

CHAPTER VI

HISTORICAL ANALYSES OF LEGITIMATION OF POWER IN LOCAL WATER RESOURCE MANAGEMENT

Legitimation of power as a process can be achieved through four levels of institutional practices which are structure of power and interests, rules making, performance and accountability. In this case study, first, Zengchong village is an arena for local water resource management which is impacted by state policies, market mechanisms and by local context. The institution, *Kuan*, gives a lens to study how cultural principles have formed local water resource management. Second, these institutional practices can be divided into four hierarchical elements. The structure of power and interests is the fundamental element since it potentially influences on the other three. Rules making and performance are the elements that put power and interest structures into practice. The last element is accountability which is used by water users to check and balance the leader's power, and also links local leaders to high-level government.

In practice, all these elements were closely connected and influenced each other. A weakness in one may be compensated by a strengthening in another. Water institutional sustainability can be strengthened through a process of local legitimation. This is, generally an ongoing interaction of four levels to form local integrated institutional process.

There are four stages in Zengchong village's history. In each stage, different local water institutions were legitimated by their institutional practices. So four institutional processes were achieved in these four different stages.

6.1 Clan Stage

6.1.1 Structure of power and interests

The clan stage is the first historical period in Zengchong village. In this stage *Kuan* started to have its form and had two functions. At first, *Kuan* was the Dong people's defense organization, which united different villages based on their consanguinity of clans. Secondly, *Kuan* was an autonomous institution made and executed by local people themselves to manage their affairs. In each village, *Kuan* leaders from different clans managed their affairs by using *Kuan* law. So the clan was the base of *Kuan* in this stage.

- Local power structure

The practices of power in this stage were defending against outside attacks, participating in *Kuan* meetings, joining spirit worship ceremonies and so on. All these activities were arranged by *Kuan*. As I mentioned above, there were four clans in Zengchong village. In these activities, the four clans interacted with each other and endowed different social positions ranked as *TouGong*, *SanShiJia*, *SanGong* and *TouChao*. This clan social ranking was the power structure of *Kuan*, which could be indicated by *Kuan* committee structure and others indicators.

Moreover, a cooperative structure can also be found in this village. Historically, this village was attacked a few times by the central government and other ethnic groups. Their cooperation was forged through having to unite together using *Kuan* to defend against outside intervention: *TouGong* was the big brother folded around the others to protect the other three clans and all these four clans lived together and combined together to join the protection activities led by their *Kuan* committee. This cooperative idea can be demonstrated by a local song which has been maintained by old people up to the present as follows:

*We are four clans in Zengchong village,
Like four brothers held by one mother.*

Four brothers should cooperate like fingers of a duck's claw,

Which are connected together.

We shouldn't like the fingers of a chicken's claw,

Which are separated.

(By: Shi Ruiqing etc.)

This cooperation idea also ensured the survival of all the clans. They thought of the four clans being like the four plinths of a drum tower. Absence of anyone would break down the drum tower. They also avoided conflicts among clans. In the coming of every New Year, the young from all four clans sing together, and the girls and boys in different clans fall in love. Inside the village, Villagers would marry within the village but members of different clans. All these arrangements kept the four clans connected closely and avoided conflicts.

In this stage, outside powers could not penetrate the village. Although the central government and other ethnic groups wanted to control the village, they were all defeated by the practice of *Kuan*. So *Kuan* was the only institution that was practiced in this village.

- Structure of interest

In this stage different water sources had different functions. An arrangement of agricultural production was matched to the rainy season, the main water source for crop growing in this stage. By adjusting the height of ditch dam of the terrace, spring water was used for irrigation and fishery. River water was used for fishery, domestic use and mouse and fire prevention. The length of the river inside the village was broken into four sections, each allocated to a different clan.

Grain was the main livelihood of the local people. Since agricultural productivity was very low, there was very limited grain for sharing to members. Hence, one of the villager's basic needs was water for grain, and also water for domestic use. From the

viewpoint of local people this supported their survival.

- Socially constructed principles for water management

Local power and interest structures were put into use in water resource management. First clans had different power in the *Kuan* institutions; this structure gave water priority to clans of higher social ranking. Secondly, the local people cooperated together to fight against outside attackers. This arrangement ensured the survival of every clan through considering water-use priority as a basic need.

- 1) The Priority Principles: giving better access to higher ranking clans:

Spring water was used for irrigation in this stage. The local power structure could be observed in spring water allocation. Higher position clans or those who came into Zengchong village earlier could occupy the area close to the springhead to start their paddy fields. The water allocation rule for spring water gave priority to those farmers who owned plots close to spring water through ditch-dams. There was no canal. Spring water first reached the closest plot, and then flowed successively down through each of the plots in turn. Every terrace was kept with its terrace ditch-dam at a fixed height or fixed water level. Then water went across the ditch-dam down to the others. In the dry season, if water was not enough, it could be kept in the upstream land by damming channels in the terrace wall (through the construction of a "ditch-dam"). So arrangements of spring water gave highest priority to land closest to the spring, which were owned by the clans who came into this village earlier and had higher social ranking.

In this stage river water was used for fishery and domestic water. Each clan members used water from their own section of the river. In each section there were two dam walls. The first dam was made of stone and soil to store water. And the second layer was made of tree branches to keep fish, and let the water flow down. In the dry season, water would be kept in the upstream section by the first layer dam. Just like for other resources, the priority principle was used in river water

management. The river around the village was divided into four sections, one for each of the four clans (see map 5-1). From upstream to the downstream, the four sections were owned by the *TouGong*, *SanShiJia*, *SanGong* and *TouChao* clans. In keeping with their social ranking, the highest ranking clans received access to the water source when it was the most abundant and least interfered with by other user groups, while the lowest ranking received access when it was uncertain in dry season and all other clans had had a chance to use their fill.

2) The Principle of Survival: all clans co-operating together to ensure subsistence needs were met.

This principle was also used in water resource management. In Zengchong village, spring water use gave priority first to grain growing, and secondly to fishery. In practice, this was done by adjusting the height of ditch-dams. If water was abundant, the ditch-dam of the upstream plots would be kept at higher levels to keep more water in, for raising fish. In the dry season, if water was not enough for downstream grain growing, the upstream plots would decrease the ditch-dam height to release water to support downstream grain growing. This principle helped to sustain the low ranking clan members who owned the downstream plots.

For river water, the priority was for domestic use. In water abundant seasons, different clan members could only carry water from their section. But in dry seasons, all of the villagers could carry water from the upstream sections of the river. This principle could also help every member of Zengchong village to survive.

To summarize, in the clan stage, not only spring water but also river water was allocated on two principles. One was giving priority to high-ranking clans. The higher-ranking clan who came to Zengchong village earlier could access water preferentially. The second was the principle of survival for all, to support the basic needs of all local users. Spring water was first used for grain growing and the river water first used for domestic. Those water functions were villagers' basic needs and

could support all of the members of the village to survive even in drought years.

6.1.2 Rule Making and Performance

In this stage, the village was consisted of four clans. Each clan selected their clan leaders, and all the clan leaders together made up the *Kuan* committee. The rule in this period was that of *Kuan* law regulated by a *Kuan* committee.

Through *Kuan* committee meetings, rules were made. After that, the *Kuan* committee announced the rules to all villagers in a village meeting, called “*Jiang Kuan*” in local dialect, which means explaining *Kuan* law to villagers. All of the villagers got together at the drum tower, the leader of *Kuan* stood on the stone table, announced *Kuan* law line by line. Upon finishing each item, the leaders explained in detail the meaning of this item and asked for the villagers’ comments. If all the villagers agreed, these would become the rules for the village. If someone didn’t agree, he/she would explain about the reason, and this reason would be discussed in the village meeting in order to revise the law. Finally the villagers’ meeting would accept the *Kuan* law.

Dong did not have language characters during the clan stage, so we cannot find any *Kuan* law in written form today. As investigated by the old people of Zengchong village (Shi Ruiqin 75, Shi Chaoan 77, Shi Jiumei 83 etc.), as some *Kuan* rules have been edited and handed down to the present day as songs and tales.

There were two rules related to water resource management, called “*GongShui*” and “*JieShui*” in the local dialect. *GongShui* means to steal water from upstream. If the plots close to the springhead were short of water, and at the same time the plots lower down kept water, the owner of the downstream plot would be judged as *GongShui*. *JieShui* means to stop the water moving to lower. If downstream plots lacks water for grain growing, and at the same time the upstream land had water in

excess of their needs for rice growing, enough water for fishery, the owners of upstream land could be viewed as *JieShui*. These two kinds of behaviors could be punished by *Kuan* law.

The punishment demanded that the rule-breaker to walk around inside the village announcing his wrong doings. This was called “*XueQinZhiFa*” locally. Performance of this type was enforced by the leaders of the wrongdoer’s clan because if someone was punished by the other clan leaders, it would lead to one clan wanting to revenge the other. This kind of performance and its enforcement by the wrongdoer’s own clan leaders, could avoid conflict between two clans.

Judgment on every punishment was judged through *Kuan* committee meetings in the drum tower and punishment of the rule breaker was recorded by leaders of the clan. To enforce the committee decisions, the belongings, such as the clothes or tools of the rule-breakers would be taken and put on display at the drum tower until he/she corrected his mistake and the *Kuan* committee could be sure that he/she would not break that rule again. Then, their belongings would be brought back.

6.1.3 Accountability

The leaders in this stage were clan leaders selected by clan members. So accountability in this stage was downward accountability. The clan leaders were accountable to the clan members. The mechanisms for accountability were:

- Leader selection: the committee of the *Kuan* contained clan leaders who were selected by clan members. Usually, some preconditions had to be fulfilled by potential leaders, such as, they had to be elders who had high seniority in clan hierarchy and were well informed of the *Kuan* law. These old men could perform *Kuan* law and were well able to deal with uncertainties and communicate with others. Before *Kuan* meetings, clan

members would select their leaders to join *Kuan* meetings. If the leaders did wrong doings or became over aged, they would be removed by clan members through a clan meeting.

- Transparency: the *Kuan* law was announced openly in the village meeting. And all the *Kuan* law was edited as songs and stories which were spread through the village. The performance process was also transparent for all villagers with a clear record of the rule breaker's confession and presentation of evidence to the public.
- Independent monitoring and adjustment: the *Kuan* law was revised through villager's meetings. The *Kuan* leaders who came from each clan had to be reappointed by clan meeting for each *Kuan* meeting.

6.1.4 Legitimacy through four levels institutional practice

Following their structures of power and interest, local people constructed principles for water resource management, giving water use priority to higher ranking clans and to ensuring the survival of every clan. The local people translated these principles into rules through rule making. Through the performance element, local people put these rules into use. And through accountability mechanism, these rules had been consented to by all the people and their application, both judgment and punishment, done open to the scrutiny of all people in the drum tower. In the clan stage *Kuan* was established as an autonomous and legitimate institution for water resource management, which continued to be practiced for a long time by the local people to manage water resources. Its legitimation was enabled by the ongoing practice of these four aspects of institutional legitimacy.

The element of structure of power and interest is the fundamental for legitimacy since it is the base for the other three elements. In the final analysis, the rules of

GongShui and *JieShui*, were both a result of the local power and interest structure as well as the priority principle and survival principle. The *Kuan* committee, which was the leader and performer of water resource management, consisted of clan leaders and thus was also based on the local power structures combined with the element of accountability.

These four hierarchical elements are connected and interact with each other. For example, performance element can support the element of structure of power and interests through performances carried out by the leaders of the rule-breaker's clan, which avoid conflict between clans. This, therefore, supports the principal of cooperation of the local people. The element of accountability was practiced inside the clan by the leader selection mechanism, which can affect the performance element.

In this stage, *Kuan* was the only institution accepted and legitimated by the local people. Outside institutions such as government law could not come into play because of resistance by local people using the *Kuan* institution. Stability was achieved in this period solely through the continuing practice of these four institutional elements.

6.1.5 Legitimacy impacted by other *Kuan* practices

Kuan institution had been practiced in the clan stage not only for water resource management but also for other affairs. So the legitimacy of water resource management was affected by other institutional uses of *Kuan*. An example is forest management. On the one hand, forest management could support spring water management since water-keeping was seen as the main function of forests. On the other hand, the *Kuan* committee was the performer of management of both of these two resources, good performance in one could strengthen the management of the other.

The legitimacy of water resource management was also connected with local spirits. For example, local people pray to the *Sa* spirit for rainwater. In their judgments local people sometimes linked *Kuan* with the spirits. In some cases which could not be judged by a *Kuan* committee because of lack of evidence, *Kuan* leaders would make judgments by spirit. They boiled the oil in a pot and put a coin into it. The one who took the coin out was free from guilt. No one could argue this judgment since it was by the spirit's arrangement. So water institutions were legitimated by this spiritual process.

Moreover, legitimacy of water institutions was also affected by other *Kuan* activities, for instance, repairing the drum tower. *Kuan* was used to mobilize labor for the drum tower repair. Water resource management activities were all practiced in the drum tower, such as revising rules by villager's meetings, announcement of rules, recording of the rule-breakers and so on. The drum tower can be seen as the symbol of the *Kuan* institution. So the activity of drum tower repair was actually a form of legitimation of water management through *Kuan*.

In summary, water management at this stage was carried out through practice of the four elements of legitimacy in the institution of *Kuan*. It was legitimated by these four integrated institutional practices. The legitimacy process for water resource management was impacted by other *Kuan* institutional practices, such as other resource management, drum tower repair, spirit worship and so on. So water resource management interacted with all of the *Kuan* practices.

6.2 Class Stage

Through the process of privatization in this village in the class stage, local social relationships changed from clan-based to being class-based. The unequal class-based relation between landowner and landless became the new power structure in water resource management.

6.2.1 Structure of power and interest

- Power structure

Emergence of the landowner class is the indicator of this stage. Through exchanging food for land, lands were collected gradually by landowners, and some households became the landless. These landless had to depend on landowners through land-renting or exchange of labor for food. These practices of power between landowners and the landless usually took place inside the one clan. Through these practices, landowners became the powerful group in the clan. They could control the clan meetings and became the leaders of the clan, and also the leaders of *Kuan*.

At the same time, the government came into this village through implementation of the *TuSi* institution etc. Landowners combined with the central government and became the local government officers.

- Interests structure

At the start of this stage, local forest became a commodity from the point view of landowners. So they cut a lot of the forest for sale. This damage to water-keeping forests resulted in decreasing spring water. This decrease had more impact on those lands far from the springhead and located on riversides. These lands were also occupied by the landowner through land exchange processes. Technology for river water utilization for irrigating these lands was created and implemented by landowners to make these fields productive despite not receiving enough spring water.

Also due to spring water shortage, the function of paddy fields as fishponds, for which had been enough water to do fishery in the clan stage, were abandoned in their function as fishponds. At the same time through the privatization process, private fishponds owned by landowners emerged. Landowners did fishery in their own fishponds, so the river sections which were used as fishponds in the clan stage became

less important for them.

- Social construction principle for water resource management

In this stage, the priority principle, which was used in spring water management, was continued. Lands which were close to springheads also got priority water use. But these lands were occupied by landowners in this period. Landowners controlled spring water use through continuing the priority principle.

In river water use the priority principle was also continued. Higher-ranking clans occupied the upstream sections of the river as their clan fishpond. But this priority principle became less essential for landowners because through canal construction to carry river water inside landowners were able to build a lot of private fishponds inside the village.. Harvesting fish from clan fishponds could be practiced in some collective festivals, for instance, the *JiSa* ceremony. Household fishponds supplied fish for the landowner's consumption.

In spring water management the survival principle used in clan times was cancelled. Since forest was badly damaged by landowners tree cutting, the spring water for paddy field irrigation was short, especially for the lands in far downstream areas. Spring water shortage left just enough water for growing grain on land close to the springheads. Paddy fields couldn't be used as fishponds anymore. At the same time as there were natural shortages, landowners deliberately tried to reduce the water for other people who owned downstream lands in every way. This is a possible explanation for these people who lost land because they lacked food in the dry season. Spring water shortage lead to the removal of the survival and thus landowners were able to collect more and more land through the practice of food exchange.

A new principle emerged in the class stage. It said that the ones who owned private canals and waterwheels also owned the water. Downstream lands were short of water because of the shortage of spring water through deforestation. Landowner

occupied these lands gradually through the land-food exchange process. In this period, since the new tools to carry water, canals and waterwheels had been created, river water was used to irrigate these downstream lands. Since landowners had enough labors to take over from the landless, and also enough wealth and materials to build canals, they built a lot of canals to irrigate their accumulated lands, and these canals became landowner's private property. So the owners of these canals controlled the river water in this period. Others who were landless or had limited lands couldn't get river water since they couldn't build canals. The big canal linking the two foot points of the "U", built by Shi Wenda, the big landowner, which carried upstream river water to his land in downstream areas (see map 4-1).

In fishery, landowners built a lot of private fishponds inside village, and built a canal to carry river water into the village as a water source for their private fishponds. This can be demonstrated by noting the proximity of the one old canal which supplies these fishponds inside the village with the bricked houses which were the landowner's. We find that the course of this canal fits exactly with landowner house location (see map 4-1). It was built by landowners and owned by landowners. Through canal building, the landowners occupied the river water for their private fishponds.

So in the class stage, landowners utilized the river water through their own private canals and waterwheels. Others could not use river water since they could not build canals. "Private investment-private access to benefits" was the new principle of this period.

6.2.2 Rules making and Performance

As in preceding periods in this stage, rules were titled *Kuan* law and made through the *Kuan* committee. But landowner became the leaders of the clans and also the leaders of *Kuan*. So the rules were really made by landowners.

Through the *Han* culture introduced into Dong areas by the government, *Han* language and writing had been learned by the Dong people. So *Kuan* law can be recorded in writing. Usually during that time, *Kuan* law was marked on a piece of stone tablet, and stood in the drum tower. The oldest stone tablet I found in Zengchong was made in July 3, *KangXi* 11th year of *Qin* dynasty. It is 1672, about 330 years ago. The rules on that stone tablet included regulations about all the affairs in Zengchong village.

Rules related to water resource management were punishment of stealing water, including stealing water from upstream and canals. If the upstream land which close to spring water was short of water in the dry season, and at same time the lower down lands owned a lot of water, the owner of lower lands could be judged have stolen water from higher up land. If the canal wall had been dug at the place which would release water to irrigate a certain person's land, that person would be judged to be the one guilty of stealing canal water. Stealing water would be fined about 500 doits, and also should compensate in cash for the grain loss resulting from water stealing. This punishment was very strict. The size of cash fines could lead people who had limited land lose it all.

This punishment was carried by landowners themselves. Since sometimes the performance was resisted by the poor villagers who had to steal water for their survival, the landowners performance was sometimes practiced through force. For example, punishment of water stealing was done using guns. This was supported by the government because the landowners were the government's agents in Dong communities.

6.2.3 Accountability

The power was held by landowners, and all the rules of water resource management served for them. So accountability in this stage only involved

landowners being accountable to themselves.

6.2.4 Legitimacy through four levels institutional practice

The landowner class was the power holder in this stage. Through all the four levels of water institutional practices, they organized water use for their own interests. And also through these institutional practices, their power was legitimated as their entitlement by *Kuan* law, and they became an authority for local water resource management.

The principles constructed by landowners sometimes faced the resistance from others in the community. So the rules were stricter than in the clan stage. In the clan stage, the rule-breaker was just punished by being made to announce his wrongdoing. In the class stage, the rule-breakers had to pay a big amount of cash, and punishment could leave them bankrupt due to loss of land. The performance carried out by landowners was also stronger and higher-pressure than in the clan stage, in which punishment was executed by one's friendly clan leader. So in this stage, although the element of structure of power and interests was weaker than in the clan stage it could be strengthened by the elements of rule making and performance. As usual, all these four elements were connected and interacted together for legitimation of landowner's power.

6.2.5 Legitimacy impacted by government and market

Landowner's power for water resource management was primarily legitimated through institutional practices. This legitimation process for water resource management was impacted by the government. The landowners became the local government officer responsible for collecting tax from villagers. They got the government's support, such as supply of weapons, to do this job. Weapons given by the government were also used to enforce punishment, and therefore could secure

their power legitimization in water resource management.

Legitimacy was also impacted by local timber business. Through control of the timber business, landowners collected a lot of wealth which could be used to buy land. At the same time, deforestation for timber production decreased the spring water and directly impacted on downstream lands which at the start were owned by others. So the timber business set the field for land business carried between these people and landowners. This land business made landowner get more power and others became more dependent, therefore supporting the existing power structure of local water institutions.

6.3 Collective Stage

6.3.1 Structure power and interest

- **Power structure**

The collective stage started with Zengchong village being liberated by the Chinese Communist Party. After establishing the People's Republic of China, the new Chinese government launched a lot of socialist alterations, many of which had an impact on this village. The first one was land reform.

When the Chinese Communist Party came into Zengchong village, they set up the Revolutionary Committee of Zengchong Village. The landless became the main members in this committee. They represented the Zengchong villagers' power, and confiscated all landowners' land. They distributed these lands to every household equally based on the population of each household. Through this socialist alteration, class disappeared and every villager in this village had the same level of landholding. All the villagers became equal members of a socialist country.

Moreover, the Cultural Revolution took place in this period. In this revolution those who were landowners in class stage had been animadverted again. They had

been considered as *Niu Gui She Shen* and been pushed down by the Revolutionary Committee. The local *Kuan* institution was damaged by this revolution because it was judged as a feudal remainder used by the landowner class to exploit the landless class. The *Kuan* committee was disbanded by the Revolutionary Committee and *Kuan* law canceled. Buildings used by *Kuan* such as *Sa* temple had been burned. Only the drum tower was protected by the old.

Through these power practices, the Revolutionary Committee of Zengchong Village became a power holder in this village. All villagers, not only landowners but also the landless from class stage became members of the socialists Zengchong village. They were all led by the Revolutionary Committee.

- Interests structure

After the Mutual Aid and Cooperation movement, all the villagers and natural resources were centralized at the village level to do production. During this period, there was a planned-economy era in China, and all the production was arranged following government plans. The plan was made by the central government and then delivered step by step downwards to the local government. So in this stage, production was based on government interests.

In the early part of the collective phase, the government launched a movement called "Agricultural Production Should Learn from Dazhai". This movement achieved a quick improvement in agricultural production of Zengchong village. Canals and weirs were built collectively and quickly in this village to improve agricultural productivity. Paddy fields had to be fully used to do agricultural production for the whole year. Fishery wasn't practiced in paddy fields at all.

To support socialist industry development in China, on the one hand all agricultural products were bought by the government at the price given by the government, and also all the agricultural products were sold into the market chains

designed by the government. Through this government buying and government selling, the Chinese government took the surplus from agriculture and was thus able to support industry development in China. On the other hand, rural natural resources were heavily consumed as the raw materials of industry production which sometimes reduced them and or degraded them. For instance, forests were massively cut down as fuel and timber; water was used to produce hydropower and so on (Chen, 1999). These can be demonstrated in Zengchong village: in this stage, people built three hydropower stations along the river. They connected the village to the national power net and carried the power out to support state construction.

So in this stage, water was managed based on government interests, which first to aimed to improve agricultural productivity, and second aimed to support state industry development.

- Social construct principle for water resource management

The principle for water resource management used in this period was that “all the water resources are our socialist country’s property; they should be used to serve for our great socialist country’s development.” This principle was created by the central government and implemented by the local government. In Zengchong village the Revolutionary Committee of Zengchong Village was the local government.

6.3.2 Rules making and Performance

Water, land, forest and other materials all belonged to the collectivity of Zengchong village in this stage. So water resources were managed collectivity, held by six small productive teams led by the Revolutionary Committee of Zengchong Village. All the rules in water use were made by the Revolutionary Committee according to government plans and state laws. Performance was also carried out by this Revolutionary Committee.

Different small productive teams produced collectively in different productive zones. One productive zone was a small watershed, such as one hillside. So there was no conflict in water use between small productive teams, or between households in each small productive team. Water use conflict came from the demands of different water functions in this stage, for instance, water use for agricultural production or fishery, for agricultural production or hydropower. The rules to deal with these conflicts were made according to the government plans in that period. For example, in the “Smelt Steel Movement” period, water was used mostly for smelting steel as directed by the central government.

6.3.3 Accountability

The Revolutionary Committee of Zengchong Village was the basic power holder of the government. Accountability was upward to higher-level government, that is, to the township government. All the members of the Revolutionary Committee were appointed and adjusted by the township government. Their work, power and duties were given by the township government. The monitoring and adjusting of their work was also carried out by the township government. Their wages, office expenses and water construction expenses were supplied by the township government.

6.3.4 Legitimacy through the four levels of institutional practice

Water management in this stage was practiced by the local government which was the Revolutionary Committee of Zengchong Village. Through structure their power in this village, the Revolutionary Committee made the rules for water management and performed their enforcement as well. Their power was institutionalized and became legitimate in water resource management through these institutional practices.

In this stage, the characteristics of the element of structure of power and interests

were very strongly influenced by the movement for socialist revolution. Through this revolution, power was strictly held by the Revolutionary Committee of Zengchong Village, which was the local agent of the Chinese Communist Party and the Chinese government. Through upward accountability, the local Revolutionary Committee could get strong support from the township government. This constructed a strong base for water resource management in Zengchong village. So in this period, although rule making and performance elements were weak compared with the past, the other two elements gave the strong support for the legitimacy of local water management institutions.

6.3.5 Legitimacy impacted by high-level government

In this stage, accountability meant upward accountability. The local Revolutionary Committee was upwardly accountable to the higher-level government. Hence, the Revolutionary Committee's power practice was impacted by it. For example, high-level government could give funds and materials such as cement to support their building, could make plan and laws to support their rule making, and could give administrative support for their performance. All of these supports linked local water resource management with high-level government and impacted on the process of legitimation of local government.

6.4 Household Stage

6.4.1 Structure of power and interests

- **Power structure**

Starting from 1979, after the "Household Responsibility System" was introduced into Zengchong village, land, forest and other materials were distributed to every household. Following this reform state economic policy changed from a "Planning Economy" to a "Socialist Market Economy." Villagers could do production independently because they owned the resource utilization rights. So water

management power had been transformed to the villagers' hands.

Land allocation was based on principals of equality. First, lands were classified into three categories considering their fertility level, and more importantly, their access to water sources. Not only access to spring water, but also access to canal water was the most important characteristic in deciding the value of each piece of land. Each type of land was distributed equally to each household. Each household had some land far from water, and also some land close to water. This was called "*ChaHua*" distribution in the local dialect.

This kind of land distribution has let all villagers have more equal power in accessing to water. Because every one has land close to water and also far from water, negotiation between villagers can take place on an equal basis. If A doesn't let B carry water across A's land in order to irrigate the B's land, A could face the same sanctions from someone else. So all the villagers keep good relationships with each other and always depend on each other in times of irrigation.

Although right now plastic water pipes and water pumps are used by some households to carry water from the weir or canal directly to their lands without negotiation with other community members, and this practice could change the power structure of interdependence in the community. So most villagers still do irrigation through water negotiation with each other.

- Interest structure

In the start of the household stage, resources were distributed evenly to all households. Every household could and still does independently use water for their production. So water use is based on the interests of every household.

Some arrangements in this period were the same as in the clan period. Agricultural production has again been the main livelihood in this period. Not only

spring water but also river water have been used by every household for paddy field irrigation. Fishery is mainly practiced in the villager's paddy fields since fishponds inside the village have mostly been changed into house foundations. The water of paddy fields with a good water sources, which are close to spring waters and canals, are used to breed fry in the winter. In the dry season water supply is a priority for agricultural production.

Some new canals have been built in the village to carry river water for fire prevention and for domestic use (see map 4-1). Water is not used for hydropower since high voltage power came into the village as a government project in 1997. Another government project was the tap water system, which was built in 2001 by the Congjiang County government. This system was aimed at fire prevention because the number of fishponds inside the village had decreased. Right now, this tap water system is used by villagers for washing, and also for preventing fire.

- The Social construct principle for water resource management

Based on lands *ChaHua* distribution, villagers have organized using water by negotiation with each other and through dependence on each other. No body has had more power than the others. This “interdependent” power structure has introduced new power structures to local water management so as to “benefit each other and help each other”. These principles can be proved by lots of cases:

Case I----- Exchange of Fishpond Water

During the household stage, lands located in one cultivation zone have been distributed to all the households of the same small productive team. In each small watershed area (one cultivation zone), every household owned the land at all the different levels. Water becomes less in the winter, and this phenomenon has continued till the rainy season of the next year. If the rainy season comes late, water will be not enough. So Lands which are close to the water source are usually used as holding

fishponds to breed fish and store water through the winter. When the time for irrigation comes, fishpond water is released to allow catching the fish in each pond. This outflow water has a high-fertilizer value since fish manure has been dissolved in it during fish feeding in the winter and is good for irrigating cropping lands. So in the irrigation season, villagers use fishpond water by exchanging it directly or indirectly with different water sources:

I have about 1.5 Mu of land located on the top of our cultivation area. There is a springhead that has enough water to support my land even in most winters. So every year, I use that land as fishpond to raise fish. I can harvest about 60 Jin of fish, and at the same time when the water I keep in my fishpond is released it irrigates Shi Jiakai's land, which is in that same area but a lowest position. In a similar way I receive fishpond water from another farmer's fishpond. At the riverside, I have land next to Shi Dehua's land, and his land is close to canals so it has a good water source to use as a fishpond. Every year when he catches fish, his fishpond water is released over my land. All the fishponds in our village are used not only for feeding fish but also for keeping the water to irrigate other land. So every year I release out fishpond water to one farmer's land and another's fishpond water is released to my land, just like we are exchanging fishpond water amongst us. (By: Shi Huabin, one villager of group 5)

In our village, irrigation will be arranged at a fixed period in every year. In that period, the irrigation sequence works from downstream land to upstream land since downstream land irrigation depends on water crossing from upstream lands. So the fishpond water usually gets to the land in lowest position of one area. Although downstream land gets the benefit from fishpond water, for other lands, they can benefit from less water demand in that area. And also most households have the chances to get fishpond water in their lowest land. (By: Shi Shuiha, the leader of group 5)

In Zengchong village, all of the lands close to water sources are used as fishponds

in winter. These lands are like many small water pools. They keep the water for irrigation of other's fields in the next year. This water exchange guarantees full water use for all different levels of lands in different seasons.

Case II ---- Water Crossing

The second case is water crossing. During the collective stage, all the households in one small productive team produced collectively and shared their harvests together. Also, in each small productive team, there were different clans, (see table 4-3) so they could keep marriage relationships between them. This arrangement made them know each other and trust each other, which is the basis of their negotiations of water. Water crossings are usually arranged as follows:

- 1) At the beginning of irrigation season, because all the villagers start irrigation at same time following *Yang* (this is a traditional arrangement practiced for a long time), irrigation of all of the lands is practiced by every villager in fixed period lasting about ten days. The irrigation water is arranged to flowing down to downstream land through a lot of ditches. If the water is quite enough, the ditch-dam in every land can kept a higher level which can keep the more water for fishery in the next part of the cycle. If by the community meeting estimates that, the total amount of water is not enough the ditch-dam will be kept at a low level to widely distribute the remaining water for grain growing. After the first irrigation, water will be stopped from entering the irrigation system. Instead it will be leading it into streams. The water is cut off because villagers will fertilize and plant seedlings in their lands, and all the ditch-dams are closed for keep fertilizer in.
- 2) The second time for irrigation starts about *LiangChang* (local time unit, same as two weeks) later. Villagers think the fertilizer has been used up by the seedlings, and the lands also need irrigation since they are dried by the

sunshine. So they lead water from the water source and keep the ditch-dam at certain level for free water flow down to the next lands.

- 3) Because fertilization usually takes place in the first two months of grain growing, villagers practice periodic irrigation during this period. After each irrigation they close ditch-dam for keeping fertilizer. If the downstream land owner wants to irrigate with water crossing upstream lands, he should negotiate with upstream land owners to confirm fertilization arrangements. If it is less than four days after fertilization, water crossing will not be accepted. The time between irrigations is based on the experience of local farming. In case of urgent water need, the flexible negotiation is used where those getting crossing water must compensate the upstream land owner fertilizer which has been used.
- 4) Two months after planting seedlings, irrigation water can be set to flow continually from upstream to downstream through keeping all ditch-dams at a certain level. If there is enough water to raise fish, ditch-dams will be kept at a high level, otherwise, ditch-dam will be low to support grain growing in all the lands.

Water crossing is negotiable between villagers in each group. Because every household has lands both in upstream and downstream zones, their power in water crossing negotiations is balanced by checking each other in different areas. If one rejects another's offer, he will be faced with same sanction in the case where he needs water. So the villagers keep a good record in water negotiation.

If the time is more than four days after fertilization, we all agree to water crossing. And also, if someone wants to cross water, he should tell others to confirm the time. That is easy for all of us, just exchange the information in the field, or visit

each other in the evening. There hasn't been any conflict on this issue recently as far as I know. (By: Liang Mushen the leader of group 4)

Case III ---- Canal Repair

The third case is that the villagers in one irrigation area repair and maintain canals collectively. Although some lands are close to the canal and other lands are far from it through water exchange and crossing villagers can equally use canal water. So they assign labor equally to do this work. Usually, the standard unit of labor measurement is one adult, and the number of labor units is based on the irrigated land areas. In the case of some households lacking adult labor since they are the old or sick at that time, others don't demand strict implementation according the agreement but allow substituting children for adult laborers or just don't demand labor at all. Villagers think that every people will be old and sick, and they need help from each other. If the household owner does outwork in the city, he will be asked to pay compensation for his absence in canal repairing rather than being allowed to substitute someone else. Villagers in each irrigation area are usually organized as a group to repair their canals in February of every year (Chinese calendar) (see table 4-5, photo 6-1).



Photo 6-1 Repair Canal As a Group

Case IV ---- Clean Water

The fourth case is clean water. Canal water passes different houses inside the village, and functions as part of the process of clothes washing, livestock drinking, cleaning inside the house and other minor roles etc. If the households located upstream throw the garbage into the canal, it will flow down to downstream users. To ensure clean water for downstream household domestic use, villagers use bamboo or reed lattice fences to clean canal water between the houses. Every household put a fence at the exit of his canal section. This fence stops their garbage from flowing down into other canal sections (see photo 6-2). This ideal is also demonstrated in river water utilization. From upstream to downstream, at intervals of about thirty meters villages have built stone dams used as fences to clean river water for domestic use of all the households at different river levels (see photo 4-1).



Photo 6-2 Fence Used by Villager to Clean Water

6.4.2 Rules making and Performance

Water resource management and forest management are linked, and are all controlled at the community level. Although canal repair and water negotiation are practiced at the irrigation group level, making rules on water allocation, overcoming disputes and punishing rule-breaking activities are all done at the community level.

At the beginning of the household stage, the leadership of Zengchong village was also the Revolutionary Committee. This committee was led by the people's community of Wangdong (and later titled as Wangdong Township Government). So it can be seen as a basic power holder in the government system. Water resource management rules and performance were all carried out by this Revolutionary Committee.

In 1984, the Villagers' Committee (VC) was set up to substitute the Revolutionary Committee of Zengchong Village (RCZV). This committee had a more independent character than the RCZV, but it was also a holder of government power. Through the market economy, open door and decentralization policies had been practiced, so government institutions became weaker than before. In rural areas, for instance, villagers produced of their own free will, not just to follow state guidelines. This decentralization process left a rule vacuum in local resource management and also gave more space to local people. So an autonomous community law entitled *Cun Gui Min Yue*, which are the resource management rules made and performed by the Elders Association (EA) of Zengchong village, emerged as a supplement of state law. Water rules were included in this law. In this period, the Villager's Committee did the job which as tax collection, agricultural technology extension led by township government. The Elders Association managed affairs inside village. Through a democracy construction policy practiced in rural areas, especially the "Community Democracy Construction Law" implemented in 1998, the Villagers' Committee became more independent. It became the villager's local autonomous management unit. So recently, the Villager's Committee was substituted for Elders Association, as the performer of *Cun Gui Min Yue*, which were made through villager's meeting.

This *Cun Gui Min Yue* continues to use the rules of *Kuan* to manage water resources. The same as in *Kuan* law, there are two rule-breaking activities such as *GongShui* and *JieShui*. But the meanings of the rules have been partly changed. Today, *GongShui* means crossing water without upstream land owners' agreement; *JieShui* means rejecting water crossing in a situation where it is needed and there are no legitimate reasons to refuse water crossing. Each illicit activity will be punished by a fine of 100 Yuan, and recorded on the board beside the drum tower.

6.4.3 Accountability

At the beginning, Revolutionary Committee of Zengchong Village was also upwardly accountable to higher-level government. When the Villager's Committee was substituted for it they continued upward accountability to the township government. Later, the Elder's Association was set up to manage water and other resources. They used downward accountability mechanisms, same as with *Kuan* institutions in the clan stage. Through the independence of the Villager's Committee, the Villager's Committee became the manager of water and other resources. In coexistence with upward accountability, the downward accountability mechanism was also continually carried out by them.

Downward accountability:

- Some leaders (*Cun Zhang* and *Cun Weiyuang*, who are the administrative leaders) of the Villager's Committee are selected every three years by a meeting of the villagers.
- Rules are made and adjusted through villagers' meetings which also happen every three years.
- The accounts and community affairs are announced on the board beside drum tower at the end of every year.
- Villager can monitor the leader's activities: If the leaders break the rules,

they will be punished by cash fines or removed from the Villager's Committee. There was an example in 2000, when the leader corrupted the community money he was removed from employment and amerced.

Upward accountability:

- Some leaders of Village's Committee, for example *Zhi Shu* who is the leaders of Community Sub-Branch Committee of Chinese Communist Party, are appointed by the Chinese Communist Party Branch Committee of Wangdong Township.
- The rules should be agreed on by the township government, and accord with state law.
- Some projects (for instance, tap water systems) are arranged and advised by the township government.
- Adjusted and monitored by township government through examination and work checking.
- The township government gives the wage and the award for the committee leaders.

So in this stage, the accountability has a more complex character than before. On the one hand, the community is an autonomous unit held by local people themselves through downward accountability. On the other hand, the community committee is the local agent of the government and is controlled by high-level government through upward accountability.

6.4.4 Legitimacy through four levels institutional practices

In the household stage, villagers have depended on each other for water use for a very long time. This interdependent power structure makes them share the principle of "benefit each other and help each other," which gives a strong base for local water resource management. Due to this principle, although rules have been around for a

long time, villages rarely break the rules even in very dry season.

“Everyone know that we should negotiate each other to arrange water for a long time since land policy will be stable for a long time. If an member of our community breaks the water rules by GongShui from upstream, he will be confronted with by stopping water in the next few years, and also JieShui activities. So it is very important for us to keep good relations with each other.” (By: Shi Yuande, one member of the community committee)

Hence, in this stage, the element of structure of power and interests gave strong support for the legitimacy of water institutions. In combination with the other three institutional practices it strengthened the process of legitimation of local water resource management.

Through downward accountability, water institutions has been consented to by local villagers. And also through upward accountability, water institutions have been agreed to and supported by high-level government. Nowadays the *Cun Gui Min Yue* of Zengchong village has been record in the township office. Community leaders can obtain wages from the township government. This can be an incentive for them to spend their time to prepare meeting in water resource management, to mobilize labors in canal repairing and so on. So accountability element is quite important for the legitimacy of local water institution in this stage.

6.4.5 Legitimacy will be impacted by the government and the market

Legitimacy in this stage is based on the *ChaHua* land distribution mechanism which is directed by state land policy. The Chinese government promises that this policy will be kept stable for the next thirty years. . Hence, this policy will support the legitimacy of local water institutions in the future.

Through market institution intervention, local livelihoods will be changed from agricultural production to commodity production. This has some foreshadows in this village. For example, some villagers are already practicing the planting of high-market-price commodities such as flowers and herbs. The government is also encouraging market-orientated production through a project called “Adjustment of the Rural Production Structure”. Increased market orientation will impact upon local interest structures, and therefore will impact on the legitimacy of local water institutions.

6.5 Institutional Change

Local water institutions have changed from one stage to the next during these four stages. In each stage, different characteristics have been represented in the four elements of legitimacy, including the water management power holder, local interest in water use, water management principles, water rules, rule performance and accountability.

There have also been changes in the importance of these four elements during these four stages. For instance, in the clan stage, collective stage and household stage, the element of structure of power and interests has had a strong characteristic; hence, it could strengthen the other three elements in the legitimation process. In the class stage, although the element of structure of power and interests was weaker than it was in other stages, the element of rule making and performance was strictly practiced so it strengthened the legitimacy of local resource management. Moreover, in the collective stage and household stage, upward accountability connected the local water management power holders with the higher-level government, which gave strong support to the legitimacy of local power holders. Therefore, these four elements are connected and impact on each other in the legitimation process. This can be described through a diagram:

Table 6-1 Institutional Changes

Stage Element	Clan Stage	Class Stage	Collective Stage	Household Stage
Structure of Power and Interests	<i>Kuan</i> as the power holder Constructed the “priority” and “survival” principle for water use in agriculture, fishery and domestic.	Landowners as the power holders enforced a “priority” and “water owned through investment in canals and waterwheels” principle for water use.	RCZV as the power holder promoted a “service for our great socialist country” principle for water use in agriculture and electricity production.	First EA and later VC as the power holder constructed “benefit each other and help each other” principle for water use in agricultural, fisheries and domestic use.
Rules making	<i>GongShui</i> and <i>JieShui</i>	Water stealing	According to government plan and state law	<i>GongShui</i> and <i>JieShui</i>
Performance	<i>XueQinZhiFa</i>	By landowner strictly	By RCZV	First by EA and late by VC
Accountability	Downward to clan members	Accountable to landowner	Upward to high-level government	Mixed upward and downward accountability

Institutional changes during these four stages were impacted by government policies, market mechanisms and also technological creations. Different impacts had been practiced in different change processes between two stages. From the clan stage to the class stage, institutional change in water management was impacted by government policies and market mechanisms. Through the implementation of *TuSi* etc. policy in this village, landowners such as Shi Wenda, Shi Yuqin were appointed as local officers and got the support of the government to stabilize their power in local

water management. And through the impacts of the timber business, land exchange relationships between landowners and landless were introduced and boomed. Hence, impacted by government policy and market mechanism, the local structure of power and interests had been changed from clan based to class based. Moreover, new technology, such as canals and waterwheels, were created and used by landowners. It this drove the new principles such as private ownership of canals in local water resource management.

From the class stage to the collective stage, government policy has impacted greatly on local institutional change. First, the socialist revolution and land reform policies were implemented to cancel class relationships in this village. Then, through the establishment of the Revolutionary Committee in Zengchong village, and through social alteration movements launched by this committee, water management power was moved to this committee. Thereafter, the Revolutionary Committee acted as a local agent of the central government and implemented lots of government policies in this village including the management of water. In this change process, only government policies drove institutional change. Market mechanisms had impacts since they were also controlled by the government.

In the change from the collective stage to the household stage, the greatest impact came from the “Household Responsibility System” policy, which impacted on local land distribution, and therefore impacted water allocation for land irrigation. Decentralization policies were was another important influence. Through the course of this process, government institutions moved away from the local step by step, this giving space for local people to reconstruct their water institutions.

In the future, local water institution change will be impacted by market mechanisms. There are some pre-indications of this in its impact on local land use.

During these four stages, local water institutions have changed from one stage to

the next. These changes are indicated in water management power, local interests, water functions, principles and the rules, performance and accountability. These changes have been impacted by outside factors such as government policies and the market. However, any changes first occurred in the fundamental element: structure of power and interests.

In the clan stage, *Kuan* institutions were formed based on local sociopolitical structures and had the function of local water resource management. From the clan stage to the class stage, the local social structure was changed. A landowner class emerged and became a powerful figure charged with local power through land exchange with food, and land renting practices. They directed local water use and for their private lands and fishponds through their private canals and waterwheels. So institutional change from clan stage to class stage was started from the change of local power and interests structure.

From the class stage to the collective stage, the water institutional change started as a result of socialist revolution lead by the Chinese Communist Party. Through this revolution, local structure of power and interests was changed through the introduction of an equal membership structure for Zengchong village. Through launching this process The Revolutionary Committee of Zengchong Village held power over water management. New interests sourced from the central government introduced into this village by the Revolution Committee to take as new principle for local water utilization. Water institutions in collective stage were based on this power and interests structure.

New institution was constructed in the household stage based on the new structure of power and interests. In this stage, the "Household Responsibility System" led to land distribution on the *ChaHua* principle. In terms of power structures, local power structures involved "depending on each other" to use water. Through government powers moving away step by step from local areas through the

decentralization process, the Villager's Committee became the manager of water resources. So new institutions for water management were established in this period, again lead through new structures of power and interests.

As the fundamental element, structure of power and interests is the base of the other three elements. For example, water management rules are made and performed by local power holders, which are based on the local power and interests structure. The accountability element was also based on this structure. If the local people controlled water management power, the accountability mechanism would be downward to them the same as in the clan stage. If the water management power was handled by the government, accountability would be upward to the government, as in the collective stage. So the other three elements' change are all based on the structure of power and interests. Therefore, all institutional changes between different stages were started from the fundamental element of structure of power and interests.

Summary

In different stages, different factors such as different state policies and market interventions have impacted on institutional change. And in each of these four stages, different powers in local water resource management have been legitimated through the four levels of institutional practice. In the clan stage, *Kuan* was the water management power which was legitimated. In class stage, it was landowner's power even though the institution was still called as *Kuan*. In the collective stage, it was the Revolutionary Committee of Zengchong Village. At last, first the Elder's Association, then the Villager's Committee held power for water management in the household stage. As the basic element of legitimacy, the change of power structures was the most important of these four elements and was the leader of local water institutional change.

In each of these four stages, the four levels of legitimation practices, such as structure of power and interests, rule making, performance and accountability, have been interactively practiced together construct four different legitimation processes. In each stage, through the legitimation process of that stage local water institutions have been legitimated and stabilized. From the holistic point view, these four legitimation processes continued one by one, and handed down the influences stage by stage. The next chapter contains the research findings of this study and analyzes these four legitimation processes' interactive relations together.