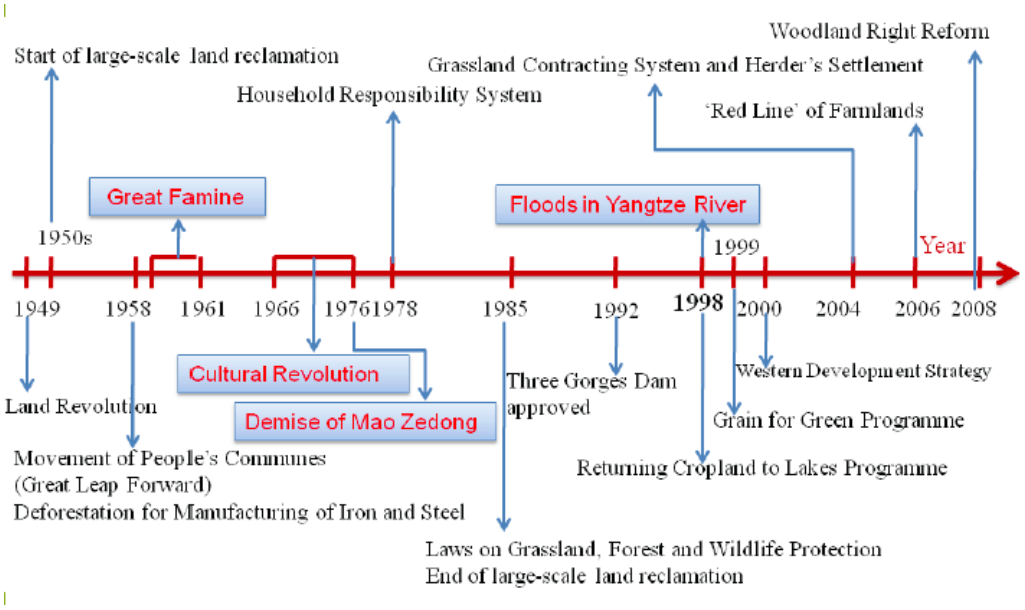

Figure 1: Key Events and Related Environmental Policy Changes since 1949 in China (UNEP, 2012: 4)

In general, the Chinese central government has increased investment in environmental conservation and ecological protection. The policies and practices have attempted to change from facilitating the destruction of the environment to protecting it. Although some positive results followed the change in environmental policies and practices, many projects and polices failed due to ill-planned intervention and a lack of sustained management (UNEP 2012).

[9] '*Tuigenghuanhu'*, returning previously reclaimed farmland to lake.

1.3.4 Tacit Influence of Confucianism on Sustainable Development in China

While discussing the concept of sustainable development in China, it is important to consider it in a broader cultural context of Chinese values and traditions. Confucian philosophies have significant influence in almost every aspect of Chinese society. Sustainable development has also been influenced by Confucian philosophies. There have been a number of discussions on Confucianism and its relations to ecology/environment in the development and environmental fields. A whole volume of relevant discussions are found in the book, *Confucianism and Ecology* (1998). According to this book, Confucian texts have embedded ecological values and ethics, which can provide inspirations for dealing with the environmental crisis in Asia and beyond (Tucker and Berthrong 1998). A general understanding of Confucianism with its relations to ecology can be summarized in three points.[10] First, Confucian thought views humans as part of nature and that humans should have a harmonious relationship with all "things" [11]. The Confucian texts emphasize the concept of 'harmony', advocating *tianren hexie/yi* (heaven/nature and human beings in harmony). In the Confucian view, humans are able to be reflective of and adjust their relationship with the non-human world, achieving the state of 'harmony'. Second, the Confucian texts advocate utilizing natural resources with certain limitations, allowing for mutual growth and flourishing. This idea seems to embed a certain view that human development and environmental protection are not contradictory, but should exist simultaneously. In addition, Confucianism sees the continuity of life, imposing a long-term perspective for human development. These Confucian thoughts can potentially provide fundamental principles for environmental protection and the ethical justification for the emphasis on sustainable development.

On the other hand, Confucian thought addresses study and education, pursuing personal achievement through the life-long process of *xiushen* (self-cultivation) (Riegel 2013; Sun 2012). Confucius' political philosophy advocates moral rulership with the possession of *de* (virtue). This is a type of "a moral power that allows one to win a

[10] Besides the book of 'Confucianism and Ecology', the views presented here were inspired by an unpublished work on 'Confucian View on Sustainable Development' written by Jan Erik Christensen, as well as Christensen (2014) and Shapiro (2012).

[11] A personal communication with Jan Erik Christensen: "'things' not only includes biological things such as plants and animals, but also lifeless things such as the mountain and water." Email on 23.11.2015.

following without recourse to physical force, such 'virtue' also enabled the ruler to maintain good order in his state without troubling himself and by relying on loyal and effective deputies" (Riegel 2013). Confucianism addresses the importance of social hierarchy (rules, status, and authorities). Individuals should follow this tradition, in order to pursue a harmonious relationship with others for maintaining social integration and stability (Zhang et al. 2005). This part of Confucian culture can potentially bring some negative social and environmental effects. Shapiro (2001) argues that the degradation of the natural world in revolutionary China cannot be separated from the often willing participation of millions of Chinese people, at all levels of society. The Confucian culture fostered obedience to superiors, playing a critical role in suppressing dissent and in promoting such overambitious development projects at the time (Shapiro 2001). Such Confucian culture, embedded in Chinese society, may influence the mindset of the Chinese people as well as the structure of the society.

Studying the relationship between cultural traditions (e.g. Confucianism and Mao's legacy) and ecological modernization in the Loess Plateau is beyond the scope of this thesis. However, it is important to point out that neither Confucian values nor Mao's traditions can be ignored as modifying factors of ecological modernization and sustainable development in China.

1.4 Structure of the Thesis

In this introduction, I started with the background of the LPP, followed by a discussion of the research questions and rationale of this study. I also presented a historical background for sustainable development and rural governance within specific Chinese social, cultural, political and economic contexts. Chapter two outlines the conceptual and theoretical approaches used in this thesis. Chapter three presents the methodology of the study, giving the rationale for conducting a qualitative case study, and introducing the fieldwork area of Ordos, Inner Mongolia, as well as specific methods and processes of data collection during fieldwork. The role as a researcher, ethical considerations and the limitations of this study are also included. Chapter four will explore the mechanisms of the success of the LPP through investigating the local level implementation process of land tenure contracts, grazing management and integrated watershed planning. Political, economic and communicative mechanisms of the project

implementation will be respectively discussed, providing a foundation for analyzing the mechanism of the ‘participatory approach’ of the LPP. Chapter five will conduct an inquiry on the concepts and practices of ‘participation’ in the LPP, exploring the existing gaps of the World Bank-required ‘participatory approach’ and the reality on the ground in the local context of the LPP. I will use the theoretical framework of ‘participation’ developed in chapter two for practical analysis and discussion. Lastly, chapter six summarizes the findings with concluding remarks on sustainable development in the Chinese discourse, and suggestions for future research.

2 Conceptual and Theoretical Framework

This chapter will outline the main theories and concepts, with a brief explanation on their connection to the study of the LPP. These theories and concepts will be further elaborated upon when analyzing the empirical materials and discussing the findings in the subsequent chapters.

2.1 Political Ecology

This thesis uses a political ecology approach to guide the analysis and discussion of Chinese ecological modernization through a case study on the Loess Plateau Watershed Rehabilitation Project (LPP). Political ecology provides a situated lens for tracing and analyzing local impacts of social and environmental movements at a global level (Robbins 2004). It addresses an analysis of human-nature relationships and conveys a critical perspective on dominant power relations (Robbins 2004, McCarthy 2012). Political ecology applies an analysis of political economy to explore environmental degradation, not only as a physical problem, but also as a social problem situated in a specific cultural, political and economic context, developing an understanding of the contemporary environmental problems that are caused by capitalism and dominant power relations(Robbins 2004). Political ecology informed research provides theoretical and empirical contributions to the critique of neo-liberalization in the sphere of environmental governance, tracing its trajectories and evaluating its effects (McCarthy 2012). It does so through focusing on the study of power relations among different stakeholders in environmental management and policy-making (McCarthy 2012).

The LPP, as a state-led environmental and development project, cannot be seen solely from an ecological conservation perspective, but needs to be studied through analysis of political economy and the dominant power relations in the local context. Political ecology can both provide a theoretical framework for this analysis and be applied to develop a critique of the LPP. Specifically speaking, a political ecology approach helps document local knowledge and understandings of ecological process regarding the LPP. It seeks to disclose constraints in the state and international authorities-favored approaches to development and the environment. Furthermore, the political ecology

approach can be used to develop an empirical understanding of changes in environmental management regimes and conditions, and document the unpleasant impacts of policies and market systems, especially from local people's perceptions and experiences (Robbins 2004). Thus, we can obtain a more complete understanding of such a state-led ecological modernization project with its ecological, social, political, and economical effects on local social and environmental systems as well as the lives of local people. Later in Sections 2.3.2 and 2.3.3, I will go into depth on how the analysis of power relations, central to political ecology, will be used in this thesis.

2.2 Sustainable Development and the Concept of 'Harmony' in Chinese Culture

I have suggested in Chapter 1 that we cannot disregard the Confucian ideas and some ethical traditions in the Chinese modernization processes. Nor can we ignore the concept of 'harmony', which has been of great importance after the Maoist era and is now codified as part of the Chinese political and ecological discourse (Rothman 2007; C. Wang and Lin 2010; Chan 2010). 'Harmony', as a central concept in Confucianism, is "a social idea that governs not only family and interpersonal relations but also those of the rulers and the ruled"(Chan 2010:821). The former president of PRC, Hu Jintao, had a vision of *hexie shehui* ("harmonious society") that has been the main aim of PRC policy (Cencetti 2010:48). As noted in Chan (2010:821), a harmonious society is a society that is "democratic and ruled by law, fair and just, trustworthy and fraternal, full of vitality, stable and orderly, and maintains harmony between man and nature". Thus, the Confucian concept of 'harmony' has an influence in shaping the Chinese discourse of sustainable development, especially regarding ecological modernization in the context of the LPP. According to L. Zhang, Mol and Sonnenfeld, "ecological modernization" gets along well with the concept of "harmonious development" that is currently popular and promoted in China (L. Zhang, Mol, and Sonnenfeld 2007:665).

I particularly include a 'harmony' theory in studying Chinese communication patterns in its ecological modernization throughout the LPP. According to Chen (2013), harmony, as the core value of Chinese culture, guides communication behavior and has been a paradigmatic theme of many studies of the Chinese communication. Chen (2001) points out three Chinese ontological assumptions of human communication: 1) "a

changing and transforming process"; 2) "changing according to the endless but orderly cycle of the universe"; and 3) "never absolutely completed or finished". To Chinese people, harmony is the most crucial element used to "regulate the transforming, cyclic, and never-ending process of human communication" (Chen 2001: 57). In summary, "harmony itself is a dynamic rather than a static state" (Chen, 2013: 33).

2.3 Participation: Main Concepts and Theories

The section will provide a theoretical foundation for exploring the complexity of the concept of participation and different power relations in the local context of the LPP. They also provide inspiration for the theoretical framing of the central problem of participation in the LPP—the gaps between Western-inspired discourse and rhetoric of participation, and reality on the ground.

2.3.1 The Definitions and Nature of Participation

The World Bank defines participation as "a process through which stakeholders influence and share control over development initiatives, decisions and resources which affect them" (World Bank 1996:3). Participation often can be interpreted as a means to accomplish the aims of a project more efficiently, effectively and cheaply, or as an end itself, "where the community or group sets up a process to control its own development" (Nelson and Wright 1995a:1). These two interpretations imply different power relationships between key stakeholders. Usually the extent to which the local population is both involved and empowered is more limited in the first than the second. Nelson and Wright (1995a) further draw attention to a complicated nature of participation in any contemporary context, listing three main factors: 1) its accumulated meanings over time; 2) the level of empowerment and involvement of local population; and 3) different ideologies represented by different actors. And these three main factors provide a context for studying the discourses and procedures of participation in practice.

2.3.2 A Critical Perspective of Participation

Community participation and empowerment has been a central agenda of the major development institutions in fostering people's (or grassroots organizations') participation, and directly addressing the poor's struggles of equality, human rights and

democracy (Potter et al. 1999:158,177). Studies have shown that there has been always a gap between the rhetoric of participation and the reality of on-the-ground experiences (Nelson and Wright 1995b). Nelson and Wright's (1995a) study summarizes several points of the differences between institutional rhetoric and practice. First, the term 'community' often generates a feeling of homogeneity, covering potential divisions in communities and hiding differences among members and groups within a community. Second, project designers may use the vague definitions of participation to disguise their real agendas. Often they expect that 'participants' can provide volunteer or cheap labor through participating in their projects. This potentially creates a new form of dependency, which is the third point. This dependency provides an employer/employee relationship between the project donors and implementing organizations, and their targeted beneficiaries, or so-called 'participants'. The next point concerns the paradoxical nature of aid-assisted projects with continued centralization in the name of decentralization. On the one hand, aid agencies exert a top-down influence. On the other hand, they aim for bottom-up local capacity building for participation and empowerment. Last but not least, the implementing agencies often rely on tangible results to satisfy their donors, rather than making efforts to clarify the otherwise abstract influence of participation (Nelson and Wright 1995a).

More critically, Cooke and Kothari (2001b: 3) warn against the 'tyranny' of participation, saying that, "tyranny is both a real and potential consequence of participatory development". The 'tyranny' refers to "the illegitimate and /or unjust exercise of power" (Cooke and Kothari 2001b: 4), as the tyrannical potential "lies not with the methodology and techniques but with the politics of the discourse" (Cooke and Kothari 2001b:7). Instead of only thinking of the tyrannies as "a matter of how the practitioner operates or the specificities of the techniques and tools employed", they addressed "how the discourse itself, and not just the practice, embodies the potential for an unjustified exercise of power" (Cooke and Kothari 2001b: 4). Cooke and Kothari (2001b) suggest three particular sets of tyrannies: 'the tyranny of decision-making and control', 'the tyranny of the group' and 'the tyranny of method'. Various studies on these three categories of tyranny, which are included in Cooke and Kothari (2001a), challenge the orthodox account of participation from different angles. Particular topics covered range from 'local knowledge' and 'bureaucratic planning' to a specific analysis of a single institutional setting, the World Bank. A particular participatory methodology

for rural development, 'participatory rural appraisal' (PRA), which the World Bank mainly applies for delivering development interventions, has been considered a potential risk of becoming a type of 'tyranny' (Cooke and Kothari 2001a).

2.3.3 Power and Empowerment

Empowerment is a central concept in participation theory, with the idea that "some can act on others to give them power or enable them to realize their own potential" (Nelson and Wright 1995a :7). Power is considered to exist in everyday life, within social, cultural, economic and political systems and is defined by Nelson and Wright (1995a:8) as "how people stand in relation to each other in these systems". Thus, power is a relation between people rather than something an individual possesses. According to Nelson and Wright (1995a), there are three models of power: 'power to', 'power over' and 'decentered' model of power. These models of power are often used to analyze empowerment and participation. The first model is 'power to', using "a metaphor of human development" (Nelson and Wright 1995a:8). It suggests that power can grow without limits, and personal growth does not necessarily negatively affect others. The second model of 'power over' involves gaining access to political decision-making. The metaphor of this model is seeing power as "a thing of which there was a finite amount in a closed system" (Nelson and Wright 1995a: 9). There are three situations of power relations in this model (Nelson and Wright 1995a: 9):

1) A has power over B, meaning that A has power that can make B do what B would not have done. The conflict between A and B is observable;

2) A affects B in a manner contrary to B's interest. However the conflict is not visible;

3) A exercises power over B by influencing, shaping or determining B's role in the existing order of things, and no conflict arises.

According to Nelson and Wright, the third model of power is considered 'decentered power. This model implies that "power is subjectless and an apparatus consisting of discourse, institutions, actors and a flow of events" (Nelson and Wright 1995a: 10). The analysis of the 'decentered' power suggests that when participatory approach is implemented through a top-down process, and thus determined by and adapted to the project authorities' concern, its potential bottom-up impact may be reduced or

eliminated entirely. In this sense, the concept of participation can be used to disguise "continued top-down attitudes and approaches" (Nelson and Wright 1995a: 11).

Friedmann (1992) links the concept of empowerment to alternative development, indicating an increased access to power for marginalized groups (like the poor or women) through small local movement and initiatives at a grassroots level. Friedmann focuses on household empowerment, where three types of power are required for marginalized groups to gain access to power and enable them to control their own development; social power, political power and psychological power. Social power relates to access to resources, such as information, knowledge, skills, participation in social organizations, and financial resources. With increased access to these resources, households are able to increase their abilities to make their own decisions and meet their own objectives. Political power means that the individuals of households can participate in the process of decision-making that affects their own future. Political power not only addresses the right to vote, but also the right to express one's own opinions and take collective action. Psychological power concerns self-confidence, which is often a result of success in social or political domains. However, it can also produce a positive impact on social and political power. Therefore, alternative development can be understood as a process that seeks the empowerment of households and their individual members through involving them in social and political actions (Friedmann 1992).

Friedmann (1992) particularly addresses gender equality and sustainability for development. Two types of women's claims in his account were addressed: strategic claims and practical claims. [12] Friedmann considers the strategic claim as the fundamental claim of gender equality, and a long-term struggle. It concerns "the systematic disempowerment of women that is encoded in social institutions", and seeks to "change legal-institutional arrangements that keep women in a position of permanent subordination" (Friedmann 1992 :112). Practical claims affecting livelihood have been mainly concerned with women in disempowered households, including four categories of needs: time savings in conducting household chores; improved health care conditions; acquisition of knowledge, skills, and information relevant to women's traditional tasks; and expanded income opportunities while ensuring that women control their own earnings (Friedmann 1992: 116). Friedmann (1992) considers these practical needs

[12] The two claims presented by Friedmann (1992:112) were developed according to a widely accepted distinction first proposed by Maxine Molyneux (1985).

require urgent attention, and progress made regarding practical claims can further a fundamental change in the structure of opportunities that limit women's ability to access the basis of social power and productive wealth. He further argues that women working together with other women on projects can accomplish more than a single woman acting for herself alone, which can enhance the women's empowerment process.

2.4 Applying the Analytical Framework

The LPP is one of the earliest experiments by the Chinese central government in what can be viewed as an ecological modernization approach to sustainable development. The 'participatory approach', introduced by the World Bank, has been a crucial component of ecological modernization throughout the LPP. The theoretical framework of political ecology will be applied in an attempt to develop a rich understanding of the political, economic and communicative mechanisms of the ecological modernization process and dynamics in the local context of the LPP. It will also be applied to provide a critical analysis of the power relations generated through local 'participation' in the project. By applying a political ecology approach, this thesis not only includes an analysis of the local political economy, but also of local cultural traditions. In this sense, Confucian philosophy and its core concept of 'harmony' offers a complementary perspective in understanding the Chinese discourse of sustainable development in the context of the LPP. In particular, a 'harmony' theory provided by Chen (2001, 2013) will be used for studying the communicative mechanism of the LPP. A framework of participation and empowerment will be applied to examine the 'participatory approach' used in the LPP. The implemented 'participatory approach' was also a crucial project mechanism, which was interconnected with the political, economic and communicative mechanisms of the LPP. Through the analysis and discussion, this thesis will demonstrate the processes of different stakeholders' involvement and their interaction, as well as evaluate the effects of the project interventions on both the target group and other groups within the broader community. Thus, this thesis will generate insights into the political, economic and communicative mechanisms of operating an ecological modernization project in the Chinese context, and furthermore shed light on Chinese approaches to sustainable development.

3 Methodology

This chapter will present the qualitative research methods applied and how they guided my data collection throughout the fieldwork in Ordos and later my analysis of the data. This chapter will include discussion of the following topics: rationale for choice of research approach; description of study site and outline of fieldwork in Ordos; methods of data-collection; ethical considerations; the role of the researcher; and limitations of this study.

3.1 Rationale for Research Approach

3.1.1 Qualitative Research

According to Yin (2011:7), qualitative research involves studying the meaning of people's lives within a real-world context, representing people's interpretations, understandings, and perceptions of the studied topic, and addressing the historical, social, ideological, and cultural contexts where people live. Qualitative research can provide insights into the studied field and may develop new concepts that can help explain social processes and behavior (Yin 2011). According to Bryman (2004), qualitative research often involves a rich descriptive detail of social settings, events, and individuals. That is because qualitative researchers believe that behaviors, values and other factors must be understood within a context. Thus, qualitative research focuses on the unique context and meaning of the social phenomenon that is investigated (Bryman 2004:275).

This study shares these broad epistemological and ontological positions, with focus on the LPP's planning and implementation process, the local participants' experiences and perspectives, and through official project documents as a way to achieve a "thick description" (Geertz 1973), emphasizing personal accounts within broader social, political and economic contexts. Local agricultural and livelihood practices, as well as conservation policies, can be understood fully only when taking into account context. Participant observation and interviews were therefore used as the main methods for data collection throughout the fieldwork, which will be elaborated later in this chapter.

In this study, both deductive and inductive approaches are applied. When applying a deductive approach, the research design is based on the derivation of specific hypotheses or questions from more general theoretical formulations (Bryman 2004). For the inductive approach – which, it can be added, is primarily used for qualitative research – the researcher collects empirical data under as few assumptions or theoretical concerns as possible, and is more open-minded when interviewing informants, ready for unexpected or spontaneous discoveries (Bryman 2004). The main research questions were reformulated both during and after fieldwork. Before entering the field, I planned to investigate a number of topics, such as participatory planning and local agricultural and alternative livelihood practices, particularly regarding grazing management, which naturally affected the findings. Furthermore, some of the preliminary data analysis was done in the field, which helped formulate the next stages of the data collection process (Bryman 2004). Several concepts and categories of study gradually emerged from the process of data collection and analysis, and were developed iteratively, regarded as the central feature of grounded theory (Bryman 2004).

'Triangulation' can be used to cross check findings, in order to ensure the credibility of the findings (Bryman 2004: 275). Triangulation emphasizes the use of more than one method or source of data in the study of social phenomena (Bryman 2004). In this study, several methods were employed, including qualitative interviews, participant observation, case studies, as well as comparison between various sources of data and theories. Empirical data were mainly collected through fieldwork in Ordos, provided by official authorities in the form of government reports, documents, and brochures etc., and local informants in the form of semi-structured interviews and informal conversations, as well as field participatory observations. External actors' studies on the LPP as well as a few official project materials were collected from a range of international academic papers and information from websites.

3.1.2 Case Study

A case study is "an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident" (Yin 2014:16). Case studies often adopt some qualitative methods, such as participant observation and unstructured interviews, in order to have "an intensive, detailed examination of a case" (Bryman

2004: 49). The cases are chosen for the study based on the fact that they are able to provide a suitable context from which to answer the research questions (Bryman 2004). One limitation of case studies often mentioned is that findings deriving from case studies cannot be generalized. However, case study researchers often argue that the research design attempts to avoid generalization to other populations and cases (Bryman 2004). It is the theoretical reasoning made from case study findings that are crucial to the process of generalization (Bryman 2004).

3.1.3 Case Study Site: Ordos

Fieldwork focused on one particular region of the LPP, specifically project areas in the four counties Dongsheng[13], Dalad, Jungar and Ejin Horo of Ordos prefecture [14] in Inner Mongolia (see figure 2 below).

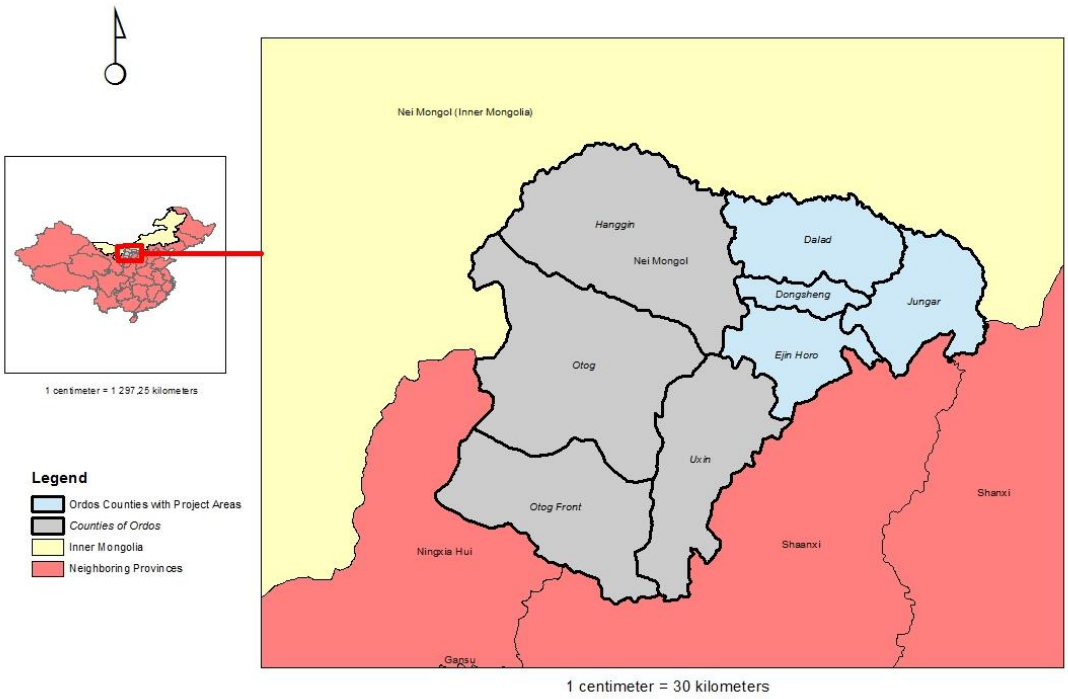

Figure 2: Map of Study Area Located in Ordos

[13] At the time of the project, Dongsheng was still classified as a County level city, but in 2000 it was re-designated as a District. For clarity and consistency, it will be referred to as Dongsheng County throughout this thesis, despite it being re-designated half-way through the LPP.

[14] Ordos Prefecture is actually called Ordos City, named after Ordos City, but includes far more than the urban areas.

Inner Mongolia is located in the north of China, with a territory of 1,183,000 km^2. According to the 2010 National Census, the region has a total population of 24.7 million, of which Han Chinese represent 79.5%, and Mongols about 17.1%. Inner Mongolia has unique agro-pastoral characteristics due to its location within an ecologically and culturally transition zone between Han Chinese-dominated intensive agriculture and Mongol-dominated pure pastoralism [15] (Williams 2002; Conte and Tilt 2014).

Ordos Prefecture covers a territory of 86,752 km^2 with a population of 1.94 million, according to the 2010 National Censure. In Mongolian, Ordos means 'Many Palaces', and is regarded as the resting place of Genghis Khan. It borders the provinces of Shanxi, Shaanxi, and the Autonomous Region of Ningxia. In general, it has hilly landscapes in the east, high plateaus in the central and western regions, sandy desert to the north and south, and plains along the southern banks of the Yellow River. Due to its ecological vulnerability and isolated geographical location, Ordos has until recently been a hinterland. Starting in the 1990's, Ordos began coal mining, natural gas and rare-earth exploitation, cashmere production, and heavy industrialization, all of which contributed to local economic development. There was an economic boom during middle and late 2000's, and in 2009, Ordos' GDP exceeded that of Hong Kong. However, due to national regulations on coal mining for environmental protection purposes, the local economy has since dropped. During fieldwork in Ordos, many people expressed concerns regarding the bad economic situation in the prefecture.

The LPP was implemented in four counties in Ordos: Dongsheng, Dalad, Jungar and Ejin Horo. The first three counties participated in both LPP 1 and LPP 2 from 1994 to 2005, while Ejin Horo County participated only in LPP 2 from 1999 to 2005. The project areas are located at the northern edge of the Loess Plateau, characterized by hilly landscapes, suffering from severe erosion and the threat of desertification[16]. Before the LPP, water and soil conservation efforts were mostly done by local communities, with limited national support. Previously, local villagers and local water and soil conservation bureaus cooperated to deal with environmental problems, in order to

[15] Historically, northern China was home to nomadic ethnic groups and a dominant nomadic culture. The historical large-scale immigration of agrarian populations from China's central plains contributed to the shaping of agro-pastoral patterns in this region (Williams 2002; M. A. Zhang, Borjigin, and Zhang 2007).
[16] Project areas are located near the deserts of *Kubuq*i and *Maowusu*.

change their unpleasant, harsh livelihoods[17]. Ordos was the place where a sustainable working model with alternative farming techniques was developed and later replicated on a large scale through the LPP (World Bank 2010; Mackedon 2012). Furthermore, Ordos was regarded as a pioneering project region where the first implementation of a 'grazing ban' occurred, and modern pasture practices were successfully exploited in local villages (CPMO 2010). It appeared that local project communities in Ordos played both an experimental and exemplifying role in introducing and implementing interventions. On the other hand, research exists which criticizes the conservation practice of enclosure and the grazing ban implemented in the grassland regions of Inner Mongolia (Williams 1996; Williams 2002; Kolås 2014).The controversial opinions on the 'grazing ban' and environmental policy in the agro-pastoral areas of Inner Mongolia have inspired this study to hold a critical perspective. These are important concerns when choosing the study site. Furthermore, the chosen area may not be seen as more representative of the LPP than other project locations, yet there is no doubt that it may serve as an example of several situations that are found in other project locations.

3.1.4 Fieldwork Details

I went to China for three months, which included a pre-fieldtrip visit to the Loess Plateau region to apply for official permission for the fieldwork. Later, fieldwork was conducted in the Ordos project areas, and I also interacted with Chinese environmental and development institutions. A hierarchical investigation strategy was applied for this study (see table 1 p.28).

During the preparation phase preceding fieldwork, consultations were made through e-mails, phone calls, and personal meetings with both western experts on China and Chinese researchers. They advised me on proper procedures to follow, including establishing a local network and obtaining the support of a Chinese academic institution or organization before initiating fieldwork, as it would otherwise be very difficult to perform this type of research. Contact was also established with The World Bank and Chinese government offices, as well as related institutions in Mainland China.

[17] According to interview with local staff and village leader informants, as well as from the official document CPMO (2010).

The pre-fieldtrip to the Loess Plateau region and communicating with local informants was challenging as not much information was gained for the study, but it was rewarding as I gained preliminary experience with practicing methods of snowballing and qualitative interviews, and gained an impression of different parts of the Loess Plateau and a sense of the local socio-economic conditions and culture. Furthermore it helped me select the case study location.

Administrative level	**Location**	**Research activities**
International	Beijing	Visit to World Bank and UNEP-IEMP Beijing Offices
National	Beijing, Xi'an	Visit to China Agricultural University, YRCC, CAS
Provincial	Inner Mongolia	None
City	Ordos	Interviews (details in Table 2)
County/Township/ Village	Dongsheng, Dalad, Jungar, EjinHoro	Interviews (details in Table 2)

Table 1: Hierarchy of Different Administrative/Political Entities Investigated

After this pre-fieldtrip, I made a particular effort of obtaining official permission to enter the field and collect data, which was due to three concerns. First, it was necessary to gain first hand resources from the local government, yet local governments do not have the authority to receive a researcher without official approval from a higher administrative level. Second, the LPP finished ten years ago, and all project management staff and offices have since been dismissed. It was therefore difficult to reestablish communication with these contacts and informants without support from local governments. Third, in my pre-fieldtrip it proved to be very difficult to find the exact project areas, villagers and villages that participated in the project without local government support.

After the application for visiting the project area was approved, I got one week's official guidance in the field of Ordos for conducting the research. It helped me collect data more efficiently and precisely. Staying with project staff who were also local officials created opportunities to get to know locals quite differently from what would have been possible if I had shown up independently. It also legitimized my presence in the project area and villages, easing access to both public and closed settings (pubic settings

included villages and their surroundings; closed settings included local organizations). However, it created a bias in the research based on official preferences, which brought certain limitations to the circles I interacted with. Moreover, I took measures to behave appropriately, or be sensitive to social identities while interacting with informants in the field. In other words, I spoke politely and was careful about raising politically sensitive topics.[18] During the first week, I made intensive visits to the countryside of the four project counties and initiated interaction with both local project staff and villagers. Thus, I developed preliminary knowledge of the project area, generated a mutual trust with some informants, and most importantly established a local network. For the second week, I made the choice to conduct independent research focusing on a single project area, in an attempt to conduct a more in-depth investigation as well as to improve the data quality by staying longer in the project area and spending more time with informants. While staying in a hotel in the town of Ejin Horo County, I obtained a local translator and we gradually established mutual trust, which led to good cooperation in the field. Making use of the translator's identity as a local person and his knowledge of the area, we easily accessed to two project villages and two non-project villages. This was the first inroad to initiating a relationship with local village leaders and farmers, allowing a first glimpse into their current life situation, their worries and expectations of the future, as well as their experience with the LPP.

The Villages:

I was able to visit seven villages located within the four project counties during the two weeks, with the help of both local project staff and officials. Most interviews with local farmers and project staff were conducted in Jungar County and Ejin Horo County. Two days were spent visiting the other two project counties, Dalad and Dongsheng, and interacting with local project staff and officials, as well as a few farmers who also provided important information.

According to field observations and local informants, people currently staying in the villages are mainly elderly and young children. Other family members have moved to cities and towns as migrant worker. A medium size village in a local area consists of around 150 households, a total of between 700-800 people. The environment in the

[18] This is due to previous experience working within the Chinese government, as well as having grown up in China, enabling fluency in localized tacit communication.

local communities varies from county to county. Villages in Jungar County appear to have a relatively better environment and economic situation. Villages in Ejin Horo County have relatively greater forced resettlements because of the developing mining industry[19]. In general, these villages share some similar ecological and economic benefits from the rehabilitation efforts made through the LPP. Local farmers conduct similar agricultural and livelihood practices, influenced by LPP interventions. These will be elaborated upon during the empirical analysis in chapters 4 and 5.

Date	**Locations**	**Study activities in project areas and villages**	**Interviews with LPP participants**	**People not participating in the LPP**
9. 17	Dongsheng	Observation, interview, documents, field notes and diaries	Local officials village leaders	Farmers
9.18	Dalad	Same as above, participant observation	Local officials Farmers	Local officials farmers
9.19-20	Zhunge' er	Same as above	Local officials, village leader, farmers	Local official farmers
9.22-27	Ejin Horo	Same as above (visit the mining area and ecological resettlement district)	Local officials, village leaders, farmers	Farmers

Table 2: Overview of Two Weeks' Activities in Ordos

3.2 Methods of Data Collection

Participant observation and qualitative interviews were chosen as the main methods for data collection. Recognizing that each method contains merits and limitations, attempts were made to be flexible in combing methods in the field according to different

[19] I will elaborate on this in chapter 4.

situations, in order to obtain data accurately and fairly and minimizing problems (Bryman 2004).

3.2.1 Qualitative Interviews

In qualitative interviewing, semi-structured interviews and unstructured interviews are the two major types of data collection. Both are flexible during the interview process, and put emphasis on the interviewees' point of view (Bryman 2004: 320-321). In this study, I elected to employ semi-structured interviews with open-ended questions as the main interview method. Informal conversations and landscape study methods were adopted as well.

Before entering the field, I prepared a list of questions with some specific topics of interest, which served as a preliminary interview guide. My general interest and focus was local people's experiences and perceptions of the LPP, particularly regarding the educational process established for local farmers, the implementation process of a 'grazing ban' and the implications for both the local environment and livelihoods. Of lesser, but nonetheless significant importance was information regarding the daily lives of locals, especially concerning their current situation. In addition, I always took care to ask informants about the situation twenty years ago, before the LPP was initiated. Since this is not an ideal way of comparing the situation before and after the project, it nevertheless provided space for my informants to reflect on the changes achieved or not by the project. Attempts were also made to encourage them to describe give more fully their life before the project and the changes they experienced over the past several decades. This was done in an attempt to see the LPP and associated changes through the eyes of local informants. Throughout most interviews with village members, I started by introducing myself, and continued with small talk in order to get the interview/conversation started. When meeting local project staff and officials, I usually asked more specific and direct questions after the initial introduction of interview participants. However, some indirect and probing questions were used when approaching more sensitive topics (referring to problems regarding the 'grazing ban' and 'empowerment' in the LPP) with the informants.

Most semi-structured interviews were carried out in a less formal way, more akin to conversations during casual situations. Usually, these conversations took place in a

more social setting, such as when driving in a car, traveling to a particular place; while having a meal together; or while walking around the project area and villages. However, these conversations were not just random chit-chat, but had the particular purpose of trying to maintain a relationship with informants and establish mutual trust, generating a deeper knowledge of local areas regarding history, culture, and society, as well as discovering more information related to this study. Noted in Manson (2002:62), Burgess's term 'conversation with a purpose' captures these conversations very accurately (Burgess 1984:102).

Both interviews and conversations were conducted in farmers' own domain and local project staff's workplace — their landscape. The purpose was in line with Syse's (2007) method of landscape study. Landscape can act as a trigger for local oral history due to the close physical and psychological relationship that people have with a familiar landscape. Thus, the informants' working and living places were explored, with the purpose of learning things about the landscape as well as the individuals (Syse 2007:326). Some interviews were then followed up by informants offering a small tour of their working environment. The informants themselves chose where to walk, and what to talk about. This particular method of "walking about with people" can generate stories that "in many cases both answer unasked questions, and add to the aspects which ought to be considered." (Syse 2007: 328). Through walking around with informants in their landscape, it became possible to discover some of the informants' life stories, as well as their experiences of and perspectives on the LPP.

Through these interviews and an immediate interpretation and analysis of materials, it was possible to generate a preliminary knowledge of local agriculture and conservation practices, environmental regulations, as well as future plans for local development. This led to a deeper understanding of the LPP as both a historical event and a social process, and the relationship between the people and the land.

Selection of Informants and Sampling Methods

Sampling is used to help access data that will allow the researcher to develop an empirically and theoretically grounded argument regarding the focus of the research questions (Manson 2002:121). The snowballing method and convenience method were used for sampling informants in this study. According to Bryman (2004), snowball

sampling can be a form of convenience sampling, because the researcher initially contacts a small group of people relevant to the research topic, later using them to establish contact with further informants. The snowballing method was used to obtain study informants through people and organizations that I first interacted with, who helped establish future contacts through their recommendations and support (Bryman 2004). Convenience sampling was the result of restrictions, such as when members of an organization themselves selected which individuals I should speak to for the study (Bryman 2004).

Inquiries into the LPP started with watching the film 'Lessons of the Loess Plateau'[20] whose director, John D. Liu, became my initial informant. Through Liu, it became possible to find more informants both in China and internationally. In the rural area of Ordos, introductions were gained to village members through local project staff and visits were made to their houses or places of work. Attempts were made to talk with farmers I encountered randomly in the field in order to increase the sample size regarding people's perspectives and to collect more information. A further interesting possibility was the potential for comparison between these randomly encountered informants and the informants introduced by local officials. This cross-checking or triangulation added not only to my sample size, but validated the quality of other methods used.

During fieldwork in Ordos, I gradually developed a sharper focus and more refined ability to categorize perceptions and phenomena through my interactions with informants as well as through personal observations. Informants were categorized into groups according to social identities and level of involvement in the LPP. They were differentiated with titles such as 'local officials and project staff', 'villager leaders/committee members', 'project contracted farmers', 'ordinary farmers' (mainly as laborers hired by the LPP), and 'others'. Although members of the same group may hold differing opinions on certain perspectives, they have a general alignment in their attitude towards a certain topic. The goal was not only to collect enough data to define these groups clearly, but also to have sufficient data to analyze the perspectives of each group. At this time a saturation of knowledge led to a decision to leave the field. Before

[20] The film was directed by the independent environmental filmmaker, John D Liu. He was designated by The World Bank to document the process of the LPP in the field. The film can be seen at http://eempc.org/lessons-of-the-loess-plateau/.

reaching this level of saturation, I had the chance to reflect multiple times on the differences between the unfolding reality of my data and theoretical considerations.

A total of 38 people were involved as study participants through both formal and informal conversations during the fieldwork in Ordos. 22 participants were local farmers; 5 were local village leaders; 8 county-level officials; 2 city-level officials; and 1 regional-level official. Additionally, visits were paid to some institutions in Beijing and Xi'an to obtain general information and potential informants (see table 1). This thesis mainly used the data from interviews with villagers and local officials. Among farmer informants, ages ranged between 40-65 years; one village leader was 70 years old. Most were men with just a few women informants, as it was easier to find male villagers who were willing to discuss the LPP. They were also more talkative and had a greater desire to express their thoughts, compared to female participants. However, it was still possible to interview some female farmer informants. The female informants included one local project staff from Dongsheng County, a woman working on her farmland in Dalad, and three female farmers from Ejin Horo County. Each interview lasted between 30 minutes and 2 hours, according to the situation. Besides informal conversations and several interviews written down in the form of field-diaries and field notes, other interviews were recorded on a digital voice recorder and transcribed.

Several challenges existed with regard to qualitative interview during the research for this thesis. It was very demanding in terms of skill, time, and effort in both planning and conducting the interviews, as well as the analysis of the resulting data. According to Manson, the interview method is "heavily dependent on people's capacities to verbalize, interact, conceptualize and remember" (Manson 2002: 64). This needs to be kept in mind, in order to ensure a more accurate analysis for this study. Attempts were therefore made to be critical with regards to interview sources, both through re-reading of interviews and deriving data literally, interpretively, and reflexively (Manson 2002).

3.2.2 Participant Observation

With participant observation, the researchers immerse themselves into the social life of those they intend to study. They often engage in their observed activities in order to gain a deeper understanding of the society and cultural behavior of the studied group (Bryman 2004: 293). One advantage of participant observation is to help researchers get

better equipped to "see as others see" through a much closer contact with informants, participating in many of the same kinds of activities as members of the social setting being studied (Bryman 2004: 338). This can help gradually develop a sense of the local culture by observing local language, which in turn helps generate a fuller understanding of the contexts of people's behaviors (Bryman 2004), as well as cultural cognitive concepts and categories, which in turn influence perceptions (Lakoff 1992). Compared to qualitative interviews, participant observation can help develop a more holistic view of the interviewee by not only relying on what is said but also through observing their behavior in social life. Furthermore a participant observer can discover some areas that "insiders are likely to be reluctant to talk about in an interview context alone" (Bryman 2004: 338). Participant observation may suffer from reactive effects as a result of the presence of a participant observer, which means that people's awareness of the fact that they are being observed may influence their natural behavior (Bryman 2004: 340). This may in turn affect the reliability of collected data.

During fieldwork, I observed local communities in Ordos, and the behaviors of their people. This provided a deep understanding of the studied topics through local informants' viewpoints in everyday life situations and settings. I managed to visit the project areas where afforestation and grassland rehabilitation occurred, and dams were constructed. I also visited project villages, observing the community environment, as well as local farmer households' living conditions. In addition, I participated in farming activates together with farmer informants on their farmland. For example, I helped them with harvesting in their land (see figure 8). I also participated in several local events (e.g. local festivals, markets, and village culture activities) in order to establish a connection with local members of society, while also using this opportunity to observe and experience social and cultural rituals and habits to gain more knowledge of local social and cultural conditions. These experiences provided opportunities to interact with local people and to develop a better understanding of the specific socio-cultural contexts where my informants were situated.

3.3 Ethical Considerations

Regarding ethical issues, my main concern in this study is the protection of my informants' and other participants' privacy, decency and safety. Therefore, I followed a

set of ethical guidelines, with regard to four main issues: whether there is harm to participants; whether there is a lack of informed consent; whether there is an invasion of privacy; and whether deception is involved (Bryman 2004: 509).

Before initiating fieldwork, I was aware that the project entailed a certain degree of risk to the people participating in this study, when topics regarding human rights and other politically sensitive issues arose. I always tried to remain mindful that there might be real-world consequences to this work for many of my informants. Many people preferred to remain anonymous, and I have respected their wishes to the greatest possible extent. Any name mentioned in this paper is therefore an alias. I always introduced myself as a student researcher from the University of Oslo and asked for local people's consent to interview/talk with them. Throughout the entire study, I approached the data I collected in the field with utmost ethical concern and hope that I have painted a picture of local perceptions of the project that local people would recognize, appreciate, and find valid and insightful.

3.4 Role of the Researcher

My personal background put me in a unique situation when conducting my fieldwork research. Being a Chinese student conducting research for a western university acted as both an advantage and an obstacle in accessing local villages and people. The fact that I am based in a western country created an initial separation between myself and local Chinese communities, which may have generated a certain distance with informants and a lack of trust. I applied for the official permission with the support from my university department as well as my personal contacts and network in China. My work experiences in the state government provided tacit knowledge concerning how the state system works.

On a practical level, language was another barrier in performing fieldwork in the chosen area. Differing from standard mandarin, local farmers have a strong accent, and most speak a local dialect. Having grown up in an urban city in the southeast of China, it was very difficult to understand the local dialect and to communicate directly with local farmers. However, local translator provided solutions to these problems. My continued presence in the community, and with assistance from the local guides, I gradually

gained some understanding of the local culture and livelihoods, and learned some local communication skills, which I felt helped me slowly obtain the trust of local villagers.

Chattopadhyay (2013) discusses her views on conducting research, reflecting on the self and being aware of power relations when collecting data in the field. She particularly reflects on her privileged position as part of the urban 'middle-class', which would have separated her from her informants and research participants. Thus, rather than being a fully 'transparent' researcher, she decided not to reveal her privileged background entirely, in order to establish a friendly platform for knowledge sharing (Chattopadhyay 2013:139). I found myself with similar experiences during fieldwork research. I was continuously having to be reflexive with regards to the interaction between the informants and myself. I analyzed my positions within different situations and recognized that these positions were complicated in terms of locally defined categories of my 'identity' or 'role'. My identity was conceived as a World Bank official by some local officials. In turn, my association with local officials in the project villages made some villagers perceive me as an official, because I was guided and introduced to local farmers by the officials when visiting the villages. When I was only with the local guide in the project villages, I was often perceived by local villagers as a journalist. Whether being perceived as official or journalist can influence and direct the way the informants responded to my interview, what they wanted to talk and what they didn't want to or avoided to talk. I always tried to correct such misinterpretations when they were revealed, by presenting my identity as a student researcher, but probably such misunderstandings regarding my true identity has affected my interview data in various ways. My female gender also played a role both positively and negatively. I had to be more concerned for my safety as a young female alone in a rural setting, with limited access around village areas and without access to important information about the villages. On the other hand, my female gender made it easier to be close to the female informants and talk with them.

3.5 Limitations of the Study

One challenge to the study was the limited time and funding for a master student doing fieldwork. The LPP covered large areas located in four provinces of China. It would be impossible to visit all project sites with only such a short time available, being forced to

restrict the investigation to Ordos for two weeks. However, this period was not enough to collect in-depth data with limited time for interacting with local villagers and project staff. A particular challenge was my attempt to talk and interact with female members when visiting farmer households. Wives often spoke little or said nothing at all, resulting in most of the talk being with their husbands. Another factor that may influence the data is the fact that there were several other national projects that were executed in the same location since the end of the LPP. The project also started almost 20 years ago and finished ten years ago; local informants may have had little memory of it. Aware of this issue, I selected informants who appeared to have a clearer memory of the project. In addition, I cross-checked the information obtained from the informants with information from other sources such as official project documents.

In addition to the specific factors influencing this particular study and its design, the inherent problems of qualitative research may cause the research findings to be somewhat subjective, hard to replicate, with problems of generalization and lack of transparency (Bryman 2004: 284-285). In this study, I am the main instrument of data collection. My personal background and interests may cause me to prioritize what to observe and hear, and also what to concentrate upon; at the same time, the participants' responses are affected by their interpretations of my identity. Furthermore, the informants who provided the data in my thesis may not be representative of a larger population (e.g., farmers in the LPP). However, compared to large sample-size studies that have ambitions of generalization, cases studies are more concerned about testing theory in a local context and recalibrating theory on the analytical level based on empirical findings. In addition, I was quite mindful to keep my study transparent and trustworthy by disclosing methodological limitations. Taking this into account, the results of this study should be more reliable and replicable, should other researchers endeavor to undertake a similar project in the future.

4 Political, Economic and Communicative Mechanisms of the LPP

Since the reform and opening-up policy in the late 1970's, China started economic liberalization in order to integrate into the world economy. This allowed Western institutions to enter Chinese society, advocating their ideologies and practices. This study attempts to analyze how these Western ideas and practices became the basis for Chinese discourse on sustainable development in the local context of the LPP through the following two chapters. The World Bank introduced Western ideas and practices regarding sustainable development during the implementation of the LPP in Chinese communities, including land tenure contracts, enclosed areas with grazing bans, and the participatory planning/approach. However, these Western institutional ideas and practices were adapted and translated to local practical conditions by the Chinese implementing agencies.

This chapter attempts to investigate the mechanisms of the LPP in terms of three new institutional arrangements: land tenure contracts, integrated watershed planning (or participatory planning), and grazing management (including implementation of a grazing ban and introduction of modern livestock practices). I will analyze how these three interventions were implemented at the local level, particularly from political, economic, and communicative perspectives. A brief discussion will also be given on the involvement of the World Bank, the Chinese state and local governments, and participating villages and their members, in the processes of local level implementation. This chapter will provide a foundation for the in-depth analysis and discussion in Chapter 5 of the 'participatory approach' as implemented in the LPP.

4.1 Political Aspects of Project Intervention

The World Bank required new institutional arrangements for land tenure, grazing management, and integrated watershed planning to be implemented at the local level as part of the LPP. The Chinese state government further integrated these arrangements into their policy-making and development agenda within the socio-political context, and

later implemented them at the local level. According to official project reports, these three new institutional arrangements played a strong role in facilitating project implementation, and contributed to the success of project sustainability (World Bank 2005; CPMO 2010). I will discuss the political strategies of the LPP in relation to implementation of these three new institutional practices at the local level. In particular, an analysis will be given concerning the involvement of, and interaction between, the World Bank, the Chinese state and local governments, and local farmers.

4.1.1 Land Contract Intervention

According According to Ho (2005), land reform through land tenure programs aims to transform rural society with significant impacts on rural-urban and state-society relations. According to Raup (1967:270) and Ho (2005:3), land tenure programs often involve distribution of rights to land in order to achieve "social justice, political health, and agricultural output expansion". Before the project started in 1994, China's land tenure system was unstable, with frequent adjustments to land-use terms at the local level. Chinese economists and social scientists had since the 1980's been claiming that the persisting tenure insecurity would result in low investment and even waste of land resources (Bromley 2005). Furthermore, the flexible land lease system created spaces for some people to abuse their power for personal gain. This situation thus required "the development of legal means to protect land users from indiscriminate interference or infringement" (Wang 2005:64).

The World Bank played an important role in promoting land tenure reform through the LPP, based on the acknowledgment that protection of the land-use rights of farmers was important for project implementation. The World Bank claimed that the intention of land tenure reform during the LPP was to ensure farmers' land-use rights so that they would have adequate incentives to realize the benefits of land development, with these incentives depending on farmers having confidence in their land contracts (World Bank 1994:31). Juergen Voegele, the World Bank team manager of the LPP, stated in the film 'Lessons of the Loess Plateau'[21]: "the first key policy was land-use rights for the farmers and this was the key for sustainability". Thus, the World Bank held negotiations with project-involved provincial governments regarding a new land tenure contract

[21] The film highlighted the LPP project planning and implementation process at the local level and summarized the key points of the success of ecological restoration.

before initiating the project. This became one item included in the Credit Agreement[22] that the World Bank made a condition for providing credit. The approval of the Credit Agreement by the State Council of China made these project conditions legally binding. Under this agreement, for participating households, the minimum land contract term in the project area would be 30 years for orchards, terraces, and warped land, and other lands would have a minimum contract period of 50 years. All farmers affected by the project would receive written and signed contracts, with copies of such contracts held in village or township registries, available for inspection (World Bank 1994: 47). The farmers who signed these contracts would also have to fulfill their obligations of managing land development and erosion control work. In return, they would fully benefit from the output of the land for which they were responsible (World Bank 1994). Under this agreement, project-involved provincial governments started the new practice of giving farmers individual, standardized, and notarized contracts under the supervision of the World Bank.

The state government supported implementation of land tenure reform at the local level, issuing amendments to the State land policy. In 1998, the State revised the previous land administration law by introducing a stable lease period, free from reallocation for 30 years (World Bank 2003; Ho 2005:12). This revision of lease contracts has been regarded as a "second round of lease" (Ho 2005: 13), showing a central leadership commitment to the protection of farmers' land-use rights (Ho 2005; Wang 2005).

In the meantime, local governments encouraged local farmers to contract land for rehabilitation through supporting policies. Local governments promoted *huangshan chengbao* (waste mountain contract) [23] for restoring the ecological environment and promoting agricultural development, advocating *shui chengbao, shui zhili, shui shouyi* (who contract the land, who manage the land, who will get benefit) [24] in local villages. This local policy advanced a pre-existing national policy *kaihuang* (opening up of wasteland) [25], regarded by Pieke (2005) as a cornerstone of preservation of the total area of cultivated land in China. Local governments attempted to generate economic

[22] Specific information about the Credit Agreement can be found in the World Bank (1994:46).
[23] 'Waste mountain contract' is a rural land contract policy that encourages people to contract wasteland at rural areas for land development.
[24] Those who contract land will get benefits from their personal investment in and efforts made to manage it.
[25] Land reclamation

incentives for farmers to make private investments and take care of their contracted land long-term, according to official local reports and local official informants. This resulted in increased local agricultural productivity, as well as improved livelihoods (World Bank 2003; World Bank 2005).

In addition to the land contract signed with farmer households, the World Bank had a loan requirement for contracted farmer households. I will discuss this loan in the section on economic aspects of the intervention. The land tenure issue was a deal-breaking aspect that came before more specific project planning. Next, I will discuss the project planning and preparation considered in terms of 'integrated watershed planning' by the World Bank project reports.

4.1.2 Project Planning and Preparation

The State government and provincial governments, as well as the World Bank, played instrumental roles in project planning and preparation. At the macro-level, these institutions conducted project planning through a centralized approach. They built the project on existing governmental and functional institutions, and operated it through a project management system (see below).

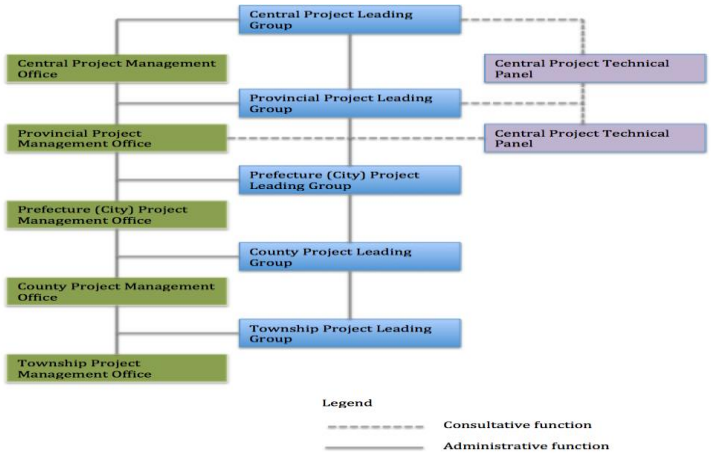

Figure 3: Macro-Level Project Management System (CPMO 2008)

Under the leadership of the State government, the project was implemented through MWR. The project established project lending groups (PLGs) and project management offices (PMOs) at different administrative levels (central, provincial, prefectural, county, and township). PLGs consisted of members from different levels of government

and parallel departments[26] (World Bank 1994). The Central Project Management Office (CPMO) was established at The Upper and Middle Reach Bureau (UMBR) under The Yellow River Conservancy Commission (YRCC)[27]. PMOs at the lower levels were established under local Water and Soil Conservation Bureaus (World Bank 1994).

According to the World Bank project reports, the LPP was well designed through participatory planning [28] combining outside expertise and experiences with local knowledge (World Bank 2003). It involved several actors during local level project planning and preparation: the project team (made up of members delegated by the World Bank and the Chinese State government), local PMOs, and lastly the village committees and farmers (see figure 4). The interaction between these three actors resulted in a working model for land rehabilitation and certain supporting policies.

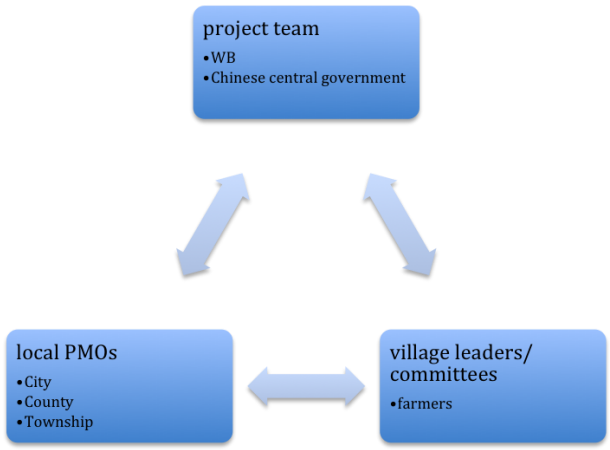

Figure 4: Local Level Project Planning and Preparation

The project team played an important role in developing a working model. This was mainly achieved through close cooperation with village farmers through the village committees. According to the World Bank project report, the project team spent three years on detailed planning [29] and design, carrying out land use and capability surveys at each watershed and sub-watershed, investigating local farmers' interests and needs,

[26] Departments of Agriculture, Forestry, Husbandry, Finance, Water Resources, Land Resource Planning etc.

[27] The Upper and Middle Reach Bureau (UMRB), located in Xi'an of Shaanxi Province, falls under the Yellow River Conservancy Commission (YRCC) of The Ministry of Water Resources. UMRB is a governmental institution responsible for soil and water conservation in the Loess Plateau.

[28] This will be further discussed in chapter 5.

[29] Detailed planning was based on surveys, which shaped future land use patterns and specified the crops, shrubs, and trees to be grown. It specified the main category of land use for units less than one hectare, and provided further specifications within each category on a sub-watershed level based on 1:10,000 maps (World Bank 1994: 20).

identifying local problems and seeking suitable solutions according to local conditions (World Bank 1994: 20). In the film 'Lessons of the Loess Plateau', Juergen Voegele, project team manager, stated that: "over 2 to 4 years, the team designed a package together with local people that would apply to small watersheds, which would help local farmers improve their income and lives, and at the same time restore the ecological environment". This package refers to a working model involving the ideas of creating sustainable crop production and high-yielding farmland. This was done by a radical change in land use in erodible-sloped areas; a range of trees, shrubs and grasses were planted on the sloped lands for land stabilization and production of fuel, timber and fodder (World Bank 1994: 13). According to the World Bank (2010), the design of this working model was done on the basis of field visits to several local villages to seek possible solutions during project planning and preparation. In particular, one village seemed to stand out regarding sustainable farming practices: *Shageduo* in Jungar County in Ordos. The project team visited Shageduo in the spring of 1994. They discovered that this area had significantly better environmental conditions, including more green vegetation and less soil erosion, compared to other areas in the Loess Plateau. Through consultation with local villagers regarding their current practices and experiences of dealing with their environment, the project team developed several ideas for their project planning and design (World Bank 2010). Later, Mackedon (2012) described the LPP as a showcase of large-scale ecosystem rehabilitation projects that can be replicated to scale up sustainable agricultural development in other parts of the world. He regarded the *Shageduo* model of environmental and agricultural practices as a breakthrough investigation, upon which a working model was developed and replicated in other project locations.

The local PMOs had a say in specific watershed planning and design decisions. Local PMOs worked very closely with villagers, through the village committees, in developing small watershed project planning proposals (World Bank 1994). According to local project staff and village leader informants, the preliminary design was developed by local PMOs, but included consultation from local farmers in order to address farmers' interests and needs. The film 'Lessons of the Loess Plateau' displayed how the planning was carefully conducted using participatory assessment[30] in order to learn from local people, in particular when identifying what already worked in local

[30] This will be elaborated on in chapter 5.

communities in terms of protecting the environment. According to the film, when preparing and planning the project, local experts determined that any slope greater than 25 degrees would not be suitable for agriculture. This led authorities to designate areas where farming was forbidden and where land was allowed to return to a more natural state. Follow-up polices were implemented at local project areas, banning tree cutting, planting on hillsides, and free-ranging goats and sheep. However, it was a challenge to implement these policies locally, as local farmers did not understand the proposed polices which contradicted their traditional practices. According to the film, one of the common arguments against the changes was that local people were so poor they could not think about sustainability and conservation. In order to help them through the transition, the LPP hired them to implement the new practices. Most farmers became project laborers, implementing construction work. In addition, authorities used various tools and materials in communicating with local farmers. This will be elaborated upon in the section concerning communicative aspects.

Based on the evidence above, project planning authorities appeared to use a bottom-up approach of consulting and learning from locals during the planning and preparation process. However, when replicating and implementing in other areas, project authorities' strategy was more top-down. In addition, high-level project authorities seemed to be more concerned with local social, political, and economic conditions when preparing and planning the project. This seemed to have positive effects on the effectiveness of project implementation. In contrast, many conservation projects in developing countries have adopted a top-down bureaucratic planning, without paying attention to the local population's opinions and interests. Furthermore, they have lacked certain considerations of social, political, and economic conditions in local project areas, treating environmental degradation only as physical, natural problems to be dealt with. In consequence, these conservation projects have failed at the local level implementation (Blaikie 1985).

4.1.3 Grazing Management

Ordos was chosen as the experimental project area to implement a policy banning grazing, and succeeded in implementing the policy at the local level. When the policy was implemented in project villages, both a top-down and a bottom-up approach were

used in order to suit local practical conditions, particularly concerning local farmers' livelihoods.

The idea of establishing closed areas and restricting grazing for environmental protection was supported by the World Bank. According to Zhu, a regional project official, the World Bank team manager discovered that grazing caused destruction of newly planted trees and grassland (Interview, official, Xi' an, 28.07. 2014). As mentioned previously, the World Bank project staff, together with local project officials, conducted a three-year investigation of local problems from 1991 to 1993. One of the most destructive practices was identified as unrestricted herding of goats and sheep, resulting in overgrazing and other unsustainable agricultural practices in the local area, leading to severe land degradation. According to an official local report, previous conservation efforts remained ineffective, as goats would continue to destroy rehabilitated grasslands and reforested areas over and over[31] (Dongsheng PMO 1 undated)[32]. In 1994, grazing was restricted in certain project areas to prevent goats from destroying newly planted trees and shrubs and maintain rehabilitation outcomes, according to local project staff informants. This had an immediate, positive effect on protecting vegetation. Due to the success of local experiments regarding grazing regulations, the project further recognized that "any vegetative protection of the watersheds had to go along with a radical change in grazing management" (World Bank 2005:7).

Ordos was the pioneering project area that first implemented a grazing ban policy. In 1999, an experimental 'grazing ban' policy was initially enforced in four project counties in Ordos (Wu, Yu and Li 2005)[33]. The governments of the four counties one by one started to implement a grazing ban in project areas, until it was implemented in all four counties by 2000. Non-project areas in the four counties also had different types of grazing restrictions implemented (Wu, Yu and Li 2005). In this way, a grazing ban was implemented as a project-supporting policy.

[31] At the time, a local slang was *niannian zaolin bujianlin,* 'Year after year planted forest doesn't see any forest', implying that a new forest would be planted every year, as the trees would never survive long enough to become an actual forest, ostensibly due to overgrazing.
[32] Chinese official report, obtained during fieldwork 17.09.2014
[33] Chinese official report, obtained during fieldwork 28.07.2014

Local governments in Ordos faced great challenges in implementing the grazing ban policy during the early stage of implementation, as local farmers refused to accept the grazing ban at the time. According to many informants and official local reports, the grazing ban policy was implemented at the cost of local farmers' short-term interests and economic profits, countering current local interests. In addition, according to several informants and official local reports, grazing practices had been a part of local culture and tradition for a very long time (Interviews, Ordos, 17-27.09.2014; Ordos PMO 2005[34]; Dongsheng PMO Report 1 undated).

> Farmers didn't agree with the 'grazing ban', because if the government banned grazing, where and what should they then feed their sheep and goats (with) (Interview, contracted farmer Bing, Ejin Horo County, 25.09. 2014).

Illegal grazing became a common practice among local farmers, particularly during the first three years of implementation of the grazing ban policy, according to official Chinese project reports and many local informants.

Local governments, responsible for grazing ban policy implementation, applied a top-down approach. They issued very strict administrative rules, promoting this policy in local villages. According to an official report from Dongsheng County, the responsibility for enforcing and complying with this policy was devolved to township-level governments. If illegal grazing was discovered once, the township government would be fined 10,000 yuan. If discovered a second time, the township government leader would be fired from his/her position (Dongsheng PMO Report 1 undated)[35]. In addition, an inspector team *jinmu duchadui* [36] was organized by local governments checking up on project-protected areas, in order to prevent illegal grazing. If farmers were caught grazing, they would be punished according to specific conditions clarified in the *jinmu hetong*[37]. It was officially reported that 43 farmer households were caught illegally grazing, and the total amount fined was RMB12000 yuan[38] (US$1500) in Dongsheng County, which constituted a significant cost, particularly for the very poor

[34] Chinese official report, obtained during fieldwork 22.09.2014
[35] Official report obtained from local staff, 17th September 2014.
[36] 'Inspector team for illegal grazing'.
[37] 'Grazing ban contract', a contract made between local governments and farmers including an agreement made on grazing.
[38] From 1994 to 2005, the average exchange rate for Chinese RMB to US dollars was approximately RMB 8: US$1.

farmer households. Some informants had been caught breaking the grazing ban and were punished through fines.

Rather than banning all grazing immediately, local governments in Ordos gradually implemented grazing restrictions in project areas. In the project area of Ejin Horo County, restrictions started with a seasonal grazing ban in project-rehabilitated areas, and later extended to an all year grazing ban. According to Hu, a project staff from Ejin Horo County, local farmers could not accept this idea of banning grazing for ecological conservation, as they were relying on pastures for their livelihoods. If this practice was suddenly stopped, it would be "just like choking them to death." Traditional local practice was to conduct a seasonal grazing ban. In spring and summer, from May to August, it was time to let the grass grow. The grazing ban would therefore be adopted during this time. This practice was a transition for local farmers to adopt the full ban. Through gradually changing their means of production and developing alternative livelihood practices, local farmers became less dependent on pastures, and therefore more readily accepted the idea and practice (Interview, official Hu, Ejin Horo County, 22.09.2014). Contracted farmer Fang from the same county recalled that despite the initial resistance when the grazing ban was first introduced, by the third year, people naturally stopped grazing anymore (Interview, Contracted farmer Fang, Ejin Horo County, 22.09.2014).

A livestock development program, as a project-supporting measure for local farmers, was also implemented at the local level. This program was, to some extent, initiated through a bottom-up approach. During the mid-term review in 1999, the project was adjusted with the addition of a livestock development program, as local farmers had expressed strong interest in and need for livestock development, according to the World Bank (1999, 2003). The aim of this program was to compensate for the economic loss from the grazing ban and to increase their income from raising livestock through modern pasture practices. With this new program, local governments provided supportive services and policy for livestock development in project villages, helping farmers cope with the effects of the grazing ban. Livestock development activities included providing loans to farmer households for raising cows rather than goats and sheep; providing supporting services for animal shed construction and pen-feeding facilities; promoting growing of grass and corn for fodder; introducing new breeds of sheep and goats suitable for pen-feeding; and helping to develop local companies

assisting farmers in livestock development. Farmers who took a lead role in supporting grazing ban policies had priority in receiving governmental supporting services and policies (Dongsheng PMO 1 undated). Governmental guidance and financial support helped farmers cope with the effects of the ban, an action both important and necessary. Huang, a local official, stated:

> Had this support not been offered, the implementation of a grazing ban policy would have never been accepted by local farmers, who in turn might have started protesting against the government (Interview, official Huang, Jungar County, 19.09. 2014).

Local farmers quite easily adapted to this assisted project intervention, offering alternatives to grazing husbandry. Most farmer informants, when speaking of the grazing ban, seemed to accept the ban, particularly due to the positive effects of an improved natural environment.

> Before, there was little grass and lots of sandstorms. Now there's more grass and it's less sandy. The grazing ban is necessary; otherwise there would have been more desertification. We couldn't do anything. (Interview, ordinary farmer Wang, Ejin Horo County, 24.09. 2014)

Local governments seemed to play an important role in contributing to effective grazing ban policy implementation at the local level. Specifically, county- and township-level governments were crucial actors in local level policy implementation. This is in line with Schubert and Ahlers (2012a)'s study on the role of local governments in implementing new socialist[39]-related policy in rural China. Schubert and Ahlers (2012a) argue that county and township cadres mediate between the central government and local populations, and that they have a certain power to shape central polices at the local level and influence the results of policy implementation. This study shares similar findings: during the LPP, Ordos project county- and township-level governments interpreted and executed the grazing ban policy, following upper guidelines. On the other hand, they adjusted the policy to a certain extent, in accordance with local practical conditions and groups' interest, in order to achieve the optimal results. Specifically, local governments simultaneously used a strategy of punishment and compensation when implementing the grazing ban policy in local project villages, as well as gradually accepting a change of local grazing traditions, rather than a radical change through eliminating traditional grazing practices. In addition, local officials used

[39] '*Shehui zhuyi xin nongcun jianshe*' means 'building a new socialist countryside'.

various communicative methods and materials for facilitating the implementation of the grazing ban and modern livestock management, guiding local farmers to change their traditional farming practices[40]. These efforts to some extent contributed to effective policy implementation on the ground.

In a broad context, the grazing ban and enclosure conservation policy has been criticized by many studies from the perspective of political ecology. The studies of Williams (2002) and Kolås (2014) provide critical views on enclosure conservation and a grazing ban policy implemented in the grasslands of Inner Mongolia in China. They claim that certain enclosure conservation polices with grazing restrictions had negative influences on grassland degradation and local livelihoods according to local people's perspectives. Both studies mainly targeted the grasslands of Inner Mongolia with Mongolian herder communities, which have very different conditions from the areas of the LPP. For the LPP, the grazing ban policy was mainly implemented in the hill and gully areas with more than 25 percent slope, and when traditional grazing practices had negative influences on the local environment. Considering this, the grazing ban policy was necessary at the time of project implementation. However, the problems of the replicating a 'grazing ban' policy on a large scale, beyond the LPP, remain open-ended and contested. Certain guidance and support from the central and local governments was provided to project village communities during the LPP, helping farmers deal with the policy intervention, which to some extent reduced the negative effects of the grazing ban on local farmers' livelihood. The compensation through implementing an additional livestock development program was to some extent aligned with the interests and needs of local farmers (see p.48). However, it was also a project strategy for reducing conflicts and tensions between local implementing governments and farmers, avoiding the use of more aggressive approaches to enforce the grazing ban. This corresponds somewhat with the view of Kolås (2014:324), although she has a more critical perspective on government programs facilitating policy implementation in the local herder communities of Xilinguole. This study considers it necessary to understand the grazing ban policy and other related conservation policies within local contexts and conditions, as different situations may bring different effects and results. This is in line with Kolås (2014:311), stating that "policy outcomes are widely divergent and difficult to predict".

[40] This will be elaborated on in section 4.3 on the communicative aspects of project intervention.

4.2 Economic Aspects of Project Intervention

Project interventions have improved agricultural productivity and increased farmer households' income through introducing alternative agricultural and livelihood practices at the local level. However, it appears that project contracted farmers and ordinary farmers working as project laborers received quite different economic benefits through the project intervention. I will discuss how local farmers benefited from the project intervention in the Ordos project areas, with a focus on one project intervention in particular: the introduction and promotion of a market system at the local level, intended to help small farmer households increase agricultural output and income. This intervention followed on the past two decades of economic development in China, and the project area in Ordos appears to have been transformed from a planned rural economy to a market-driven rural economy. The growing market system in rural areas of Ordos seems to bring challenges to local small farmer households.

4.2.1 The Funding Process in Local Villages

Project interventions improved the ecological environment and boosted the local economy. However, it also appears to have created a widening economic gap between project-contracted farmers and ordinary farmers working as project laborers. This study asserts that this result had its origins in the initial funding process in project villages.

The project finance management was highly centralized, operating within the Chinese administrative system (Dalton and Cai 2007). Project funding was divided into the loan credit provided by the World Bank, and Chinese State government grants. The provincial governments allocated the funds and distributed to prefecture, county, and township governments. Funds were provided to local project villages and farmers, and used for specific activities approved by local governments. Contracts were signed at each level of government and each stage of the lending process, indicating obligations for repayment (World Bank 1994:30).

According to a majority of informants, loan contracts were implemented in project villages as part of land contracts. Required by the World Bank, payouts had to be made directly to farmers, and could not be paid to institutions (Interview, official Zhu, Jungar County, 19.09.2014). The intention of the World Bank seems to have been getting

farmers directly involved, using the loan to drive their own development. In practice, the Chinese governments managed funding, deciding how to distribute and use it, as well as guiding contracted farmer beneficiaries using the loans they obtained. According to project staff, village leader informants, and project reports, loans were mainly used for land conservation and development on contracted land, such as building dams, planting trees, shrubs and grass, and livestock development.

According to project reports as well as numerous informants' statements, some parts of project-rehabilitated areas were contracted out to individual households for management and maintenance as stipulated in the contracts. Contracted farmer households were promised long-term land-use rights and benefits from their private investments on the project-contracted land, as well as certain instructions and supervision from project authorities. On the other hand, large parts of project-rehabilitated areas were under the control of local governments and closed for human activity. According to certain project staff and village leader informants, due to worries concerning ability to repay the loan, farmers were in general very cautious about signing the loan contract, particularly farmers in wasteland areas that required afforestation. In these areas it was therefore usually local governments who managed the loans, in order to organize and manage rehabilitation work. They then hired local farmers to do construction and other related work.

> During the second phase of the LPP, in some very poor and ecologically harsh areas, the farmers didn't want to take up the loan contracts. It was the local government taking the loan to hire a professional forest planting team to accomplish the project (Interview, official Zhu, Jungar County, 19.09. 2014).

Members of the construction teams were often selected from able-bodied, young local farmers who received professional training in planting forests (CPMO 2010).

This governmental control and management still remained in project areas in Ordos at the time of my fieldwork. According to a project report, arbor tree development and key dams were mainly under the administration of local implementing agencies (i.e., county-level water conservation bureaus) (World Bank 2003). Also, according to several local project staff, the maintenance of certain project outcomes, particularly rehabilitated areas of forest and grassland, as well as key dams, were still managed by local governmental institutions in Ordos. For example, local official Jiang mentioned that the responsibilities for protecting afforested areas were assigned to county-level

governments. And county-level governments would hire local farmers to guard the forest (Interview, local official Jiang, Jungar County, 9.19.2014).

Farmers benefited from the funding process in two different ways: as contracted farmers and as farmer laborers. Contracted farmers were farmers who took up loans and signed land contracts. They benefited from project interventions through supporting services. According to many informants, typically only two or three farmer households in a project village team took up the loan and signed the land contract. These households were regarded as farmer beneficiaries of the LPP. The main reason for a small number of farmers taking up loans was limited project funding. Local official Sun explained that there was not enough project funding distributed to villages in order for all households to take up loans. In addition, as mentioned above, not many farmer households wished to take up a loan (Interview, township official Sun, Ejin Horo County, 26.09.2014). According to Sun, there were only a few farmers that satisfied the conditions, who then participated in the LPWPR and took up project loans. Such farmers included those who were capable of increasing production and ensuring repayment of loans, or those whose land location was suitable for land development according to the project design and planning (Interview, township official Sun, Ejin Horo County, 26.09.2014). However, according to three farmer informants, close relationships with local governments provided better opportunities for obtaining the loan (Interviews, farmers Niu, Han, Ma, Ejin Horo County, 25.09.2014). Project-contracted farmers that were interviewed were either village committee members or production team leaders in their respective villages when the project was initiated. However, a large number of local farmers were hired by the project for construction work. When comparing contracted farmers and farmer laborers, contracted farmers appeared to have developed better livelihoods and economies, relatively speaking, as an outcome of the project. This will be elaborated on in the following section.

The loan contract provided a financial foundation as well as an economic incentive for project intervention. On the other hand, the loan conditions excluded, to a certain extent, some farmers from the project due to their lacking ability to repay, which may have widened the economic gap between contracted farmers and farmer laborers. This corresponds with the perspective of Dalton and Cai: “loan repayment considerations to a large extent influenced ‘targeting’ of the project. Some of the poor households might be excluded from the project due to their capacity in loan repayment” (Dalton and Cai

2007:35). Consequently, contracted farmers seemed to obtain greater economic benefits both during and after the project.

4.2.2 Project Effects on Local Agriculture and Livelihood

Project Strategies and Practices for Local Agricultural and Livelihood Development

Project authorities used a market mechanism utilizing household-based economic incentives to engage environmental conservation behavior, while at the same time developing small households' agricultural economy. The strategy of promoting a market system for environmental conservation during the LPP follows Mol (2006) and E. Economy's (2006) argument that there has been an emerging interest from the Chinese government in introducing economic dynamics and actors into its environmental governance system.

According to the Ordos local government, economic benefits from project intervention were based on improved agricultural conditions for the development of the areas agricultural economy. Average crop land for individual farmer household increased from 0.06 hm2 to 0.7 hm^2, annual food production from 450kg to 3975kg per person, and the total agricultural output from 0.95 million yuan to 7.8 million yuan, with the average individual monthly income rising from 680 yuan to 5500 yuan (Ordos PMO 2005).

One project-promoted agricultural practice was the local water retention innovation called *yibayitang* [41], which was introduced during the LPP in project villages in Dongsheng County, and later expanded to other project areas (see figure 6). According to most informants, this practice improved agricultural productivity and brought farmers economic benefits. According to official local reports, this model created conditions for developing *shuijiaodi* [42], thereby increasing agricultural production and local farmers' income. Project villages made use of water harvesting land for growing corn and high

[41] 'One dam one pond'. The crux of this innovation was to collect water during the rainy season, and later use it during the dry season for farming and other livelihood uses. It was considered a project innovation for solving water resource constraints in the northwestern region of the Loess Plateau, particularly in hilly areas and gullies (S. Chen, Wang, and Wang 2004) (Ordos PMO 2005).
[42] 'Water harvesting farmland'.

quality grass for animal fodder during the LPP (Dongsheng PMO 2 undated)[43]. This practice of combining farming and husbandry contributed to restructuring the local agricultural system, according to the local report (Dongsheng PMO 2 undated). In several project villages, farmers effectively adopted this model, forming one of the major farming practices of their livelihood. Several village leader informants particularly addressed the development of *shuijiaodi* through the LPWPR, claiming that it brought economic benefits to local farmers. In particular, Fang recalled that during the LPP, 40 *mu*[44] of water harvesting farmland was planned and developed, which was later expanded by 20 *mu* after the completion of the LPP in his village (interview, contracted farmer Fang, Ejin Horo County, 22.09.2014). As local staff Hu explained, *shuijiaodi* has a close relation with water and soil conservation work. *Handi*, 'dried land', was the typical soil type in most project areas. Most *handi* was on sloped land, which local farmers used to farm, increasing soil erosion. Besides, *handi* usually has very low productivity, and so local farmers had to farm more land in order to increase production. Compared to *handi*, shuijiaodi has three/four fold greater productivity. Therefore, *shuijiaodi* is able to replace farming areas in sloped land. The sloped land can instead be used for afforestation and grassland (Interview, local staff Hu, Ejin Horo County, 9.22.2014). This water-harvesting method seems to also be applied in other, similar geographic areas in the world according to Liu and Hiller (2015). It helps reduce soil erosion and increase local agricultural productivity, as well as mitigating and adapting to climate change (Liu and Hiller 2015).

During a visit to project village A in Jungar County, local farmers seemed to have developed their livelihood activities and practices in the direction that the LPP had introduced and guided them. Local farmers were planting some cash crops (particularly corn) and grass for raising livestock. Many households conducted fish farming and water harvest farming, as had been developed during the LPP. According to the village leader Wu and project-contracted farmer Jun, in the past they only saw the water wasted and they suffered from frequent flooding and sand storms. They also claimed that the village had benefited from the project intervention, particularly as a result of the constructed dams and reservoirs that created a good local irrigation system for

[43] Chinese official report, obtained during fieldwork 17.09. 2014
[44] 1 *mu* =1/15 of a hectare

agriculture, and which enhanced livelihood development[45]. From their perspective, the project had provided a foundation for future local agricultural and livelihood development (Interview, village leader Wu and contracted farmer Jun, Jungar County, 19.09.2014).

Economic Benefits of Contracted Farmers

Contracted farmers benefited from the project intervention through improved agricultural conditions, financial support, and guidance for livelihood development during the project.

Most project contracted farmers seemed to have benefited from project-introduced practices. Further, they had applied and developed these practices to improve their life conditions and incomes after project completion, particularly in the form of family-owned rural tourism businesses, known as *nongjiale*[46]. Project-contracted farmer Meng from Jungar County has been cooperating with a company in advancing project-introduced agricultural practices (Interview, contracted farmer Meng, Jungar County, 19.09.2014). He now acts as a technical manager or consultant, hired by the company, and responsible for instructing staff concerning particular agricultural practices. The case of this farmer beneficiary will be elaborated upon in chapter 5. People like him were considered *nengren*[47] by local official informants. *Nengren* often played the role of leading the trend with experiments in new livelihood practices for economic development, or managing rural collective enterprises (Interview, local official Zhu, Jungar County, 19.09.2014). *Nengren*'s practices and behaviors were to a certain extent representative of rural entrepreneurship. According to Zhong (2013), farmers´ entrepreneurship has existed for centuries in China, but was constrained during the period of rural collectivization, under the production system of 'people's commune'. However, with the economic reform starting in 1978 and the establishment of HRS in the 1980's, farmers had more economic incentives to engage in agricultural production, and once again became agricultural entrepreneurs. Furthermore, growing rural

[45] This village area has very good water resources due to its geographical climate, where it has a large amount of rainfall during a certain time of a year. The LPP's efforts on re-planning land use increased the possibility for local inhabitants to benefit from this feature rather than suffer from it.

[46] *Nongjiale* is a form of rural tourism, which focuses on actively participating in a rural lifestyle. It is often associated with eco-tourism. Started in the 1990's, it is found in many locations outside of major cities in China.

[47] 'Competent/able people'.

entrepreneurship contributed to the development of various rural industries (Zhong 2013).

Economic Benefits to Farmer Labors

A large number of local farmers were involved in the project mainly as laborers. According to many farmer labor informants, they did not receive significant economic benefit from project interventions, beyond getting paid by the project according to the amount of work they did. This was in stark contrast to project-contracted farmers, who received project guidance, as well as financial support. These project-hired farmers mainly worked at project locations for certain activities, such as planting trees, bushes and grasslands, and other construction-related services such as transportation, with instruction from and under supervision of project experts. One example is how project-hired local farmers plant *shaji*[48] for the purpose of erosion control. As one village informant, Hong, recalled, the village leaders informed the farmers that they would "earn money" from the activity.

> The township government called for planting seabuckthorn and told the village leader. Then the leader told us, saying it was for us to earn money…The seabuckthorn was planted in the gullies and wasted land. The land belonged to the production team of the village. At the time, our individual land was used for planting crops (Interview, ordinary farmer Hong, Ejin Horo County, 26.09.2014).

I interviewed two farmer labor informants Xin and Ling, at their respective farmlands during the visit in Dalad County. They were hired to plant trees at the time of the LPP. From our conversations, they did not have much knowledge of the LPP, and only perceived it as water and soil conservation work that attempted to improve the local natural environment. Therefore, they did not feel that they had obtained much economic benefit from the project intervention, except for an improved natural environment with "more green vegetation cover" (Interviews, farmers Xin and Ling, Dalad County, 18.09.2014). At the same time, their farmland was still *handi*, not developed into *shuijiaodi*. According to official Zhu, the reason they did not receive support from the project to develop *shuijiaodi* was because their lands' geographical conditions were not suitable for the project to apply this development model (Interview, official Zhu, Dalad County, 18.09.2014). Xin and Ling complained that this year was not good for farming

[48] 'Seabuckthorn'.

due to drought; therefore they had not seen any significant economic benefit this year. Besides, *handi* farming required more time to tend and more labor compared to *shuijiaodi*, as well as greater risk as it relies on *laotian* (the will of the Gods)[49] (Interviews, ordinary farmers Xin and Ling, Dalad County, 18.09. 2014).

Long-term Effects of Project Intervention

There have been economic development and modernization processes in Ordos's areas, leading to changes in rural life. The project intervention partially contributed to the process of rural development and modernization. According to many farmer informants, it has become easier to see a doctor nowadays compared to before. However, if it is a complicated condition, it is still hard to afford medical treatment. According to Ping, a farmer informant, in the old times, farmers had to rely on farming to make a living. Now farmers go to bigger cities and towns, and at this point almost all had left the village and did not farm anymore, leaving only 2-3 households who all subsisted on farming and animal husbandry. Before, farmers were too poor to pay agricultural tax, but now there is no such tax levied on rural farmers. Instead, the government has started awarding money to encourage farming. Now they are able to get a 70% reimbursement on medical treatment. In recent years, people have been doing less farming than before. Most left the village to earn better money elsewhere. The number of poor households has gone down, and there are now almost no poor households left. She said that local rural people mostly enjoyed a *xiaokang*[50] life (Interview, farmer Ping, Ejin Horo County, 25.09.2014).

From field observations, project intervention seems to continue to have an impact on the local economy, particularly in terms of attracting private sector investments for utilizing local environmental resources.

During a visit to project village A in Jungar County, I found that the village has started a development project called *meilixiangcun*[51], with a vision of developing eco-tourism and eco-agriculture. This project is financed by a private institution in Beijing and supported by the local government. According to the village leader, Wu, and local

[49] It implies that production depends on the annual amount of rainfall in the area. If a drought occurs one year, it has a drought year with less rainfall, the result of farming production won't be good.
[50] 'To live a relatively comfortable life'.
[51] 'Beautiful countryside'.

officials Jiang and Huang, one reason this village had the opportunity to start this development experiment with funding and governmental support was because of its good ecological environment and water resources, partly a consequence of the LPP intervention (Interviews, village leader and local officials, Jungar, 19.09.2014).

During fieldwork, I found that a few project-contracted farmers had moved out of their villages, transferring their land use-rights to companies for agricultural business operations. For example, at village Q project area in Dalad County, the LPP created new cropland by applying the same mechanism of *yibayitang*. According to local official Bai, the farmer who had contracted this project-constructed area had left, transferring his/her land-use rights to a company. Now this company is using this land to produce fodder (a particular type of grass) for the livestock industry (Interview, local official Bai, Dalad County, 18.09.2014) (see figure 10). At the same time, many individuals now have off-farm work as their main source of income, such as working in the mining industry, while farming has become a complimentary practice, or even abandoned altogether.

Another issue I discovered during the visit to project villages X and Y in Ejin Horo County was ecological migration. Due to local mining industry development, these areas are now considered unsuitable for human habitation according to the local government (see figure 11). Village inhabitants have been gradually relocated to nearby towns or cities. The local government provided each relocated farmer household free accommodation and economic compensation, as well as organized skill-training programs in order to help them find work in towns and cities. However, village leaders Tan and Yu expressed worries about future livelihood development of the resettled farmer households, and their integration into urban society (interviews, villager X and Y leaders, Ejin Horo County, 24. 09, 25.09.2014).

As in many other rural areas of China, the project villages have been under the influence of industrialization, urbanization, and globalization. Many people have moved out of their villages and settled down in towns and cities as migrant workers. Ecological migration seems to make more people leave rural areas, facilitating regional urbanization. Industrial agriculture businesses seem to be emerging actors in local agricultural development.

A transition in the rural economy has been taking place in the project villages in Ordos. It appears to be a transformation of the rural agricultural economy in local project villages, from a dominance of small household agricultural economies toward a dominance of an industrialized agricultural economy; from subsistence or semi-subsistence agriculture to commercial farming. The role of the LPP intervention in the process of this transition can be understood through two contrary perspectives. On one hand, markets have played a strong role in increasing smallholders' incomes. According to Tilt (2007), China's economic liberation under the Household Responsibility System has provided farmer households greater economic incentives to raise cash crops for the growing market. Many farmer informants have invested or attempted to invest their labor and capital in the production of cash crops, which has the potential to increase their households' incomes. In addition, markets have a powerful influence in enabling and encouraging rural entrepreneurship and industry in order to increase agricultural development and economic growth. Project-improved local environmental and agricultural conditions have attracted business investment, thus contributing to the local economy. On the other hand, with increased marketization, local rural economy tends to be more specialized and industrialized, which may potentially threaten local small-scale farming development. Thus, a negative outcome of the long-term project effect of increased rural industrial business is the potential harm to small, local farmer households' livelihood development, contrary to the project's objective of improving their livelihoods. According to X. Wang (2011), industrialization has several negative effects on small farming economies, particularly in the western region of China. First, it enlarges gaps between rich households and ordinary households. Rich households often get more attention and support from local governments, and also make significant gains through the market economy. Secondly, farmers often find it difficult to identify what market needs exist in an industrialized agricultural system. It is often technicians or businessmen who decide what to produce, how to produce it, and whether or not it can generate profits. Thirdly, ordinary farmers obtain limited benefits from market reform. They often need to spend more on purchasing materials and equipment for farming. According to X. Wang (2011), local farming models changed from "low-input-low-output" to "high-input-high-output", where "farmers work not to meet their own needs but those of the market" (X. Wang 2011:110). In an even broader context, Tilt (2007:198) argues that the globalization of agricultural production and consumption is starting to exert considerable pressure on China's smallholder farming system. Further,

from an ecological perspective, the trend towards agricultural commercialization and industrialization may have long-term negative impacts on the environment, threating the sustainability of the agroecosystem (Tilt 2007:198).

4.2.3 Effects of Grazing Ban and Livestock Development

The intervention of a grazing ban brought short-term economic loss to farmers during project implementation. However, through the project-supported livestock development program, some farmers benefited from adopting modern livestock management practices. Yet many other farmers either gave up raising goats and sheep for more off-farm work, or conducted illegal grazing. At the time of fieldwork, raising livestock was still a common livelihood practice in the villages, but not as popular as before. A consequence of the grazing ban was an increased in the frequency of wildfires.

As mentioned previously, the project started adjustments by providing a livestock development program, introducing modern livestock practices to farmers. The program included a provision for improved breeding of goats and sheep, some machinery for cutting grass and processing it into fodder, as well as improved technology skills for pen-feeding, which brought economic benefits to local farmers. According to certain farmer informants, the quality of goats and sheep was increased compared to previous, more traditional breeds. Wu recalled that in the old days, his village had a lot of goats. Most were still very thin after a full year of grazing. One goat weighed only 20 to 30 *jin*[52]. Nowadays, the number of goats is reduced but the quality has increased. The smallest goat was now around 40 *jin*, could produce more wool, and longevity had also been improved (Interview, village leader Wu, Jungar County, 19.09. 2014). Local governments promoted the establishment of local companies to assist local villages in livestock development. In project village B in Dongsheng County, one local farmer took up a loan of 300,000 yuan and founded a food processing company, providing wholesale purchase and exchange of sheep and goats, raw material processing, and transportation (Dongsheng PMO 2 undated). During field research, I met the aforementioned farmer Qian, who is now leader of village B. He explained that a farmer-specialized cooperative was recently developed in the village on the basis of his company. Local farmers were organized to engage in agricultural activities, including

[52] 'Pounds' 1 *jin* = 500g

greenhouse farming and livestock production and supply. (Interview, village leader Qian, Dongsheng, 17.09.2014; Village leaflet undated [53]). An average farmer household's annual income has now risen to over 100,000 yuan RMB per year. In Qian's opinion, the LPP put in place a foundation for future village development, especially through the provision of an initial financial investment, and support for developing modern livestock management practices (Interview, village leader Qian, Dongsheng, 17.09. 2014).

However, according to official Hu, not all local farmers had adjusted well to modern practices of keeping livestock in sheds. This carries a higher associated cost than illegal grazing, including construction of sheds, planting of fodder, and labor requirements (Interview, official Hu, Ejin Horo County, 22.09.2014). Therefore, some continued illegal grazing, even with the risk of getting caught and being fined, both during and after the project. Some gave up raising livestock and sought off-farm work in the vicinity, or went to nearby towns and cities as migrant workers.

Farmers seem to be much less dependent on livestock now, according to field observations and interviews with many farmer informants. Before, farmers who lived in gullies considered farming and raising livestock their main livelihood practice and source of income. They sold animals after raising them for a while, and earned money in order to pay school fees for their children (Interview, contracted farmer Jun, Jungar County, 19.09. 2014). According to many local informants, almost two thirds of local farmers have now moved out of the gullies and gone to towns or cities. Farmers who still stay in the villages now raise livestock to feed themselves, and livestock is no longer regarded as the main source of income. They have developed alternative livelihood practices, as discussed in the previous section. From field observations, the situation in project villages is markedly different from before the project, with better vegetation, fewer people, and fewer goats. Overgrazing was no longer a problem.

As farmers become less dependent on livestock, fire hazards have become a pressing problem in project areas as an indirect result of the grazing ban policy. According to many local informants, the frequency of wildfires increased as a consequence of recovered vegetation and the grazing ban policy. Fires often occurred during spring and

[53] Village B leaflet was published by the farmer-specialized cooperative of village B, undated. I obtained on 17, September 2014.

winter in various project locations, to the extent that it became a serious problem and concern for village leaders and local officials. Fang mentioned that about 3-4 times a year, a wildfire would break out in his local area (Interview, contracted farmer Fang, Ejin Horo County, 22.09.2014). During these two seasons, local governments and local villages have had to make an extra effort to prevent wildfires (Interviews, village leaders, farmers, and local officials, Ejin Horo County, 22-27.09. 2014).

> Every year during that time, the village committee members have to go to every household to make them aware of fire-prevention. We [the local government and village committee] are very concerned about this (Interview, village leader Tan, Ejin Horo County, 9.24. 2014).

This problem raised a discussion regarding adjustment of the grazing ban policy. According to official Feng, the real problem stemmed from the previous practice of an excessive number of animals being let out to graze. He explained that one area was supposedly suitable for grazing 10 goats, but had been used to graze 100 goats. This was the situation in project areas before the LPP. According to him, what should have been done was to control the number of goats, rather than banning grazing entirely. In fact, he believed that an appropriate exploitation of the vegetation was necessary. Otherwise, these resources would be wasted, and even worse, would increase the number of local wildfires (Interview, official Feng, Dongsheng, 17.09. 2014). Official Jin stated that the grazing ban policy was based on the situation at the county level. Completely banning grazing would cause conflicts and a pressure to prevent wildfires. Seasonal grazing or half-farming and half-pasture could be used to mitigate this risk. At the same time, it would reduce the economic costs incurred by farmers and herders. A conditional grazing ban would also act as a buffer for tensions in local villages (Interview, local official Jin, Ejin Horo County, 23.09. 2014). Several farmer informants also suggested that there was a need for conditional grazing in project areas in order to reduce the fire hazard. Previous research on the LPP by Hiller (2012) and S. Chen, Wang, and Wang (2004), concluded that the grazing ban was a necessary measure at the time, but they also agreed that there was room for adjustment. From field observations, adjustments to the grazing ban policy have taken place in the villages I visited. Restrictions on grazing appear to have become less strict, and some grazing has even become tolerated by local governments. Local governments were not as strict with checking up on illegal grazing as before (Interview, contracted farmer Fang, Ejin Horo County, 22.09.2014). It seems that the grazing ban was suitable at the time of LPP

implementation. However, with the improvement of the local environment, this ban seems to have lost its original function as environmental protection. Thus, local governments started to reflect on this policy and make certain adjustments, according to practical local conditions. However this adjustment has not been formalized by any regulation or policy change. There still remains space for further research on the potential adjustment of grazing ban policy.

4.3 Communicative and Educational Aspects of Project Intervention

For practical implementation of the LPP at the local level, authorities adopted certain communicative techniques to ensure local farmers accept and support the project intervention. Village leaders/committees played an important role, by assisting project authorities' mobilization and persuading local farmers to participate in project activities. I will discuss what kinds of communicative techniques authorities used, and the effectiveness of these techniques in dealing with local farmers. In addition, I shall attempt to explain how these official communicative strategies were situated within the local context. The cultural influences from Confucianism and the harmony theory of Chinese communication (introduced in chapter 2) will be used in this discussion. The analysis and discussion in this section is largely based on data and findings presented in the previous two sections of this chapter. At the same time, this section lays the foundation for a critical discussion of the project-adopted 'participatory approach' in chapter 5.

4.3.1 Local Communicative Strategies and Channels

Persuasion and Guidance through Village Leaders/Committees

Village leaders/committees were the key link between authorities and farmers during local level implementation. According to the World Bank project report, local governments had been "working very closely with local villagers through village committees", who facilitated "organizing the collective effort at the village level" (World Bank 1994: 29). County and township officials (who were local agricultural

planners) worked closely with village leaders in planning local agriculture and implementing said plans (World Bank 1994: 20).

Local authorities used two types of persuasion during the LPP to help farmers understand and accept the various project regulations and principles. The first was *zuogongzuo*, 'doing the work'. This is a common practice in China used by higher levels in the political hierarchy to persuade lower levels to agree to something that the lower level might not initially agree to. It is often practiced in face-to face talks, either in the form of group meetings or one-on-one meetings. According to field observations and interviews with local project official and farmer participants, during implementation of project rules and principles, the practice of *zuogongzuo* was carried out repeatedly at various political levels: from township level authorities to village committee members, then from village committees to farmers. Through these repetitive meetings and talks, it was very likely that those higher up would be able to make people change their minds and agree to the suggested ideas. During implementation of the loan and land contracts, as well as the grazing ban policy, this persuasion method was used frequently with farmers to ensure their compliance.

The other method of persuasion used with farmers was to teach and guide them, in order to change their attitudes and practices. This type of persuasion is also related to the communicative strategy of training farmers in order to help them develop new skills and knowledge, which I will discuss later. These two strategies, persuasion and training, were interconnected in the communication process. According to official local reports, the project tried to make farmers realize that traditional grazing practices were coming to an end. There was an immediate necessity to transition from traditional pasture practices to scientific livestock management (Dongsheng PMO 2 undated). According to local informants and official local reports, local project officials went to villages, informed farmers of the ban and explained the problem of ecological degradation and soil erosion being due to overgrazing (Interviews, several farmers, Ordos, 19-26.09. 2014; Ordos PMO 2005). Besides this direct communication between local governments and local farmers, most of the work of implementing the policy and convincing farmers to support the grazing ban and change their practices was done through village leaders/committees. According to village leader Tan, he organized several village meetings to teach local farmers how to raise goats and sheep in order to maximize profits.

> At the time of the LPP, I explained the reason to farmers and let them be aware of the problem *exingxunhuan* [54] of keeping the old farming practice, which resulted in economic loss. It was better to plant corn as fodder for feeding the sheep and goats. The sheep and goats produced manure for the crops. If you didn't sell them but kept them (the sheep and goats), you would end up losing money. You had to sell them at the right time to get profits. (Interview, village X leader Tan, Ejin Horo County, 24.09. 2014).

Village leaders/committees assisted project authorities' persuasion efforts towards farmers during project implementation. In general, village leaders/committees have a certain status in the Chinese political system of rural governance. According to Zhong, although village committees are supposed to be self-governing, autonomous organizations, and village officials are not state-paid employees, village officials are often perceived, particularly by Chinese peasants, as "state officials representing the Chinese government in rural China"(Zhong 2013:84). In addition, the Chinese government treats them as "part of the state machine and an integral part of the official apparatus", rather than "autonomous community leaders"(Zhong 2013: 84). In this sense, Zhong describes Chinese village officials as 'foot soldiers', governing rural areas on behalf of the Chinese government, implementing government policies in villages(Zhong 2013). Thus, project authorities used village leaders/committees as a major communication channel at the local level.

Training Local Farmers: Developing New Skills and Knowledge

Training farmers in new skills and knowledge was another technique used by authorities. During the second phase of the LPP, 3,182 farmers in the Ordos project area received training. Training topics included relevant skills and knowledge for conducting soil and water conservation, and orchard and pasture management (Ordos PMO 2005). These training materials were based on currently applied land development and erosion control techniques in the Loess Plateau, which were further developed through research [55] conducted by local scientists from existing research institutions and experimental stations (World Bank 1994, 2003). Farmer representatives were organized in study tours, visiting demonstration plots to gain experience and learn good practices. Afterwards, they would inform other farmers of what they had learned (Interviews,

[54] 'Vicious cycle'. This term was used by both the World Bank and Chinese government when defining overgrazing as the cause of local ecological degradation and poverty.

[55] The research was a sub-component of institutional development in the LPP. The research program was managed and coordinated by provincial technical panels (World Bank 1994).

village leaders Qian and Wu, Dongsheng and Jungar County, 17.09; 19.09. 2014). In addition, the World Bank and the Chinese State government sent experts and technicians out to the field, giving direct instructions to local farmers at their homes or project construction sites (Interview, local official Jiang, Jungar County, 19. 09.2014). Contracted farmer Meng talked about his experience, learning greenhouse farming as provided by the LPP:

> The instructors came to one village after another and gave on-site instructions. At that time, I didn't have any experience, and therefore I listened to [the instructors]. Combined with these theories [taught by them], I practiced growing different vegetables, exploring and improving the techniques (Interview, contracted farmer Meng, Jungar County, 19.09. 2014).

Farmers' training was carried out in both formal and informal ways. The formal way was to take classes and learn specific knowledge from project experts, which was limited to a group of farmers who had the opportunity to attend and were willing to learn new skills. The informal way was to receive instruction and guidance at project construction sites, which was given to the specific farmer laborers hired for a particular project. Through training and learning by doing, farmers gained skills and knowledge that contributed to the effectiveness of project implementation.

Advocating and Demonstrating

During implementation, local governments also used the technique of advocating project policies in local villages, and presenting successful examples of participating villages and farmer households to other farmers and villages in project areas.

According to Wu, his village was the first in the county to sign land and loan contracts, and implement a series of project activities. More households and other neighboring villages started to follow this village and join the project, signing land contracts. It was used as an example to encourage other villages to participate (Interview, village leader Wu, Jungar County, 19.09. 2014). According to Ordos PMO (2005) and local staff, there was a large group of *xianjindianxing*[56], who became rich through the project. They were farmer beneficiaries in the project area, who set an example, and engaged more farmers to follow the project-introduced practices.

[56] 'Pioneers for experimenting with project-introduced practices'.

Besides demonstrating successful cases of individual farmer households or communities, local PMOs carried out many advocating activities in the villages. According to the official local report, local township governments were required to promote the grazing ban and alternative livestock development among local farmers through different types of advocacy, including radio broadcasting, posters, workshops, and meetings. (Dongsheng PMO 2 undated). Official Huang, who had managed the work of advocating the grazing ban policy, mentioned that they had put up project banners and slogans at strategic locations, and disseminated project brochures during local market festivals, in order to get local farmers' attention (Interview, local official Huang, Jungar County, 19.09. 2014). The local PMO produced a documentary to advocate the grazing ban policy and broadcast it on TV, demonstrating project achievements and advocating project-introduced practices (Interview, local official Huang, Jungar County, 19.09. 2014).

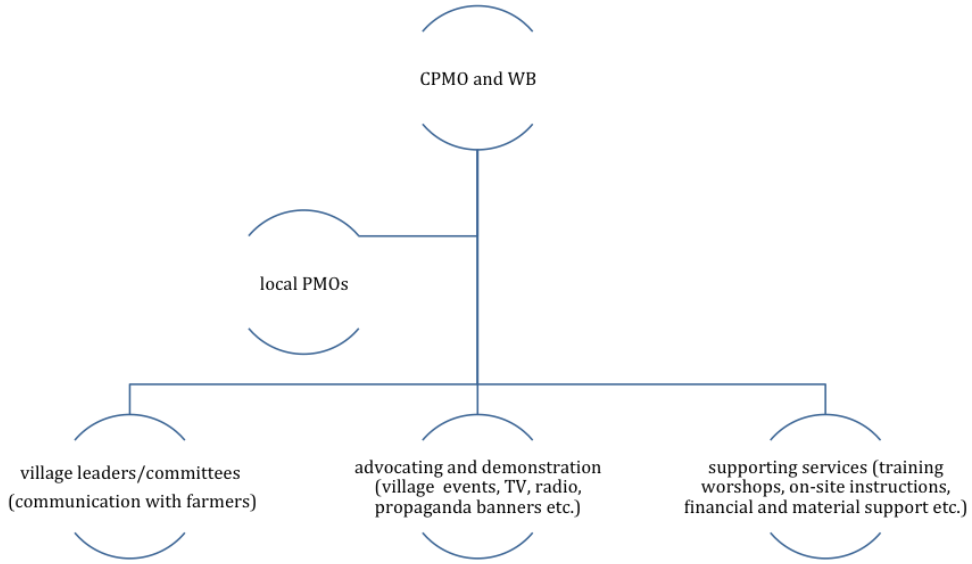

Figure 5: Communication System of Local Level Policy Implementation

4.3.2 Effectiveness of Communication and Educational Strategies

It seems that efforts made to communicate with farmers in project areas were in general effective. Most farmers participated in implementing project activities, either as labor workers, or as contracted farmers. Most farmers also gradually accepted the grazing ban, and adopted modern livestock practices and/or other agricultural and livelihood practices, using skills and knowledge they learned through the LPP. Finally, most

farmer informants also showed a clear understanding and awareness of the positive effects of the grazing ban on the environment. They quite often mentioned that water and soil conservation was important for the environment, that a grazing ban was necessary to control overgrazing in order to let vegetation recover and protect against water and soil loss. They seemed to be happy about and proud of their improved environment, showing off some of their accomplishments, including project-constructed dams, associated warped land, and rehabilitated grasslands and forests.

The reasons for the acceptance and satisfaction among local farmers can be explained in terms of economic benefits, subordination to authorities and professionals, commitment and responsibility, as well as ecological concerns. First, economic benefits seem to be the main driving force in mobilizing farmers for collective action to implement the LPP. Most farmer informants expressed this point of view during the interviews. Second, subordination to project authorities and professionals is another factor that made it easier to order local farmers to comply with project polices, and equip them with new skills and practices. Third, a sense of commitment and responsibility among farmers seems to have been another important factor, which particularly seems to have been the case when it came to project-contracted farmers. They signed land and loan contracts, showing their commitment and responsibility on paper. In practice, the degrees of commitment varied between different people and situations. Project-contracted farmer Meng showed his strong commitment and responsibility to managing the contracted land. He explained:

> The project provided opportunities and conditions. However, it required your own hard work in order to make a profit. The project only taught us skills and built dams for a better irrigation system. But the project wouldn't raise livestock, plant crops and vegetables for you. You had to practice and work very hard, learn the theories and practice them. You would face many failures before the success. Then you would obtain your own practical experiences and know-how. (Interview, contracted farmer Meng, Jungar County, 19.09. 2014)

A fourth reason for the acceptance of the grazing ban was ecological concerns. However, this seems to have been of the least concern among the four factors. However, it didn't mean that farmers had no interest in improving their ecological environment. At the start of the LPP their life conditions were extremely constrained, with severe poverty and hunger, which made them prioritize short-term economic interests, rather than ecological interests. But during the implementation they witnessed and experienced

the benefits of an improved environment, which made them gradually accept the grazing ban and replace grazing with other practices introduced by the project.

Based on these four factors farmers gradually changed their agricultural practices of unrestricted grazing and planting of crops on hill slopes, destructive to the ecological environment, and accepted and applied environmentally friendly agricultural practices introduced by the project.

4.3.3 Discussion of Findings

The above evidence suggests that the project has to some extent succeeded in restoring the degraded ecosystem and creating a harmony between local people and their environment. This is both in line with Confucian thought and with the idea of 'sustainable development'. The harmony was partially contributed to by local governments who succeeded in persuasion and mobilization of local farmers for collective action. Village leaders/committees played an important role in assisting local governments' communication with farmers and organizing them for collective action. The rural institutional structures established under Mao's policy of collectivization seem to have contributed to the practices of mass mobilization and collective action during the LPP. The practice of mobilization and collective action in rural areas goes back to the period of collectivization and People's Communes, when farmers were organized into teams, brigades, and communes by village leaders, to conduct collective agricultural production activities (Uphoff 2004; Plummer 2004; Unger 2012). As mentioned previously (p. 12), although attempts have been made to decollectivize since China's economic reform in 1978, by the introduction of a market economy, a certain continuance of rural institutional functions and operations from Mao's era has been maintained, particularly during the early reform period. On the other hand, the Confucian nature of fostering obedience to superiors may have assisted the Chinese government in successfully utilizing mass mobilization and collective action for supporting the LPP. According to Shapiro (2012), Confucian culture addresses "orderly hierarchical relationships" where rank and role are considered the basis of social order, and ordinary citizens should be loyal to their superiors, who would repay them with paternalistic protection (Shapiro 2012:87).

The Chinese project authorities gained farmers' compliance through a range of communicative measures, during local level implementation of the LPP. This style of communication and behavior is supported by the harmony theory introduced in chapter 2. Chen (2013) argues that harmony is not only a philosophical and ideal goal, guiding Chinese communication behavior, but also a power game that involves different compliance-gains strategies in dynamic interaction. During the LPP, when implementing the grazing ban and several other policies/regulations in project villages, local Chinese authorities adopted certain strategies to reduce and diminish large-scale conflicts and resistance among the local population. This is in line with Chen's argument that "Chinese communication aims to reach a harmonious state of human relationship" (Chen 2001:58) and that all actions are taken in order to achieve harmony (Chen 2013). On the other hand, certain levels of coercion existed during local level implementation of the grazing ban. Local authorities applied certain punishments for illegal grazing, as well as made efforts to persuade farmers to obey the rules. This is in accordance with the coercive nature of Chinese communication: when harmony cannot be obtained through positive interaction, compliance-gaining strategies are often applied in order to achieve one's communicative goal (Chen 2013). Additionally, Chen argues that within the hierarchical structure of Chinese society, "power is attributed to the elder and those in superior positions, such as rulers, parents, teachers, husbands, and educated civil servants", who can thereby directly solve conflicts (Chen 2013:32). Therefore, they are considered key figures in reinforcing and perpetuating the harmony system in China (Powers 1998; Chen 2013). However, in the case of a power struggle, or when acting for personal gain, they may abuse the power gained from the system to achieve their own goals and interests (Chen 2013). This situation occurred during local-level implementation of the LPP, when authorities (local governments and village leaders/committees) exercised their power on ordinary farmers, in order to make them accept and support project interventions. In this way, the very idea of harmony seems to have been an invisible controlling force behind the project.

In addition, the communicative strategies used in training and guiding local farmers (particularly contracted farmers) to master new skills and practices for their own livelihood development seemed to be a crucial element to the success of the LPP. The contracted farmer informants were able to gather enough information and knowledge to carry out their own development initiatives, evaluate their actions, and recognize the

return benefits. I will discuss this finding in terms of participation and empowerment theories in chapter 5.

4.4 Concluding Remarks

In summarizing the findings of this chapter, there are three points I wish to address in terms of the role of the World Bank, Chinese local governments, and village leaders/committees.

Firstly, the World Bank exerted a crucial influence in the development process of the LPP, particularly in shaping the land tenure and grazing ban policies, the core elements of the project. The World Bank stipulated specific requirements in the agreement with provincial governments, and worked closely in the field with local communities in the process of project design and planning, as described earlier in this chapter. The State and local governments followed the World Bank's required practices and ideas by implementing land tenure and grazing ban policies, as well as applying the methodology of a 'participatory planning/approach' for watershed rehabilitation.

Local governments played an important role in effective policy implementation at the local level. They shaped project polices at the level through influencing the local level implementation process. They provided relatively suitable guidance and support (i.e., training programs, on-site instruction, and financial and service support) to local communities, ensuring farmers' participation. These guidance and supporting measures, to some extent, helped farmers cope with the policy intervention (in particular the grazing ban), gradually changing their previous farming practices and adapting to project-introduced agricultural and livelihood practices.

Village leaders/committees played a crucial role in assisting local governments during policy implementation among village members. They acted as a major communicative channel between farmers and the government. During the LPP, they served, to a degree, the government machine, implementing the grazing ban, persuading and organizing farmers to participate in project activities. On the other hand, they, again to a certain extent, helped authorities understand farmers' needs and interests, as well as local conditions for developing more practical and suitable measures for environmental conservation and livelihood development. However, village leaders and committee

members were able to exploit their positions to obtain greater opportunities and support from the project, which would lead to a failure of the project's attempts at including the poor and weak into the development process.

To conclude, I have analyzed the mechanisms of the LPP in terms of three new institutional arrangements required by the World Bank and the Chinese government apparatus, focusing on the local level implementation process. In particular, I have discussed the Chinese authorities' strategies and practices for implementing land contracts, the grazing ban, and integrated watershed planning within the local context, and provided some insights into the communicative mechanisms stemming from the historical practices during Mao's rule, and from cultural practices influenced by Confucianism. In the following chapter, I will provide an in-depth analysis and discussion of the 'participatory approaches' applied during the LPP, based on findings from political, economic, and communicative aspects of the project.

5 The 'Participatory Approach' in the LPP

In this chapter, an inquiry is made into the LPP project's use of the western concept of participation in a local context. I shall attempt to explore to what extent the project-applied 'participatory approaches' empowered local farmers. I will discuss the elements of the participatory approach required by the World Bank, as well as the Chinese strategies and practices in responding to these elements. The theoretical framework of participation introduced in chapter 2 will be applied here for analysis and discussion.

In the dominant, western-inspired theory and rhetoric, participation is often associated with a developing ownership, capacity building, empowerment and gender equality (Nelson and Wright 1995a). Additionally, the concepts of 'participation' or a 'participatory approach' contain the western development ideology of good governance (Potter et al. 1999; Chambers 1993) [57]. However, the western dominated development ideologies and practices of participation cannot be mechanically transferred to developing countries that have very different political, social, economic and cultural conditions (Nelson and Wright 1995b; Hickey and Mohan 2004; Cooke and Kothari 2001b). In the LPP, the World Bank introduced the concept of a 'participatory approach' to local Chinese communities. However, Chinese implementation of participation contained very different meanings and understandings, based on their unique perspectives and experiences, situated in their local contexts. An attempt will be made to show the process of China's interpretation and adaptation of the concept of participation, as required by the World Bank, to a local context. By doing so, I attempt to show the gaps between the largely Western-inspired rhetoric of participation, and reality on the ground. An exploration into the political sphere of participation under the LPP will be made, and its effects on rural development and governance in a broader Chinese context will be discussed.

Initially, an outline of the theoretical understanding of participation in the LPP will be given by introducing the World Bank's development strategies of participation, as well as the political and economic conditions of China, facilitating or hampering the

[57]The concept of 'good governance' refers largely to 'efficient institutional' mechanisms to formulate and implement policy but includes the basic foundations of democratic freedoms and the rule of law (Potter et al. 1999 :158).

development of a participatory model for the project. This will be followed by a presentation and discussion of the localized participation process in the LPP, exploring its meanings and empowerment effects. Finally, a summary and discussion will be made of the findings.

5.1 Background of Participation in the LPP

This section provides a general background for investigating the concept of participation in theory and in practice in the local context of the LPP. I will outline the World Bank's theory and rhetoric of participation, connecting this to the LPP, and then giving a general historical background of the development of 'participation' in a broad Chinese context.

5.1.1 The World Bank's Definition and Practices of Participation

Participation has been defined by the World Bank as "a process through which stakeholders influence and share control over development initiatives, decisions and resources which affect them" (World Bank 1996:3). 'Stakeholder participation', defined as "the participation of all relevant stakeholders in the development process", has become a central strategy for World Bank projects (World Bank 1996:6), while a 'participatory stance' asks for a close collaboration between the sponsors and designer, as well as other stakeholders, in diagnosing problems, setting proper objectives, creating a strategy, and formulating project tactics (World Bank 1996: 3). The four concepts utilized as scales to measure stakeholder participation include listening and consulting, social learning, social invention, and commitment (World Bank 1996).

From the World Bank's perspective, it is important to "engage poor people, build their confidence, knowledge base, and capacity for action" through participatory development projects (World Bank 1996: 8). The World Bank has claimed that the best way to 'reach the poor' is by making sure that they have a real stake in development activities, and as a direct result of this is the focus on the participatory process in World Bank-supported projects (World Bank 1996). Local capacity building is addressed in such a way that the poor may act for themselves. By doing so, The World Bank argues that there exists "a continuum along which the poor are progressively empowered" (World Bank 1996: 8). To put it simply, the poor may go through a process from being

"beneficiaries-recipients of services, resources and development interventions", to becoming "clients" who are able to ask and pay for goods and services from their government and private sector agencies. Finally they move to the end stage where they become "the owners and managers of their assets and activities". This stage is regarded as the highest in terms of the intensity of participation involved (World Bank 1996: 8). According to Cooke and Kothari (2001b), the World Bank-supported concept of 'participation' promotes greater involvement of local people's perspectives and knowledge , interests and needs, providing an alternative to donor-driven, and outsider-led development. In addition, "participatory approaches to development are justified in terms of sustainability, relevance and empowerment" (Cooke and Kothari, 2001b :5).

It appears that the World Bank introduced the participatory approach and planning to the LPP in order to facilitate the project's planning and implementation, but also in an attempt to influence the development ideology of Chinese institutions in adopting a human-centered approach to 'good governance'. Thus, the project targeted local farmers as primary beneficiaries, requiring their participation in the development process of the LPP (World Bank 1994; World Bank 1999). As mentioned previously, the World Bank held negotiations with Chinese authorities, and developed several conditions for providing project funding, including: delivering loans directly to farmer households; contracting the project developed land to farmer households for long-term management and maintenance, designing training programs for farmers, as well as demanding women's participation[58]. These requirements expressed the World Bank's development ideologies and strategies for ensuring beneficiary involvement and stakeholder participation (here, both beneficiary and stakeholder refers to local farmers) through delivering the project intervention.

5.1.2 The Context of Participation in China

Participatory approaches to development have taken different forms in different contexts, due to the unique experiences of local culture, history, and political and economic situations (Plummer 2004).

[58] Women's participation was not specified in the World Bank project report. However, information was obtained from local informants as well as local official documents, that the World Bank had required the inclusion of women and gender equality in the development process of the LPWPR. Furthermore, the World Bank often addresses gender equality (empowering women) in most World Bank-involved participatory projects. Therefore, an assumption can be made that the World Bank would have mentioned this during the LPP.

The Chinese state, under the influence of neoliberalist development ideology, initiated the opening-up reform policy in 1978, in order to integrate into the global market. This provided opportunities for Western and international development agencies to enter Chinese society, potentially intervening in shaping the development discourse of China. According to Plummer (2004), the evolution of participatory approaches in China started at the end of 1980's, when it was first introduced through western scholars and international development agencies, such as the World Bank and the Ford Foundation. Participatory initiatives were launched in the context of rural development, accompanied by Chinese economic reform and agricultural reform. Thus, the participatory approach in China gradually developed through a project-by-project, sector-by-sector approach, with the support of international funding in the field of rural development and environmental management. Additionally, due to the agriculture reform of de-collectivization and with the introduction of the household responsibility system in rural areas, farmers became more concerned with their private interests, and were driven by economic incentives, rather than collectivism. Farmers would not agree to and support projects that were against their will and personal interests. By the mid-1990's, in the sectors of forestry, agriculture and water resources, there was an increasing need for more engagement with farmers and villages, in order to reach specific goals of project intervention (Plummer 2004).

The intention of those introducing the participatory approach to China, was to shift the development paradigm, promoting a people-centered approach that was inclusive of poor communities, who ideally should make their own decisions for development (Plummer 2004). However, in practice, this intention was often constrained due to the unique relationship between the people and the state, the functioning of a centralized system of government, and the heritage of a history in which collective action and mobilization had been a prominent feature (Plummer 2004). Forms of 'participation' had occurred before in China. Since 1949, 'participation' was often associated with the mass mobilization campaigns of the Mao era, especially during the 'Cultural Revolution' and 'Great Leap Forward' (Shapiro 2001), and as a result makes many Chinese skeptical towards the notion (Uphoff 2004). As a consequence, great difficulty is often associated with introducing participatory techniques and methods into Chinese development practice, particularly in rural areas, as noted by Uphoff (2004) in Plummer and Taylor (2004a).

5.2 Participation as a Management Tool in the LPP

This study will explore the interpretation and use of participation as a management tool by the authorities during the LPP. In particular, I will further analyze the involvement and actual level of participation of project-contracted farmers and farmer laborers discussed in chapter 4. The following theoretical analysis and discussions will in large part be based on Taylor (2001)'s study of participation from critical management and labor process perspectives. According to Taylor, dating back to the early/middle stages of the industrial period, traditional management featured top-down hierarchical authority structures, resulting in "the alienation of employees, and individual and collective resistance, which threatened productivity and managerial control" (Taylor 2001:127). Thus, a new approach of "concern for people" was emphasized as the "managerial grid" (Taylor 2001: 127). Employee involvement and Participation (EIP) grew out of this context as a development and management strategy in the West. Participation, in this Western managerial thinking, was considered good for business.

In the LPP, Chinese communities, as required by the World Bank, learned and incorporated the Western participatory philosophies into their traditional management structures and systems. Although EIP was not specified in official project reports, this concept was possibly applied, due to the influence of the World Bank that introduced Western managerial philosophies and practices to Chinese officials. At the time, China was intent on shifting to a market economy as part of their move to integrate into the world economy. Chinese authorities were most likely eager to obtain advanced Western management experience and philosophies, in order to tackle the new challenges associated with the transition to a market economy. As claimed by the Chinese government, they needed to adopt alternative approaches to natural resource management for the LPP for two reasons. First, the traditional state-led conservation projects were mainly top-down, focused on improving the natural environment, and were often against local farmers' will, and incompatible with their traditional livelihoods and therefore their economic interests. With the household responsibility system established in rural areas, farmers were more concerned with their private interests. It was not easy for local governments to make conservation work on farmers' individual land without their permission. Local governments needed to develop some

managerial strategies for balancing public interests and private interests for both environmental protection and livelihood protection (CPMO 2010). Second, the World Bank aimed for human-oriented development, promoting a human-centric approach. Technically, the project was an ecological conservation project to reduce the sediment flow into the Yellow River, improving ecological conditions in the watershed of the Yellow River. However, in order to meet the World Bank's requirement for project investment, Chinese project authorities had to guarantee that project activities should also concern local people's needs and interests, improving their livelihoods (CPMO 2010).

On the other hand, the idea of participation, in terms of EIP, can be understood as a managerial strategy by which authorities controlled or mobilized farmers during the LPP. According to Taylor (2001), supported by other research, the idea of EIP is "part of an employer strategy to retain control of the labor process rather than relinquish or share it" (Taylor 2001: 133). Participation, in terms of EIP, is often sponsored by powerful interests and thus works to obscure the relations of power and influence between elite interests and less powerful groups (Taylor 2001). From the same critical management perspectives as used by Taylor (2001), project beneficiaries (contracted farmers) are defined as clients of the project organizations (in the case of the LPP, meaning the World Bank and the Chinese government). The improvement to beneficiaries' livelihoods was intended to be the main goal of project implementation. However, employees (farmer laborers) were treated as an instrument for executing project construction, with employers (the World Bank and the Chinese government) able to impose an authoritative relationship upon them. It appeared that project beneficiaries were more engaged with the project and its success than the employees themselves during the LPP. As noted previously, during implementation of the LPP, beneficiaries received land and loan contracts, as part of the agreement for allowing authorities to conduct project-oriented rehabilitation work on behalf of the project designers' interests. They usually received supervision and guidance from project authorities when conducting project-introduced practices and activities. Their behaviors were directed by specific obligations and conditions stipulated in their contracts. Farmer beneficiaries of the LPP seemed to be "dependent clients" of the project donors, complying with these donors' preconceived vision and notion of development (Taylor 2001: 123). Therefore, project beneficiaries and labor employees in the LPP both had

weak and dependent partnerships with project authorities, depending on them for their livelihoods, particularly due to the fear of sanctions in the form of withdrawal of capital. According to Taylor (2001: 124), in most cases, neither project beneficiaries nor employees can "exercise a commensurate countervailing power". He further perceives this dependence of both beneficiaries and employees on development and work organizations as part of the wider social relations of capitalist production.

Thus, participation in terms of EIP in the LPP can be concluded as being a managerial tool for project authorities for the aim of accomplishing project implementation and management efficiently, effectively, and cheaply. Participation, as a managerial tool, is thus considered 'good for business' among key stakeholders. This management tool seemed to be needed at the time of project implementation, concerning the situation of economic transition in China. At the same time, some participatory elements used in the LPP have played important roles in capacity building and empowerment, which will be discussed in the following section.

5.3 Participation for Empowerment in the LPP

One aspect of participation is empowering local village communities and farmers to control their own development. Empowerment can be seen as a situation where "some can act on others to give them power or enable them to realize their own potential" (Nelson and Wright, 1995a :7). This study suggests that some attempts were made to apply participatory approach in the LPP, including 'participatory planning', capacity building of local officials and farmers through training, and the empowerment of rural women. There have been some progresses regarding empowerment in rural village communities. In particular, project contracted farmer informants are more empowered and have developed certain capabilities for the improvement of their livelihoods and making their own decisions, as compared to ordinary farmers in the same location. However, the empowerment was limited, particularly due to low capabilities of local governments in promoting community participation and empowerment, certain practical project constraints (e.g. funding, time, and personnel), and historical, political, and cultural factors working against grassroots participation in the LPP.

5.3.1 Participatory Planning: Listening and Consulting

Participatory planning and its associated concept 'Participatory Rural Appraisals' (PRA), as argued by Chambers (1993), is meant to change and reverse the roles of and relationships between project beneficiaries (local farmers) and the project organizers (the World Bank and the Chinese government) in traditional top-down, bureaucratic planning systems. Broadly speaking, PRA is used to describe "a family of approaches and methods to enable local people to share, enhance, and analyze their knowledge of life and conditions, to plan and to act"(Chambers 1994:1437). The essence of PRA is not only to incorporate local knowledge into project planning for feasibility and sustainability, but also to give 'power to' local poor and disempowered farmers, in order to develop their capabilities to improve their own livelihoods (Chambers 1993).

Participatory planning implemented in the LPP had, to some extent, a positive influence on changing the traditional top-down approach by means of consulting and listening to local farmers. This practice was in stark contrast to historical top-down mass mobilizations, during which farmers' interests and needs were ignored in order to meet project objectives, production quota or political interests (Shapiro 2001). As discussed previously in chapter 4, the LPP was co-managed by a World Bank team and local implementing agencies (county level water and soil conservation bureaus) during the planning process in the field. They collaborated with local village leaders/committees to conduct surveys among local farmers as well as directly consult local villagers, listening to their ideas and interests, obtaining 'local knowledge' for planning the project. The film 'Lessons of the Loess Plateau' followed the project staff working at a project site. John D. Liu, the director of the film, stated that participatory assessment methods were used for project planning. According to him, there was a long period of expert consultation at the beginning of the project, which contributed to farmers' participation on a larger scale:

> Many often assumed that China is a tightly disciplined authoritarian country where leaders have the power to order people to restore their landscapes without facing any contestation. This is often not the reality. In fact, Chinese people all have their own observations and opinions, and if they do not understand and agree with what the government tells them, it is very difficult to get them to act. At the beginning of the Loess Plateau Watershed Rehabilitation Project there was a long period of expert consultation as well as extensive use of participatory methods to engage the local people in the inquiry and in the execution of the project. By carefully explaining the relationship between vegetation cover and hydrological regulation and fertility, local stakeholders began to see the benefit for themselves and more willingly participated. As soon as the results of restoration were visible

> it was possible to increase the participation in some areas beyond the initial project sites (Liu and Hiller, 2015:13-14).

Furthermore, according to the World Bank report as well as the evidences presented in chapter 4, 'participatory planning' was applied through combining outside expertise and experiences with local knowledge during the LPP (World Bank 2003). However, 'local knowledge' and 'participatory planning' were, to some extent, compatible with bureaucratic planning during the LPP. This argument corresponds with Mosse (2001)'s critical view on 'local knowledge' and 'participatory planning'. According to Mosse, local knowledge is "part of the project exercise of power in constraining as well as enabling 'self-determined change'", used to "advance and legitimate the project's own development agenda" (Mosse 2001: 22). In addition, participatory approaches and methods can be used to justify and legitimize the dominant interests of local elites and authorities, disguising them as the needs and concerns of the local community (Mosse 2001). Therefore, local knowledge and village plans produced through participatory planning are often shaped by pre-existing relationships.

During the project planning and preparation process, there appeared to be local institutional staff learning and practicing the PRA methods and techniques, holding a leading role in the project planning and design process[59]. Additionally, village leaders/committees, as elites and authorities of villages, acted as middle agents between farmers and officials. Who they represented remains an open question. Several studies on the role of village cadres and politics show the complexity of local power-relations (Zhong 2013; Unger 2012; Schubert and Ahlers 2012). On one hand, these village leaders work as foot soldiers for governing villages on behalf of the Communist party. On the other hand, they are selected by village members through a so-called democratic system of village elections, and are therefore supposed to represent their village members. Additionally, these people may have their own individual interests and needs. According to Mosse (2001), 'local knowledge' and 'village plans' produced through participatory planning are often shaped by pre-existing relationships. In the case of the LPP, patronage-type relationships between project authorities and local village members may have harmed the best intentions of PRA. Project plans are supposed to be shaped by local farmers themselves, who acquire methodologies in order to identify local problems and find a workable solution, as well as to negotiate implementation

[59] According to project staff informants and 'Lessons of the Loess Plateau' (the film).

regimes with project staff and the implementing agency. However, during the LPP, this process was reversed, where farmers to some extent acted as a passive object for local institutions and staff to experiment on. In this way, local knowledge and participatory planning became compatible with bureaucratic planning.

5.3.2 Capacity Building and Empowerment

A certain progress in capacity building and empowerment did take place among local communities throughout the LPP. A common observation among local informants was that, compared to earlier projects [60] that only paid attention to infrastructure construction, the LPP addressed capacity building of local governments and villages through training. The section below will analyze and discuss local level capacity building and the empowerment process of the LPP at two levels: first at the level of local government and then at the level of farmers.

Capacity Building of Local Government

Local project staff and officials played an important role in implementing the project-related policies and activities in the villages, and thus they were required to take project-tailored training programs[61] in order to be able to fulfill their project tasks, as discussed in chapter 4. In the Ordos area of this case study, the local government arranged 22 training workshops, during which 151 senior staff and managers, 76 technical staff, and 3182 farmers received training (Ordos PMO 2005). Although local government staff and officials received training including enhancement of capacities to implement various project interventions at the local level, they seemed to lack certain training regarding awareness and knowledge of facilitating village community participation and empowerment, as defined by the largely Western-inspired rhetoric. Four factors exist that can explain the problems and limits regarding capacity building of local governments and advancing farmers' empowerment and participation during the LPP: strong leadership, skill deficiencies, 'attitudinal blockage', and financial constraints. These four points correspond to Plummer and Taylor (2004b)'s study on community

[60] There were watershed conservation projects before the LPWPR, in the 1980's, implemented by the Water and Soil Conservation Bureau. Such projects included programs for dam construction and afforestation etc. These project designs did not include training and risk management.

[61] According to the World Bank (1994), training components mainly targeted UMRB-YRCC and its associated institutions at the province, city and county level, enhancing their capabilities in watershed planning and design, project management, as well as project monitoring and evaluation.

participation in China, and are common problems for government-led community participation projects in China. I will discuss each of these four factors below.

***Leadership*:** Local governments played a strong leadership role in managing local level project implementation with farmers' 'participation'. When implementing land tenure policies and grazing ban policies, local government showed a commitment to the work of policy implementation, providing supporting services and guidance, as described in chapter 4. As a result, local farmers gradually accepted and supported project interventions. However, a significant point to be aware of is the fact that the grazing-ban policy enforcement among local project communities was a top-down authoritarian operation, rather than a participatory approach-based policy initially formulated and operated on the basis of local farmers' consensus. The local government persuaded farmers to comply with the grazing ban through the influence of village leaders/committees, creating the appearance of 'participation'. My conclusion is that although local governments made some adjustments to deal with local resistances and tension by providing financial and expertise support, as well as service goods for development of their livelihoods, it was not sufficient to reverse the top-down process of development in order to create real empowerment and participation.

Skill deficiencies: Local officials did not receive enough training and education on how to promote community participation and empowerment. According to most interviews with local officials, the greatest learning point during the LPP was new conservation ideas and project management skills. On the one hand, their skills and methods of management gradually improved through learning the World Bank-introduced management system and IT skills (Interviews, local staff, Ordos, 17.09-22.09. 2014). Feng recalled that he attended workshops for learning computer-based management tools and software, and was sent abroad together with other staff to learn different skills and ideas, in order to connect with international management ideas and practices (Interview, local official Feng, Jungar County, 19.09. 2014). In addition, judging from the World Bank report, at the local level, senior officials received training in project planning and management; technical staff learned improved methods of watershed planning and design, such as computer-based management and information systems GIS (Geography Information System) and CAD (Computer Aided Design) (World Bank 1994). However, local staff did not appear to have received any training in skills and knowledge for promoting participation and empowerment of farmers and their

communities. They therefore lacked the skills and abilities necessary to promote a real sense of participation in local communities. It was my general impression that local project staff informants did not seem to have a real and deep understanding of the 'participation' required by the World Bank, but merely perceived it as getting farmers involved in the project activities to fulfill the requirements. This may partly be due to the fact that they lacked training in participatory approach in the Western sense.

Attitudinal blockages: Local project staff had certain doubts regarding the capabilities of local farmers. From field observations and interviews with local project staff, local farmers were perceived in general as backward and uncivilized, a common prejudice towards rural people (farmers) in Chinese society. When discussing financial management with local staff regarding the World Bank's initial idea, it became clear that the local government was responsible for allocating money to specific investments in the local project area, including the funding paid out directly to individual farmer households. According to said staff, if the project had given funding directly to local farmers and allowed them to make decisions on how to use it, they would have spent the money on wine (Interview, official, Ordos, 17-22.09.2014). When it came to environmental protection, another former project staff member did not think farmers were capable of acquiring high-enough consciousness and environmental awareness. Rather than being motivated to protect the environment, they were more driven by economic interests (Interview, local official, Dongsheng, 17.09.2014). It seems that local staff did not really trust and believe in farmers' skills and abilities to realize their own development. This kind of attitude among local project staff was very likely to harm the process of promoting local participation.

Financial constraints: According to official Zhu, financial constraints influenced capacity building and a participatory approach in local project villages. Community participation projects usually require a large investment of time, effort, and money. Several village leader informants mentioned that project funding was limited during the village level implementation. Thus, the project could not provide equal support to everyone in the villages.

In summary, local governments in the LPP seemed to lack certain capabilities in promoting bottom-up community participation. In the broad context of community participation in China, local governments play a crucial role in facilitating or

obstructing appropriate, effective, and meaningful community participation at the local level, according to Plummer and Taylor (2004a) [62]. Furthermore, although there may exist a strong ambition and commitment at the national level, very often there is not the same level of commitment at the local implementing level (Plummer and Taylor 2004b). In general in China, local government officials involved often lack incentives to engage with the goals of participatory approaches (Plummer and Taylor, 2004b). This was also the case in the LPP. Therefore, capacity developments for community participation was, and still remains, slow.

Capacity Building and Empowerment of Farmers

On the other hand, local governments to some extent facilitated empowerment of farmers, particularly project contracted farmer beneficiaries, through organizing and providing them training and instruction.

A general overview of farmer beneficiaries' situation has already been given during the discussion of implementation of the LPP in chapter 4. They had access to resources through the project intervention. They were provided loans and other funding as financial support through the project. In addition, they received training to learn new skills and knowledge. Through interaction and communication with instructors, they obtained necessary information regarding the project that could potentially provide opportunities for them to make a meaningful change in their lives. According to Friedmann (1992), social empowerment is gained through access to resources, including information, skills, knowledge, finical resources, as well as participation in social organizations. The project-contracted farmers obtained access to these resources through the LPP, which had positive influences on their access to social power, as the case of Meng, a project-contracted farmer informant, shows.

As mentioned in chapter 4, Meng recalled that he learned greenhouse farming under the training program provided by the LPP, during the 2nd stage. He said he noticed that greenhouse farming was a growing trend in local agricultural development. Therefore, he was actively participating in training programs and communicating with instructors.

[62] This is an academic book discussing issues and processes for capacity building for community participation in China. The book includes several case studies of community participation projects (on rural environment and development) in China.

> The instructors came to one village after another and gave on-site instructions. At that moment, I didn't have any experience, and therefore I listened to [the instructors]. Combined with these theories [taught by them], I practiced growing different vegetables, exploring and improving the techniques. (Interview, farmer Meng, Jungar County, 19.09. 2014)

During the interview, Meng noted that the LPP provided an inspiration and an opportunity for him to improve his capabilities and make a positive change in his life through his own hard work.

> The World Bank didn't grow the food for you. You had to make an effort and work hard. Otherwise no matter what the World Bank has constructed for you, nothing will come of it.(Interview, Meng, Jungar County, 19.09. 2014)

He contracted land and took up project loans, and conducted land rehabilitation work. Through his own efforts, he and his wife improved their family economy and living conditions. Since the project period, they have been engaged in fish farming and greenhouse farming (both vegetables and fruits). They have made profits from these family businesses. Recently, due to a lack of labor and energy for running a growing business, Meng has been in cooperation with a local agriculture production company. Due to his extensive farming skills and experiences, he has become the manager or technical consultant of the company, in charge of farm production. The interview was held at his house. Thus it was possible to walk around his farmland, where he spoke of his plans to grow grapes next year. According to him, growing grapes would be a new thing in the area; there would be local demand for grapes. Second, the local government was now supporting this kind of farming experimentation. Third, he had learned some skills and knowledge on grape growing, and so appeared quite confident.

From the interview and my observations, Meng showed confidence in his farming abilities, which may be the result of success in his farming business. He was psychologically empowered, producing self-confident behavior. According to Friedmann (1992), psychological empowerment can have a positive impact on individuals' access to social and political power. In the case of Meng, he also showed a strong interest in obtaining new information and learning new technologies and methods for agriculture. Besides receiving the township-organized training and promoted information, he particularly enjoys watching TV programs about science and agriculture, which he reflects on in relation to his own work. This is a common case among several other farmer beneficiaries as well. They noted that they paid close

attention to this kind of TV program, in order to learn new methods and skills by themselves. Thus, these farmer beneficiaries were empowered through access to information, skills and knowledge. As mentioned previously, most farmer beneficiaries interviewed during this study have relatively high social and political status, as they were either village leaders, committee members or village production team leaders. Some held these positions during project implementation, while some gained the position after the end of the project. Thus, their social and political power increased throughout the project.

Through attending training programs organized by local governments, farmer participants developed from having a passive 'recipient' learning role to an active 'self-learning' role, which in turn also helped inspire others to take up learning of improved agricultural practices and methods. Through practices they mastered new skills and knowledge, as well as obtained confidence. They gradually started taking initiatives for their own livelihood development. In other words, they were gradually empowered, in line with the World Bank's notion of participation in the sense that there is "a continuum along which the poor are progressively empowered" (World Bank 1996:8).

However, such training opportunities were not equally distributed in local project villages. According to evidence presented in chapter 4, most local farmers who received so-called 'training' were told to follow instructions during the constructing of water and soil conservation works. They were hired as labor for the LPP, and were merely doing their 'jobs'. On the positive side, these farmers learned some new farming and livelihood practices from farmer beneficiaries. Through applying these methods and techniques during the LPWPR, they now actively use these methods and techniques for livelihood development and water and soil conservation, even 10 years after the end of the project. On the negative side, the hired labor's experiences of capacity building and empowerment were generally less extensive than for project-contracted farmers.

5.3.3 Gender Equality and the Empowerment of Women

Gender equality and the empowerment of women is a key priority of the majority of international institutions, and is one of the United Nations Sustainable Development

Goals[63] (UN Women 2015). Although the issue of gender was not directly included in World Bank project reports, it was an explicit requirement by the World Bank that the project include women's participation during project implementation, according to local project staff informants. Additionally, according to the Chinese official documents, women's participation was considered a component of the implementation of the LPP, targeting women as a group of project beneficiaries, in order to improve their quality of life and enhance their capabilities, thereby empowering them (Ordos PMO 2005; CPMO 2010). According to the same Chinese national level government documents, efforts aiming to support gender equality appeared to be a key achievement (CPMO 2010). During fieldwork, some local official project reports and documents were found, demonstrating government practices and achievements on the issue of gender (Ordos PMO 2005; CPMO 2010). According to the Ordos project report, the LPP paid attention to rural women's status, as well as their rights and interests, something previous rural development projects at the regional level had not addressed (Ordos PMO 2005). My field observations do not confirm that this was the case. According to a limited number of rural female informants, the empowerment of rural women in project areas of Ordos seems to have been less than effective.

Women's Involvement in the LPP

The project seemed to treat rural women in the same way as other farmer laborers as discussed previously. The official Ordos report indicated that women were an important source of *labor* during construction projects, accounting for 70% of labor contribution during the LPP, amounting to a rate of *participation* of about 31.5% of all rural women in Ordos (Ordos PMO 2005). This local government report points out that women were an important part of the rural labor force, corroborating the same claim as the national level government document, CPMO (2010). According to Chen, Wang and Wang, in all project areas, 70% of rural participants in project implementation were women, due to many men having left to seek employment as migrant workers in larger cities (Chen, Wang, and Wang 2004). According to local project staff informants, women participated in construction work for the LPP, as they were part of the rural labor force at the time of project implementation on almost equal terms with the men (Interviews, local officials, Dongsheng County, 17.09. 2014). Also, according to rural female

[63] http://www.un.org/sustainabledevelopment/gender-equality/ accessed on 19.01.2016

informants in the Ordos project areas, most were hired as laborers working at planting trees during the LPP.

Training of rural women was explicitly required by high-level authorities during local-level project implementation, with the aim of improving women's social status. The Ordos report stated that the founding of PRC had greatly changed women's status both in society and family. They were liberated from the traditional household structure of *nanzhuwai, nüzhunei* [64] (men take care of outside business, women take care of household affairs). It was one of the LPP project's tasks to attempt to further improve women's social status through organizing training for women to enhance their capacities. Over six years, 2000 women received training, a figure amounting to 60% of the rural female labor force. According to the report, women mastered skills and gained further knowledge and experience, actively participated in implementing construction projects and were willing to receive outside information and knowledge. They were clearly not only traditional rural housewives, but also active participants in the rural modernization process (Ordos PMO 2005).

However, during fieldwork I did not find a single female informant who participated in training workshops; rather they only received instructions at project construction sites. Ling remembered that she and other village members had planted trees together about 20 years previously for soil and water conservation. She did not really receive any formal training, merely some instructions at the project sites (Interview, farmer Ling, Dalad County, 18.09.2014). Ping recalled that there was a seabuckthorn project, and local people received training, including women. However, she did not attend the training workshops, as she was busy with other housework, and so was not able to find the time. According to her, most people attending the training workshops were young. She said that she was too old to learn new things. It was young women who attended the training workshops organized in the towns and villages at the time (Interview, farmer Ping, Ejin Horo County, 25.09.2014). The female informants' participation in training programs was limited, which to some extent was due to them being occupied with housework at the time. This supports Friedmann (1992)'s point about women's lack of time as a hindrance for fully participating in the project, resulting in unequal access to potential benefits.

[64] This is a local saying of the roles of men and women in Chinese traditional society.

Although the female informants in this study did not attend any training workshops, some women joined the training workshops at the time, according to the official Ordos report. Those who did participate may have been empowered to some extent. Official Zhu provided an example of empowerment and collaboration amongst women. In one project village, an orchard development project was implemented, involving a grafted seedling-training program. A local female farmer (around 40 years old) received training in grafting seedlings for orchards, and became quite famous among her neighbors due to her excellent skills, which attracted a few local women who wished to learn from her. They together made up a professional team for grafting seedlings and started to deliver these skills and services in surrounding local communities. Through training, these local rural woman gained knowledge, skills, and self-confidence to implement alternative livelihood practices. In the meantime, she also influenced changes in the behavior of other local rural women by teaching them the knowledge and skills she herself received through project training (Interview, official, Xi'an, 28.07.2014). According to the local staff informant, it was considered a project strategy to train a few female leaders in each of the communities, who could further influence other community members. This strategy correlates naturally with the theories developed by Friedmann (1992), regarding women's collective self-empowerment. However, considering that this informant was a project official, there may be an exaggeration in this particular case, or there may be an intention by the official to show off the success of the LPP. However, the possibility also exists that the case was truly a result of farmers' training and capacity building.

Changes to Women's Social and Family Status throughout the Project?

The official Ordos report further claimed that most women had been in charge of family properties and had rights of production, meaning that their improved social and educational level would have a positive influence on other family members. It could therefore improve regional *renkou suzhi* [65] and promote socio-economic sustainability. The reports indicated that the women's status in the family and broader society were improved. However, from field observations, it seemed that most female informants were subordinated to their husbands. I found most local female informants

[65] 'Population quality'. According to official Chinese perspectives, a person's 'quality' is defined by their level of education, ambition and social status.

economically reliant on their husbands. During my visits to households in local villages, with both husbands and wives at home, interviews or conversations were mostly conducted with the husbands. The wives were either sitting by his side, mostly listening to the conversation or doing some housework, for example taking care of grandchildren, or preparing tea and snacks for the guest. Therefore, several interviews or chats with women were conducted while their husbands were not at home. In one project village, I talked with the village women's group[66] leader, Gao, a woman in her 40's. She recalled that there was a livestock development project during the LPP. However, she did not have a clear memory of the project, but said that her husband would know more about it (Interview, female villager, Ejin Horo County, 24.09.2014). An opportunity presented itself to talk with four rural women at their farmland or houses while their husbands were not present. All female farmer informants seemed to have less knowledge of the LPP than male farmer informants. In some cases, both male and female informants did not know about the LPP at all. The common response among rural female informants was either that they participated, but only through labor contributions such as planting trees for project construction work, or that they didn't know about the project at all. Women's subordination is often accounted for culturally learned attitudes and values (Friedmann 1992). According to Friedmann, traditional Chinese culture contributes to the shaping of these values and attitudes:

> Confucian values stress social cohesiveness and harmony, and the individual's subordination is seen not to the patriarchy as such but to the family. Personal meaning and fulfillment are found in filial loyalty and in shouldering such family responsibilities as custom decrees, with age being a major variable in addition to gender…As in the system of Confucian values, filial 'piety' is expected: a mother's sacrifice for her children is expected to be reciprocated once the children have grown up (Friedmann 1992:114).

Thus, most female informants' behavior of subordination to their husbands can partly be explained as related to culturally learned values and attitudes.

Challenges of Rural Life: Perspectives from Female Farmer Informants

During fieldwork, rural female informants who were middle-aged (50-60 years old) expressed grieving/frustration regarding their current living conditions, and expressed a need for change.

[66] Each village committee has a department for women's affairs.

First, they complained that they were very occupied with family household work. Middle-aged rural women play an important role in managing small, rural households in local areas. They aid with family housework, farm work, taking care of other family members, and also try to obtain some off-farm work to increase household income. According to Ling, her daily life was very busy:

> Every day, I tend the farmland, take care of my grandsons, and plant vegetables. I don't have time to rest and there is no weekend for me (interview, farmer Ling, Dalad County, 18.09. 2014).

On the day of the interview, Ling got up at 7 in the morning. After finishing some housework, she arrived at the farmland around 11 am, 1 or 2 hours later than usual. She would go back home around 4 or 5 pm. During the busy season, she would usually get up at 6 am. Ling did not have much education and rarely participated in community activities. She did not have much leisure or entertainment activities outside of watching TV. Her main responsibility was to take care of her grandchildren, a situation quite common for women of her age in local villages. Another female informant, Ping, also expressed how everyday life was stressful. Her daily activities included taking care of her youngest grandchild, some housework, and feeding pigs and chickens, growing grass, corn, and potatoes. While she tended housework and some farm work, her husband mainly worked for the village transportation team, a situation quite common for male farmers in the village (interview, farmer Ping, Ejin Horo, 25.09.2014).

Secondly, rural female informants in their 50's-60's complained that farming was hard work, preferring off-farm work. Ling complained that the local economy was not as good as it used to be several years ago, and so there were less (off-farm) work opportunities.

> A few years ago, it was very easy to find work around here, when the mining business was very good. Usually (people) could earn 100 yuan per day. Now it is only about 20, 30, 40 or 50 yuan per day depending on the type of work (Interview, farmer Ling, Dalad County,18.09.2014).

Ling no longer had off-farm work and had to go back to farming. Her farmland was a dry land, demanding much more work than water-harvesting farmland. She expressed a strong interest in having more opportunities to engage in off-farm work, earning money. According to Ping, most village farmers had moved to nearby towns or cities. However, she and her husband hadn't moved to the towns and cities yet, because they had to take

care of their sheep and cows in the countryside. She expressed a desire to get rid of their livestock soon, so she could have some freedom rather than being stuck in the gully, taking care of the animals.

> Those who went out can earn more money. It is much easier to earn money outside, not here through farming. Farming is busy and hard work, not comfortable. I don't have any freedom as I have to stay here and watch these animals (Interview, farmer Ping, Ejin Horo County, 25.09.2014).

In fact, Ping and her husband planned to sell the cows and move to town within the next year or two. She then hoped to find a cleaning job, expressing a feeling of admiration for those who left the village and went to live in town.

Additionally, Ling mentioned lack of access to information and support. She wanted to raise sheep, but lacked the financial resources to purchase sheep and there was no way for her to find a solution to the problem. It also came out during our conversation that she did not know about the policy of farming compensation, a governmental financial support and incentive program for farming. The reason why she lacked access to information was partly due to her low educational level and the fact that she couldn't read or write, which limited her means to seek out support for dealing with her struggles. Ping also expressed that she had a low level of education, and could only read a few characters. Therefore she did not have the opportunity to find a better job, apart from cleaning. This exemplified the lack of self-confidence stemming from the lack of education.

In daily life, much is demanded of these female farmers, both physically and psychologically. They hardly have any free time, they are less free to leave the immediate vicinity of their homes compared to the men, and often have a lower educational level. Friedmann (1992: 112) claims that in general "the structure of opportunities available to women discriminates against them, and relative to men, women have substantially less access to the bases of social power and productive wealth."

While not denying the value of the LPP to rural women in the form of self-empowerment, it is important to be aware of the ways in which the projects training and developmental activities did not challenge existing gender relations and institutions of governance. As seen in the current situation of rural female informants, they remain

mainly occupied with housework, and their activities are limited to the vicinity of family and home. Although most rural women have been actively engaging in off-farm work, particularly at local mining sites, their work opportunities remain limited compared to men, both in terms of the types of work and the age at which they are no longer able to hold an off-farm job. Society has limited work opportunities for older women.

In summary, according to my findings, female farmer informants' participation seemed low, which can be explained using several accounts based on field observations and interviews. A practical reason appears to be lack of time and access to information (due to a low educational level). Gender inequality appears to be another reason, which is deeply rooted in the system and structure of Chinese society. In addition, personal reasons may exist, such as a lack of personal interest and motivation. These reasons were interrelated, reinforcing each other, contributing to the result of low participation in training workshops among village women in Ordos project areas. On the other hand, the LPP improved social, economic, and living situations in the project villages in Ordos. Farmers had access to resources at various levels depending on their different situations. Women, as part of rural households, also shared certain benefits from the project interventions, such as increased (off-farm) work opportunities and income, saved time for farming, improved access to, and better health care and education etc. This is in line with Chen, Wang and Wang (2004)[67] and Hiller's (2012) findings.[68] Thus, while recognizing the limitations of women's empowerment in Ordos project areas, it is also clear that the project targeted rural women's practical needs to access the basis of social power and productive resources, as Friedmann (1992) states is central to achieve empowerment.

The official Ordos report includes specific numbers tracking female participation and training. The report focuses on tangible tracking, using specific metrics and figures to support claims of progress, such as presenting information on the number of women

[67] The study on the LPP conducted a field investigation at one of the project counties in Shanxi province after the completion. It particularly included a discussion on impacts of women.

[68] Hiller (2012), in his dissertation, reported on the LPP through a case study in a project county in Gansu province. He conducted a women's focus group interview, as well as surveys, in order to investigate labor and gender impacts of the LPP. According to his findings, in general, the quality of life for women was improved. He included an overview of women's daily life activities. There were various time- and labor-saving aspects to each of the tasks in everyday life according to his female participants' views. For example, the focus group mentioned that time for collecting water was reduced by 20% after the LPWPR (Hiller 2012).

who have received training. However, this focus only on numbers provided limited information, without much detailed concerning the quality of training. From the official Ordos report, it seems that the official motivation for encouraging women to engage more with the outside world and learn new skills was to enable them to contribute to project construction, as well as rural modernization. Combining the study of the official Ordos report with information garnered from various informants, as well as other scholars' studies on the LPP, it is possible to suggest that the empowerment of rural women in the Ordos project area was limited. As discussed, the reasons for the limitation can be attributed partly to the fact that the project did nothing to change the structure of opportunities for women, as well in culturally rooted attitudes and values. However, the number of informants in project villages was limited, and cannot be considered representative for all women who participated in the LPP at Ordos, nor for project areas where women's empowerment perhaps was greater than at Ordos. However, these female informants' perceptions and experiences may provide some useful information regarding on-the-ground realities of women's participation.

5.3.4 Power, Empowerment and Participation

The implemented participatory ideas and practices led to some empowerment processes, particularly for project contracted farmer beneficiaries, yet were constrained by a wide range of factors situated at the local, national, and international levels. However, project interventions were not effective at promoting a more bottom-up approach (or a Western idealized notion of participation with the spirit of democracy and equality, etc.) for rural community development. During the LPP, in Ordos project areas, most ordinary farmers seemed to be involved in the process of planning and implementation through passive forms of being consulted, being informed, being hired, being taught, being persuaded and being distributed rights and responsibilities for natural resource management. They did not appear to feel ownership of the project, but merely experienced themselves as participating in a national, top-down project to improve their livelihoods and environment.

Thus, the idea of participation during the LPP is very similar to the revised neo-liberal thinking, defined by Mohan and Stokke (2000) as a 'top-down' strategy for institutional reform. This implies an effort made by state agencies and collaborating non-governmental organizations to improve the efficiency of institutions, and to include

target groups (the poor) in the development process. Mohan and Stokke (2000: 249) state that, in this sense, participation and empowerment is based on "a harmony model of power". Power can be increased through personal development of individual members of a community. An individual member can grow his or her power through successful pursuits of individual and collective goals. Following this model, empowerment of the powerless may be realized within the existing social order and structure. Empowerment of the powerless doesn't necessary affect the power of the powerful (Mohan and Stokke 2000). This harmonious model of empowerment is similar to the concept of 'power to', in which power can grow infinitely with individual efforts and where personal growth doesn't negatively affect others (Nelson and Wright 1995a). In this way, empowerment through the LPP can be understood through farmer beneficiaries being empowered through the development of their own capabilities and confidence. However, this empowerment had certain constrains as it also created a widening economic gap among local farmers (e.g. contracted farmers versus ordinary farmers mainly as project labors). Some farmers were left out because of their cautiousness to take up loans, and limited funds for loans available in local villages. In this sense, the harmony model of power was rather less than harmonious.

According to the second model, 'power over', addressed by Nelson and Wright (1995a), there seem to be three types of power relations at the local project implementation level. First, during the local level implementation process, project authorities held power over participating village farmers, making farmers comply with what they would not independently have done in terms of changing their land-use patterns and agricultural and livelihood practices. Secondly, project authorities affected local farmers in a manner contrary to their interests, such as closing certain project areas and implementing a grazing ban policy. Thirdly, project authorities exercised power over farmers by influencing, shaping, or determining farmers' roles during project implementation. These three types of power relations were intertwined during the project, shaping 'participation' at the local level. In this sense, the 'power over' relation may be viewed as "coercive, [and] centered in institutions of government", although it may also expand into broader structures of society (Nelson and Wright, 1995a: 9).

On the one hand, project authorities interpreted participation as a tool for capacity building and empowerment of local communities and farmer participants. However, 'participation' also acted as a mask of good governance with a human-centered

approach and ideology for local development, legitimizing the project intervention at the local level. Under this mask, a political intention existed where high-level stakeholders opted to utilize the participatory approach to ensure compliance with government policy. As a result, the impact on empowerment during the LPP through the use of a participatory model was reduced. As noted by Nelson and Wright (1995a: 11), one of the dangers of 'participation' is its use in disguising "continued top-down attitudes and approaches".

In addition, the 'participation' in the LPP was influenced by the Confucian cultural heritage of China, particularly in terms of the concept of 'harmony'. Firstly, at the local level, various stakeholders were involved, playing certain roles in the process of project implementation. However, their roles were largely defined within a strict top-down, hierarchical system setting people/things 'in order'. This is in line with the Confucian idea of 'maintaining a social and political order' in order to achieve a state of 'harmony'. Secondly, local-level communication was partially characterized by 'mobilization' and 'persuasion'. This can be traced to the influence of some Confucian cultural ideas as discussed in chapter 4 (p.70). Thirdly, Confucian culture has a long tradition in emphasizing *xiu shen* (self-cultivation), which plays a role in empowering local farmers and officials through learning and training. Thus, when the Western concept of 'participation' was translated to and practiced by local Chinese communities, it may have been perceived as an extension of the local cultural idea of 'harmony'.

5.4 Concluding Remarks

This chapter has argued that the LPP was actually a top-down, bureaucratically operated project, implementing a local, Chinese translated and adapted version of participatory approach as introduced by the World Bank. Local official strategies of increasing farmers' 'participation' was used during the LPP: local government institutions acting as intermediaries between the World Bank and participating villages; local staff and officials listening to and consulting local villagers; village leaders/committees persuading and organizing farmers' 'participation' in the LPP; and farmer beneficiaries working as a showcase to influence other village members' behavior and practices. Consequently, both farmer beneficiaries and farmer laborers were, in a limited sense, 'empowered'. Through training and capacity building, they have changed their

behaviors and attitudes, from passive learning and following, to active exploration and use of the methods they have been taught. These were feasible strategies used by the authorities in delivering the development interventions as well as fulfilling the project tasks and requirements. During local-level implementation, the state government and the World Bank handed over power to local communities in conducting specific project policy implementation, but with control on macro-level development plans and direction, providing broad blueprints and guidelines.

This chapter has also presented and discussed the gaps between largely the Western-inspired rhetoric of participation and the reality on the ground. I have explained the ineffectiveness of empowerment regarding the political nature of participation itself, and institutional procedures of operating this concept in practice. Additionally, I have argued that 'participation' in the LPP was accommodated within a local context, strongly influenced by the historical experiences of mass mobilization and collective action during Mao's era, as well as China's unique cultural, political, and economic environment. At the same time, participation was constrained by its own fundamental problems, rooted in the dominant capitalist system. Thus, western-inspired rhetoric of participation contrasted – and still contrasts with the reality at various operational levels of the LPP.

The effectiveness of participation in the LPP can be interpreted in different ways, depending on which perspective one takes. This study has recognized the Chinese character of 'participation', which may be seen as the central state mobilizing or managing farmers' 'participation' through local cadres, with the ultimate supervisor being the central government. At the same time, however, we can talk about bottom-up participation on a small scale, which contributed to the sustainability of the project. The truth is that top-down mobilization outranked bottom-up participation of villagers, as villagers did not have the option to reject participation as understood and directed by local governments, and implemented by village leaders and communities.

6 Conclusions and Outlooks

As I have argued in the introduction, ecological modernization is based on a synergy between environmental protection and economic growth, considering that environmental protection can generate long-term economic benefits. In this study, I have argued that the LPP, as a Chinese early experiment in ecological modernization and sustainable development, has partly achieved its dual objectives of ecological protection and economic development. However, it has not been without some constraints and limitations. The mechanisms of the success of the LPP were complex and diverse, including several factors situated within the local context. Significantly, the project has introduced and promoted modern agricultural practices and technologies, as well as a market system at the rural areas for economic development. Further, the project has given great attention to environmental conservation, and improved local ecological environment. On the other hand, the findings have disclosed tensions that persist in the Chinese discourse and practice of ecological modernization and pointed to challenges that lie ahead.

The study identified that the three institutional interventions—'land contract', 'integrated watershed planning', and 'grazing management'—were the driving forces of changes to local land use patterns and agricultural systems, as well as farmers' behavior and practices. The novel political, economic and communicative strategies were applied in implementing these interventions at the local level, contributing to the effectiveness of the project implementation. Through examining the local level implementation process, this study found that: 1) Although the World Bank was an important actor behind the policy-making during the project, its requirements and rhetoric were translated into Chinese terms; 2) When implementing these polices at the project villages, local governments both provided guidance and support for the project interventions (the deployment of incentives) and used their sovereign power (e.g., in the implementation of grazing ban); 3) In particular, the village leaders/committees acted as a collective actor, mediating the interests of local governments, famers and themselves.

I have argued that 'participatory approach', introduced and required by the World Bank, was also an important project component. I have identified the gaps between the

rhetoric of participatory approach required by the World Bank, and the reality on the ground. Some elements of participatory approach were implemented during the LPP, contributing to some levels of empowerment among local famers. However, the achievement was limited, due to factors such as low capabilities of local officials and staff in promoting community participation and empowerment; the project constraints with funding, time, and personnel; and the historical, political, and cultural factors working against grassroots participation in the LPP. On the other hand, a positive outcome of the applied 'participatory approach' in the LPP was a great degree of official responsiveness to local farmers' needs, providing relevant governmental guidance and support services, as well as training programs for local farmers. The effectiveness of village participation needs to be understood within local contexts, especially in the political and cultural contexts. It can be argued that the gaps resulted from the political nature of participation for development itself, as well as the Chinese interpretation and implementation of the western idea and practice within their practical context. In general, 'participation' in the LPP, as a western-oriented development ideology and methodology, was rather narrow and localized, adapting to local political, social, cultural and economic conditions.

My research has particularly focused on the challenges and problems of local ecological modernization process, using the example of the rural areas of Ordos. According to the field observation, the local rural development in Ordos seems to have followed a trend of agricultural industrialization and rural urbanization, replacing previous smallholder agriculture development. More companies and industries have entered into the local market, using local resources. On the other hand, more and more farmers moved into nearby towns and cities, giving up farming practices. In some areas, farmers have moved into new houses or apartments in the form of townhouses, which were built in the vicinity of the old villages, or on the outskirts of the countryside. As expressed by many local official and village leader informants, these changes may bring potential problems for rural governance. In addition, with changed social and environmental conditions, local communities began to gradually adjust to the grazing restrictions. Traditional grazing practices (such as rotational grazing) tended to be utilized in this adjustment. On the other hand, grazing restriction remains a crucial policy for ecological protection, particularly in ecologically vulnerable areas with severe soil

erosion, according to the Water and Soil Conservation Law of PRC [69]. In the meantime, according to the law, local governments have a certain power to re-interpret and implement the policy at the local level in light of respective actual conditions. Thus, how local governments will act within the changed local social, economic and environmental conditions in terms of the implementation of the grazing ban remains an open question.

Furthermore, I have argued that the LPP is an example of ecological modernization, which has drawn on the existing institutional practices. The Chinese society and the people have been influenced by the cultural traditions of Confucianism, in terms of keeping a political and social order, as well as maintaining harmony between humans and nature. These ideas may have acted as Chinese filters, modifying the western practices and ideologies. An investigation on the role of the cultural traditions in shaping the Chinese discourse of participation and sustainable development would be an interesting topic for further research.

This case study has demonstrated some tensions inherent in the concept and practice of sustainable development in China, which were prominent at the time of the project and remain a challenge today. Thus, the LPP can be treated as a microcosm for understanding these tensions and challenges, shedding light on the reality of local rural development for sustainability in China. However, more research and investigation is clearly needed to expand and enrich our understanding of China's visions and strategies for ecological modernization and sustainable development.

[69] The Water and Soil Conservation Law of PRC: Article 35 and Article 39 http://www.gov.cn/flfg/2010-12/25/content_1773571.htmArticle 35 and article 39 access on 01.05.2015.

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Appendix

Table 3: Interview Overview

Informant	Position	Location	Date
Zhu	Regional official (project staff)	Xi'an, Ordos	28.07,18,19.09. 2014
Feng	Local official (project staff)	Dongsheng Jungar	17,19.09.2014
Qian	Village leader	Dongsheng Village B	17.09.2014
Bai	Local official	Dalad	18.09.2014
Xin	Ordinary farmer (project labor)	Dalad Village Q	18.09.2014
Ling (female)	Ordinary farmer (project labor)	Dalad Village Q	18.09.2014
Jiang	Local official (project staff)	Jungar	19.09.2014
Huang	Local official	Jungar	19.09.2014
Wu	Village leader	Jungar Village A	19.09.2014
Jun	Contracted farmer	Jungar Village A	19.09.2014
Meng	Contracted farmer	Zhunge' er Village H	19.09.2014
Hu	Local official (project staff)	Ejin Horo	22.09.2014
Fang	Contracted farmer	Ejin Horo Village Y	22.09.2014
Jin	Local official (project staff)	Ejin Horo	23.09.2014
Wang	Ordinary farmer (project labor)	Ejin Horo Village X	24.09.2014
Tan	Village leader	Ejin Horo Village X	24.09.2014
Gao (female)	Women's group leader	Ejin Horo Village X	24.09.2014

Yu	Village leader	Ejin Horo Village Y	25.09.2014
Bing	Contracted farmer	Ejin Horo Village X	25.09.2014
Ping (female)	Farmer labors	Ejin Horo Village X	25.09.2014
Niu	Ordinary farmer	Ejin Horo Village X	25.09.2014
Han	Ordinary Farmer	Ejin Horo Village Y	25.09.2014
Ma	Ordinary Farmer	Ejin Horo Village Y	25.09.2014
Sun	Local official(project staff)	Ejin Horo	26.09.2014
Hong (female)	Ordinary farmer (project labor)	Ejin Horo Village Y	26.09.2014
No. 1	Local official	Ordos	17.09.2014
No.2	Local official	Dongsheng	17.09.2014
No.3	Local official	Dongsheng	17.09.2014
No.4	Village leader	Dongsheng	17.09.2014
No.5	Ordinary farmer	Dongsheng	17.09.2014
No.6	Ordinary farmer	Dongsheng	17.09.2014
No.7	Local official	Dalad	18.09.2014
No.8	Ordinary farmer	Dalad	18.09.2014
No.9	Ordinary farmer	Jungar	19.09.2014
No.10	Ordinary farmer	Ejin Horo	22.09.2014
No.11	Local official	Ejin Horo	22.09.2014
No. 12	Ordinary farmer	Ejin Horo	24.09. 2014
No.13	Ordinary farmer	Ejin Horo	26.09.2014

Figure 6: '*Yibayitang*' Model in Ordos

Figure 7: Project Rehabilitated Area- Afforestation in Ordos

Figure 8: Participant Observation- Harvesting in Ordos

Figure 9: Local Grazing Management - A couple who are hired by a farmer to tender his livestock in Ordos

Figure 10: Industrial Agriculture (Fodder) in Rehabilitated Project Area in Ordos

Figure 11: A Mining Industry Site in Ordos

UiO : University of Oslo
Centre for Development and the Environment

TO WHOM IT MAY CONCERN:

Date: 3 September 2014

Re: Arne Naess Project at the Center for Development and the Environment, the University of Oslo, Norway
***Researcher:* WEI GUO**
***Project Title*: Loess Plateau Project in China: 10 Years On**

To Whom It May Concern:

I hereby confirm that Wei Guo is a researcher at the Center for Development and the Environment, the University in Oslo, Norway. She is involved in the international Arne Naess project concerning the ecological rehabilitation of the Loess Plateau. The Chinese Loess Plateau project is one of the most impressive ecological achievements of China, and it would be commendable if Wei propagated this achievement to the readers in the English language.

In order to complete here research, Wei is very much dependent on the access to empirical data and conversations with the local inhabitants. We would therefore kindly ask you to facilitate her work and make the necessary material available to her in the course of her work.

Kind regards

Nina Witoszek

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Figure 12: Fieldwork Application Letter