Taoping, China

How can Taoping develop sustainably with a tourism industry and with consideration for seismic activity?

China-U.S. Professional Workshop on Regional Sustainable Development

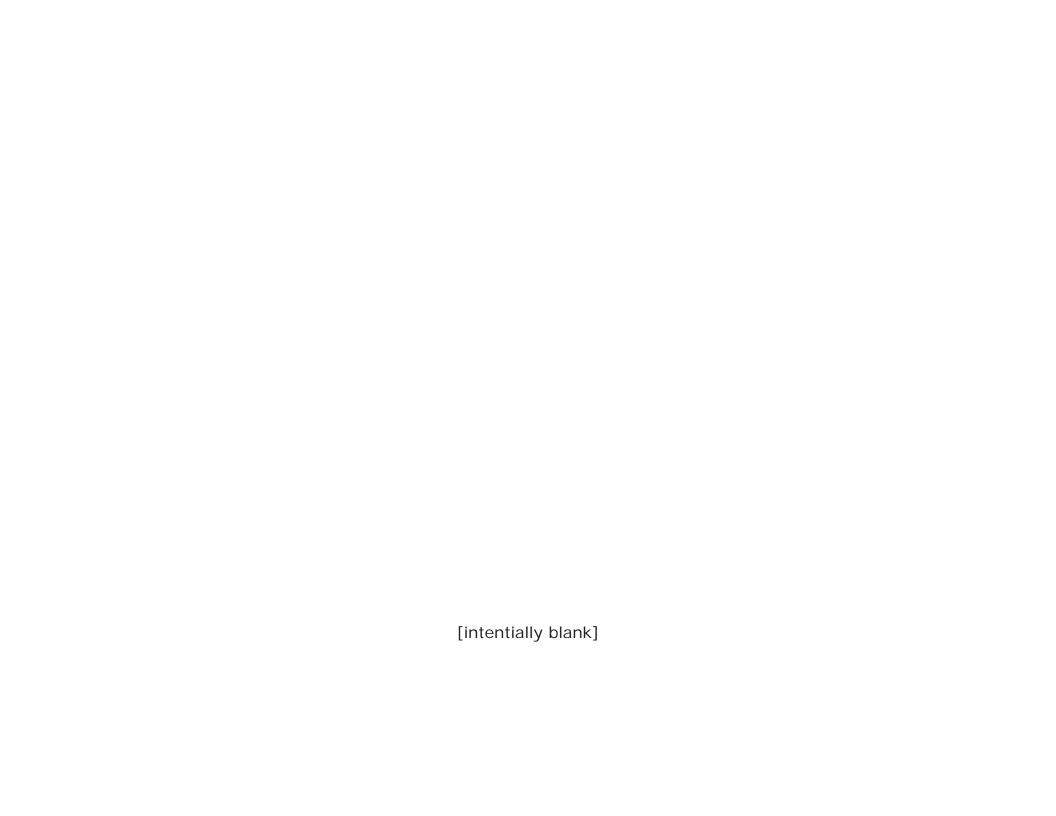




Contents

Introduction	1
Physical Geography Location Topography and Hydrology Climate Earthquake Hazard	3 3 6
Qiang History and CultureHistoryCultureLanguageReligious BeliefsFestivals of the QiangFood and NutritionClothingFamily and kinship relations1Livelihood	88823567
Built Environment 1 Architecture 1 Housing 1 Watchtowers 2 Materials 2	9

Structure and Construction	26
Village Form	29
Regional and Governmental Context	3/
Regional Tourism	34
Regional Master Plan	34
Post Wenchuan Earthquake Policies	34
Culturally, Environmentally, and	
Economically Responsible Tourism	38
Ecotourism	38
Principles of Ecotourism	
Casa Torre del Cornone, Italy	38
Nam Ha, Laos	40
Eco-village	42
AnLong Eco-Village, Pi County, China	
Slow Movement	44



Introduction

Taoping is a small but culturally and historically significant village of the ethnic Qiang minority in Sichuan Province, China. It is one of a series of Qiang and ethnic Tibetan settlements on the UNESCO World Heritage Tentative List.

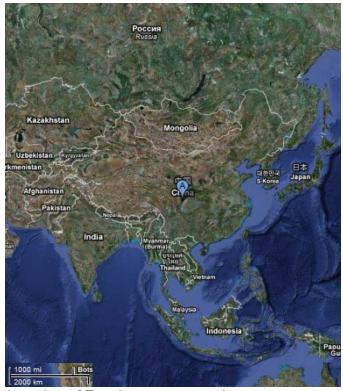
Located just 17km from the faults that shook in the May 2008 Wenchuan earthquake, the historic settlement of Taoping nevertheless sustained remarkably little building damage, and no loss of life, even as the earthquake destroyed a new "tourist village" that was under construction in the neighboring floodplain. The historic settlement's physical resilience enhances its built heritage value, and may offer important lessons for sustainable building and siting practices. At the same time, there is great need to reconsider development models throughout the Min River watershed, where the majority of Qiang people live and suffered in the earthquake.

Taoping village and county authorities have invited the University of Washington, Sichuan University, and the design firm Werkhart International, to propose a new plan for tourist-oriented development.

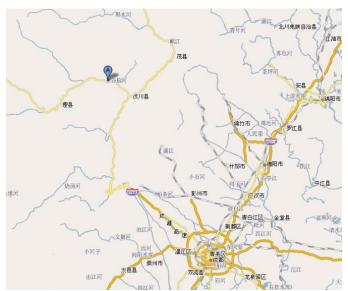
Taken from "BE Lab 2009: Taoping China," http://courses.washington.edu/belab09/.



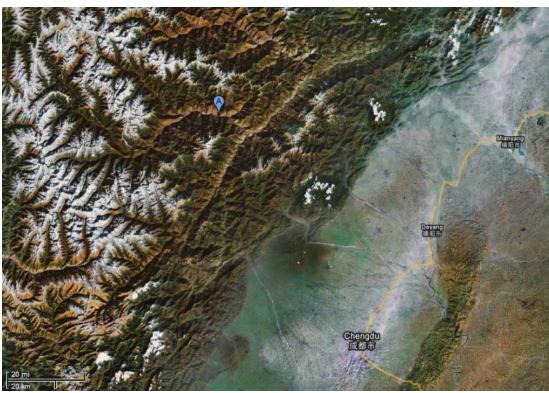
Photo by Dan Abramson.



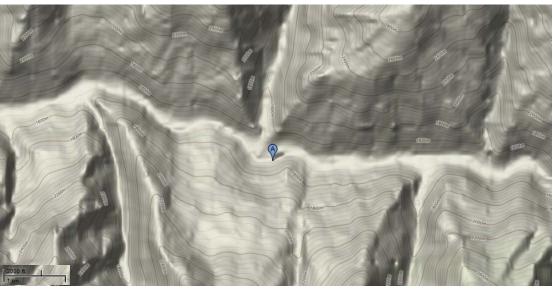
Location of Taoping, maps.google.com.



Taoping in relation to Chengdu, maps.google.com.



Longmenshan Mountains and Sichuan Plain, maps.google.com.



Topography, maps.google.com.

Min River and subterranean channels in village, http:// www.flickr. com/photos/ steenheilesen/.





Physical Geography

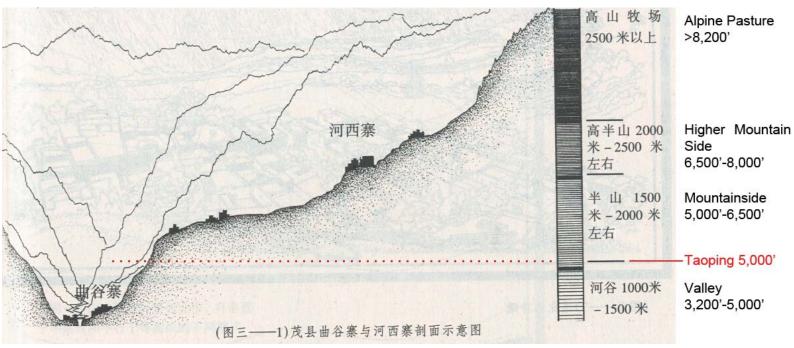
Location

Taoping is located in Li County, Sichuan, China, 170 km west of Chengdu. The settlement is in the upper Min River Basin at longitude 103° 26' east, latitude 31° 33' north, and elevation 1,500 meters (4921 feet).

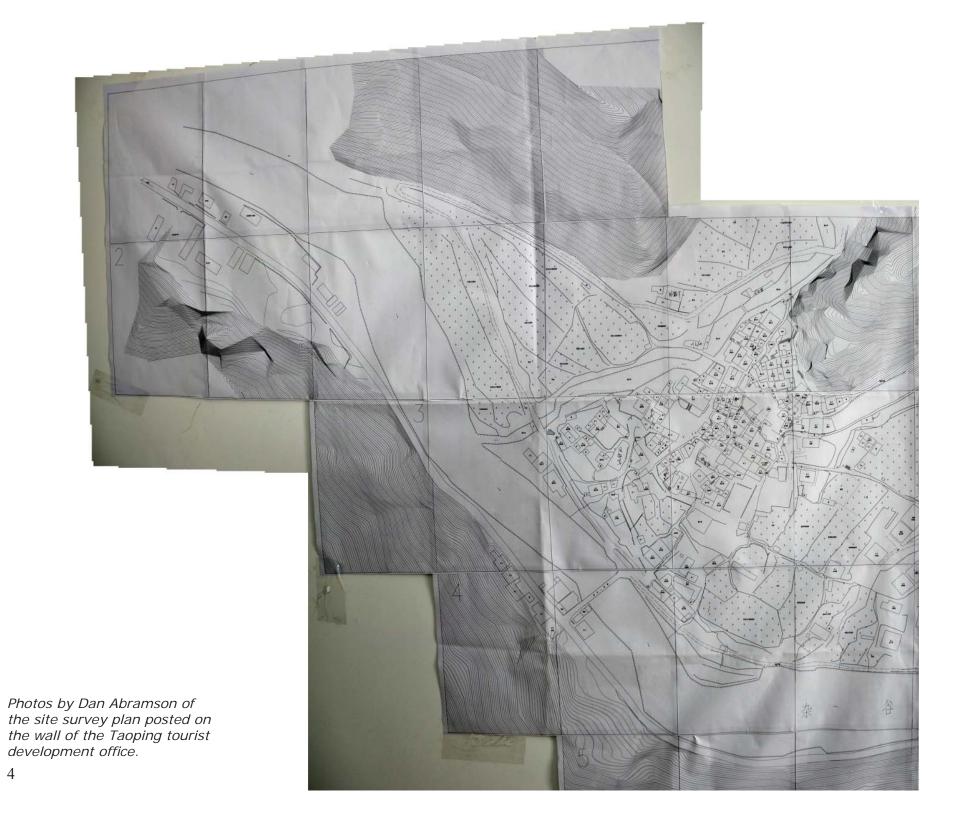
Topography and Hydrology

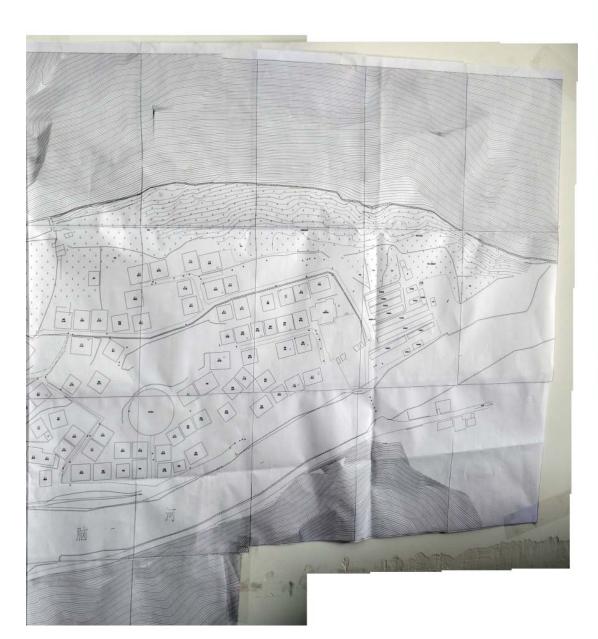
Taoping sits at 1,500 meters (4921 feet) above sea level in the Longmenshan Mountains, which border the Sichuan Plain.

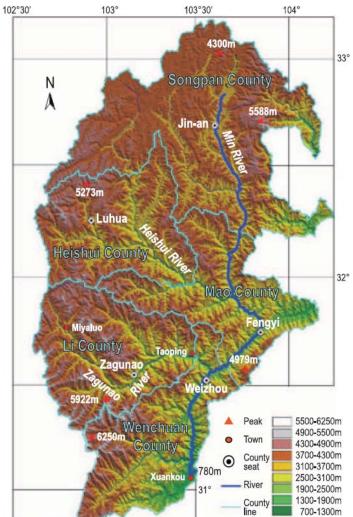
Taoping has a mountain stream flowing through



Drawing by Ji Fuzheng







Location of the upper Min River Basin, Tu Jian-jun et al.

the village, and the larger Za Gu Nao River flows by and into the Min River.

Please see the appended articles for more information about hydrology and topography:

The Upper Min River Basin: A Key Ethno-cultural Corridor in China

GIS-Based Spatial Analysis and Modeling for Landslide Hazard Assessment: A Case Study in Upper Minjiang River Basin

Landscape Pattern and Eco-hydrological Characteristics at the Upstream of Minjiang River, China

Climate

Li County is in a mountain climate and is partly cloudy but with plenty of sunny days and intense radiation.

Yearly average temperature: 13°C (55.4°F)

Winter average temperature: 0-4°C (influenced by Qinghai-Tibet Plateau cold air flow, seldom rainfall, sunny but windy)

Summer average temperature: around 21°C (more rainfall than winter)

Yearly average sunshine hours: 1685.8

Yearly average humidity level: 66%, higher humidity in May-July and September-October, especially September with 74% humidity

Frost-free season: 225 days/year

55 & 75 Degree Zones

LOCATION Mian Yang

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC
12 midnight	39	42	49	58	67	73	76	75	68	60	50	40
2	38	41	48	57	66	72	75	74	67	60	50	39
4	37	40	47	56	65	71	74	73	67	59	49	39
6	36	39	46	55	64	70	73	72	66	58	48	38
8	37	40	47	57	66	71	74	73	67	59	49	39
10	43	46	54	64	72	77	80	80	72	64	54	44
12 noon	46	49	57	68	76	80	83	83	75	67	57	47
2	48	51	59	70	78	82	85	85	76	69	59	48
4	47	50	58	69	77	81	84	84	75	68	58	47
6	44	47	55	65	74	78	81	81	73	66	56	45
8	41	44	52	62	70	75	78	78	70	63	53	42
10	40	43	50	60	68	74	77	76	69	61	51	41

Two hour temperature chart for Mian Yang, a town with a climate comparable to Taoping, created by Rob Pena.

Yearly average rainfall: 386.7 mm (1.27 feet)

Elevation of Arable Land: 1,450 - 2,800 meters

Agricultural production: corn, potato, beans, wheat, pepper, walnut, grape,

cherry, apple, pomegranate

Earthquake Hazard

Taoping has survived 3 major earthquakes in the past century (1933, magnitude 7.5; 1976, magnitude 7.2; 2008, magnitude 8.0).

Taoping is located 20 km from the epicenter of the 2008 Wenchuan earthquake. The old part of Taoping sustained minor damage. However, the tourist town located in the valley, which was under construction at the time of the earthquake, sustained major damage. One of the reasons that the tourist town was damaged was because it is constructed in the flood plain, which consists of softer soils. Softer soils transmit stronger forces during earthquakes because the soft soils amplify ground shaking.

The Wenchuan earthquake was caused by a NE Reverse Thrust Fault, 250 miles long, 12 miles deep, with a duration of 2 minutes. The estimated peak ground acceleration in Taoping was 0.8 g.

Please see the Architecture Materials section for information about the performance of building structures during earthquakes.

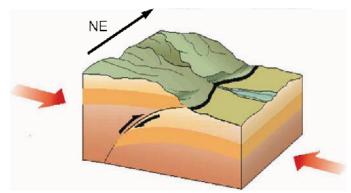
References:

"Taoping Ancient Qiang Village: The Secret of Surviving the Wenchuan Earthquake" CCTV, 2008. (Documentary can be found at www.youtube.com and searching "secret ancient village surviving earthquake". Video is in three parts.)

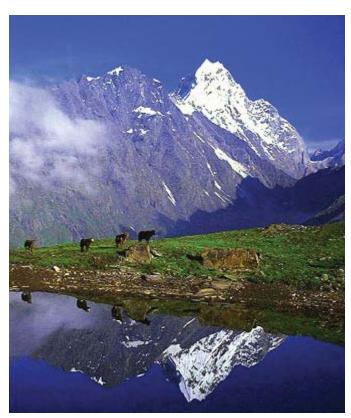
For a complete transcript of documentary: http://www.cctv.com/program/e_documentary/20081029/101426.shtml



Wenchuan Earthquake epicenter, CCTV video.



Thrust Fault Mechanism, California Institute of Technology website.



www.bjreview.com.cn/special/timeless_qiang_culture/txt/2008-07/11/content_132985.htm

Qiang History and Culture

History

The Qiang people are one of China's oldest ethnicities with a 4000-year history. Initially settled in the northeastern part of the Tibet plateau, the ancient Qiang people primarily lived off of subsistence farming, as well as hunting. The Qiang people moved to the Ranmang Area during the Han Dynasty (206 BC to 220 AD), which includes the area of West Sichuan and upper Min River region. Since the Han Dynasty, the Qiang people have built masonry towers and residents and inherited their ancestors' rituals. In 1987, the Ngawa Tibetan and Qiang Autonomous Prefecture was established.

Culture

Language

The majority of Qiang speakers, roughly eighty thousand people, are members of the Qiang ethnicity, and the rest, approximately fifty thousand people, are a subgroup of the Tibetan ethnicity. According to the 1990 census the total population of the Qiang people is one hundred ninety-eight thousand people (it had been 102,768 in the 1982 census), which means only about half of the people of the Qiang nationality still speak the Qiang language fluently. In fact very few fluent speakers have left in the majority of the southern Qiang areas. Not all members of the Qiang ethnicity speak Qiang, and as just mentioned, not all of those who speak Qiang are considered members of the Qiang ethnicity.

Religious Beliefs

The Qiang are an ancient civilization which over the course of over two millennia has developed material and spiritual wealth while forming distinctive religious beliefs.

Polytheism. Belief in Many Gods with the God of Heaven as Greatest. The ancient

Qiang people could not explain certain natural phenomena and the movement of celestial bodies and as a result they feared and revered natural and man-made disasters and believed that everything in the world had its own life and spirit. As a result, animism constituted an important part of Qiang Religious beliefs. Until recently, shamanic arts and an atmosphere of mystery remain central to Qiang religious belief and they have no specially established religious structure or organization.

The God of Heaven is the highest god in charge of everything in heaven and on earth, and with the power to bless or bring disaster on human beings and livestock. Below him are the gods of mountains, fire, trees, water and sheep. Each village also worships local gods. These local gods form a large system, including the god of each village, the spirits of ownership of village as well as specific gods of mountains, rivers and other natural features near the village, and the gods of Yin and Yang. There is also a god of the watchtower; to protect the village should an enemy attempt to invade.

"In early Qiang religious thinking, every human being had a spirit and this concept then spread to the external world having a spirit. The notion that things are controlled by spirits then extended to the concept of supernatural beings, and then to the existence of ghosts and deities" (Culture of Qiang).

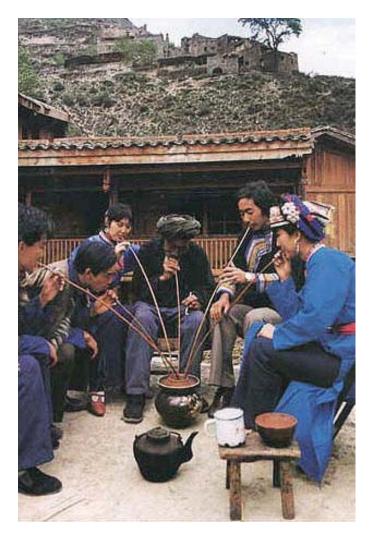
The Qiang people worship and give sacrifices to the Righteous Gods and pray for blessing; conversely on the Pig Day, Goat Day, Dragon Day and Horse day the Qiang hold rituals to exorcise evil and pray for peace. The third group of gods consists of ancestral gods who are typically worshipped at home ("domestic gods"). A family line may worship more than one domestic god on the household shrine located in the middle of the main room. The family god is central, often represented by the Han-style couplet "Heaven, Land, Ruler, Parents and Teacher." Every morning each family household burns joss sticks as a sign of respect to the domestic gods.

Legendary figures such as Yu the great have become a god of sorts, kind of like a saint, that the Qiang people pray to for strength and safety.

Totemism. The sheep Totem is the most popular. The Qiang autonym of "Ermie" is said to be similar to the bleating sound made by sheep. In the legendary battle



en.chinagate.cn/features/earthquiake/2008-06/12/content_15768877.htm



www.culturalink.gov.cn/chineseway/2008-01/17/content_126813_3.htm

against the Geji people, the Qiang all wore a piece of wool round their necks as a symbol, imitating the appearance of a sheep. To this day, when Qiang people attend sacrificial mountain ceremonies they ask the Shibi (spiritual leader) to tie a piece of wool to them to show that they are one in spirit with sheep.

At funerals the Qiang use a sheep as a substitute for the deceased and the sheep is also believed to lead the way for the dead person's soul.

The Soul Lives on as a Ghost after Death. Qiang people also believe in ghosts, believing that the human soul lives on after death and becomes a ghost. Ghosts are not harmful, only the people who have had a traumatic death or died young are believed to bring evil to the living. Disasters and diseases are the doing of ghosts, for example if a woman becomes sick, she is attached to a poisonous ghost, and it must be expelled in order for her to heal. Under such circumstances the people seek the help of the Shibi.

Sacrificial Mountain Worship and Seeking Blessings. Qiang people are tied to the mountains for food, shelter, water, timber, medicinal herbs etc. and they while the god of heaven is most commonly worshiped the mountain god is celebrated most ceremoniously.

Mysterious White Stone Worship. All Gods in the Qiang system of deities are symbolized by the white stone, except for the god of fire which is represented by the iron fire place, and the ancestral god of the Shibi represented by the head of a monkey. The Qiang put one or several white quartz stones on top of the stone tower on their roof as a symbol of the god of heaven or other gods and make offerings to them. This practice is a distinctive cultural phenomenon of the Qiang.

The Legendary War between the Qiang and Geji. The use of white stones goes back to the legendary war between the Qiang and the Ge. The Qiang ancestors were once forced to leave their native land. Later one of the branches settled down in today's Qiang area where they were confronted with a formidable enemy – the Geji people. Before the war started the leader had a dream. In the dream he was instructed by God that they should use hard sticks and white stones as their weaponry and tie a piece of wool round their neck as a symbol. The Qiang people followed these instructions and were able to defeat the Geji.

After the battle, the Qiang wanted to show thanks to the god's kindness toward them. As the god did not have a concrete image they used a white stone to symbolize him. They placed a white stone on their roof and made sacrifices to it and hence it has been that way ever since.

Shibi. The Shibi is a healer or shaman who can cure all illnesses. The Qiang places hope in Shibi, wanting through him to obtain the blessings of god. He is seen as a portal of sorts to the afterlife (ghosts) and the gods.

Tools of the Shibi. The Sheepskin Drum is like the memory of the village and the generations that precede them. With the beat of his drum he is able to recall the scriptures that are no longer written. His sacred wooden stick is used to expel ghosts as is his 30cm. long knife. He also uses a copper bell during chanting and incantation.

Passing down the Oral Texts. The Shibi is imperative to the village history as he is the only verbal link to the Qiang social consciousness. Oral texts of philosophy, literature, art and religion are handed down from Shibi to apprentice from generation to generation.

Oral Texts of the Shibi. There are three levels of division within the oral texts that pertain to 1) Upper alter: matters of the gods 2) Middle altar: human affairs 3) Lower altar: things relating to ghosts. Within the texts the Shibi communicates the procedure of religious rites, the nature of local customs and their origin, the role and responsibility of passing down information about Qiang traditions and the philosophy of Yin and Yang opposites/male and female/identity and balance.

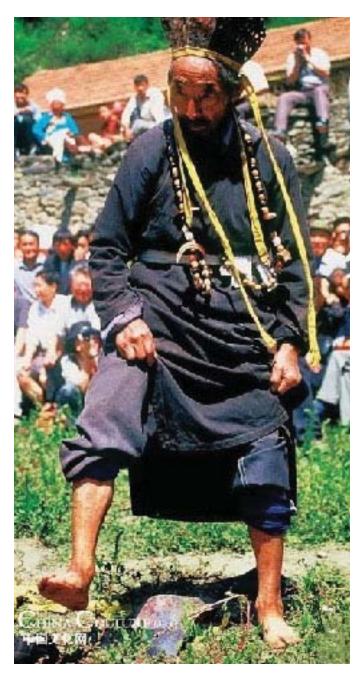
Inner and Outer Taboos (Inside and Outside the House). Qiang taboos have various culturally distinctive characteristics. Taboos are influenced by the following:

- Religious Beliefs and related though patterns and general life experience
- Primitive religion, worship of nature and polytheism
- Symbolic significance

"As a kind of ancient folk law, social taboos serve to influence and restrain people's behavior, thus protecting social order, whilst religious taboos are mainly a means for the Qiang to express their devotion to and reverence for the gods" (Culture of Qiang p. 139).



http://www.chinadaily.com.cn/ezine/2007-05/21/content_876728.htm



http://www.culturalink.gov.cn/chineseway/2008-01/17/content_126813_2.htm

Festivals of the Qiang

New Years Day Celebration "Rimeiji." New Years is celebrated after the crops have been harvested and stored, and in conjunction with the Ox King Festival. It is celebrated on the first day of the tenth lunar month. During this festival the Qiang fulfill old vows and make new ones and it lasts three to five days long.

All family members gather together, don't work in the fields and wear new clothes. The celebration begins with a sacrifice of cattle and goats in front of the village's sacred grove, offering them up to heaven. Blood is sprinkled on the small white mountain tower and the heads of the goats and cattle are placed there as well.

After, four men parade the white stone god through the village and are given a piece of beef and lamb and return home to celebrate. Young Qiang men call on every family with singing and dancing.

"Harvest Wine" Festival corresponds with New Year. A white equilateral cross with its arms bent at right angles is painted on the village walls if no one has died that year. The women make half moon turnovers and animal shaped bread. Cypress is burned in front of the lexia (small white tower with white stones atop).

The Ox King Festival is the birthday of the god of ox "Bazhase". This festival comes from the worship of oxen the Qiang livelihood (food, clothing and labor). "The life of the oxen is endlessly bitter, people depend on the ox for their food and clothing" "the 10th month is here...all the farm work is finished on the mountainsides. After a year of hard work the streams and mountains are frozen and it's time to rest for the winter."

The Ox King is worshipped at the household shrine and called to by the Shibi to expel sickness from livestock. On the 20th day of the first lunar year the villages receive a paper with magic markings to post on the pen of their livestock and protect them from illness. Qiang have an elaborate burial process for the oxen and believe they will come back in human form. On the ox day festival the oxen are allowed to roam free and are fed for a day, releasing them from their burden for at least a short while.

The Sacrificial Mountain Ceremony takes place in the Sacred Tree Glade, an open space in front of the stone tower surrounded by a grove of pine, cypress and qinggang trees. This elaborate ceremony is meant to give thanks through sacrifice to the mountain god and the god of heaven (the sacrifice of a goat is meant to take the place of people's wrong doings). Families within the village take turn to chair the ceremony each year. The timing of the ceremony varies from village to village depending on the month of harvest.

Song Leading Festival was developed from the legend of Sa Lang, a graceful girl who would sing and dance around the lake of her village Qugu. The village leader wanted her by force and she refused, so he killed her in spite. The villagers who had come to love her dancing and singing, mourned her loss, cremated her remains on a pile of azaleas (rams horn flowers) and built a stone tower for sacrifices to her. "When the azaleas bloom women go to the tower to dance and sing." On the 5th day of the 5th lunar month the ceremony takes place. It has become a 3 day celebration celebrating women, freeing them from housework and leaving it to the men. The women sing and dance and do as they will for these precious three days.

All Religion and Festival Information was summarized and in places directly quoted from Culture of Qiang by Chen Shuyu.

Food and Nutrition

The main staple foods are corn, potatoes, wheat, and highland barley, supplemented with buckwheat, naked oats, and rice. Wheat, barley and buckwheat are made into noodles. Noodles are handmade. Because potatoes are abundant in the area, the Qiang have developed many ways of cooking potatoes. Since corn is also quite abundant in the area, the Qiang have also developed different ways of eating corn.

Honey: A delicacy in the Qiang area. It is not easy to come by as they have to raise the bees in order to collect honey.

Salt: Because the Qiang live in the highlands, salt was traditionally difficult to come by, so when you are invited to eat in a Qiang family, the host will always try



www.culturalink.gov.cn/chineseway/2008-01/17/content_126813_3.htm



http://www.flickr.com/photos/steenheilesen/sets/72157603000080109/

to offer you more salt or will see to it that the dishes get enough salt.

Fruits and vegitables: The Qiang also grow walnuts, red and green chili peppers, Sichuan pepper (seed of Prickly ash; pericarpium zanthoxyli), several varieties of hyacinth bean, apples, pears, scallions, turnips, cabbage, and some rape. Crops are rotated to preserve the quality of the fields, some of which are on the mountain sides and some of which may be on the side of the stream found at the bottom of many of the gorges between the mountains. Qiang fields are of the dry type and generally do not have any sort of irrigation system. Aside from what they grow, they are also able to collect many varieties of wild vegetables, fruit, and fungi, as well as pine nuts. They now eat rice, but as they do not grow rice themselves, they exchange other crops for rice. Many types of pickled vegetables are made as a way of preserving the vegetables, and these are often cooked with buckwheat noodles or potato noodles in a type of soup. Vegetables are also salted or dried in order to preserve them.

Protein and Meat Consumption: While grain is the main subsistence food, the Qiang eat meat when they can, especially cured pork. In the past they generally ate meat only on special occasions and when entertaining guests. Now their economic circumstances allow them to eat meat more frequently. They raise pigs, two kinds of sheep, cows, horses, and dogs, though they do not eat the horses or dogs. Generally there is only one time per year when the animals are slaughtered (in mid-winter), and then the meat is preserved and hung from the rafters in the house. The amount of meat hanging in one's house is a sign of one's wealth. As there are no large fish in the streams and rivers, the Qiang generally do not eat fish. In the past they would hunt wild oxen, wild boars, several types of mountain goat, bears, wolves (for the skin), marmots, badgers, sparrows, rabbits, and musk deer (and sell the musk). They used small cross-bows, bows and arrows, pit traps, wire traps, and more recently flint-lock rifles to hunt. Now there are not many animals left in the mountains, and many that are there are endangered species, and so can no longer be hunted.

Alcohol: The low-alcohol liquor made out of highland barley (similar to Tibetan "chang") or occasionally corn or other grains, is one of the favorite beverages of the Qiang. It plays a very important role in the daily activities of the Qiang. It is an indispensable drink for use on all occasions. It is generally drunk from large casks placed on the ground using long bamboo straws. Opening a cask is an

important part of hosting an honored guest.

Clothing

Men's clothing: At present only a few of the older Qiang men still wear the traditional Qiang clothing except on particular ceremonial occasions. One item of traditional clothing still popularly worn by men and women is the handmade embroidered shoes. These are made of cloth, shaped like a boat, with the shoe face intricately embroidered. The sole is made of thickly woven hemp. It is very durable and quite practical for climbing in the mountains. In the summer men often wear a sandal version of these shoes with a large pomp on the toe. These shoes are an obligatory item of a Qiang woman's dowry when she gets married. In many villages, embroidered shoe soles or shoe pads are still a popular engagement gift of a woman to her lover. Recently some women have taken to selling them as tourist souvenirs as well.

Another item still popular among the Qiang men and women as well is the goatskin vest. The vest is reversible in the winter it is normally worn with the fur inside for warmth, and when worn with the fur out, it serves as a raincoat. It also acts as padding when carrying things on the back.

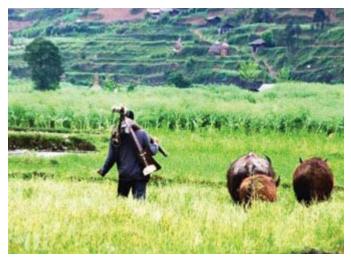
Qiang men often carry a lighter and knives on a belt around their waist. Men sometimes will also wear a piece of apron-like cloth (also embroidered with a floral pattern) over their buttocks, to be used as seat pad.

Women's clothing: The majority of Qiang women in the villages still wear traditional clothing. Qiang women's clothing is very colorful, and also varies from village to village. The differences are mainly manifested in the color and styles of their robes and headdresses. Headdresses are worn from about the age of twelve. Women in the Sanlong area wear a square headdress embroidered with various floral patterns in wintertime. In the spring, they wear a headband embroidered with colorful floral patterns, and wear a long robe (traditionally made of hemp fiber) with fancily embroidered borders, and tie a black sheep-leather belt around the waist.

Other than the headdresses and the robes, Qiang women are also fond of wearing big earrings, ornamental hairpins, bracelets, and other silver jewelry. Jewelry



http://www.flickr.com/photos/steenheilesen/sets/72157603000080109/



www.enghunan.gov.cn/wwwHome/200901/t20090122_151142.htm

pieces of those who are wealthier are inlaid with precious stones like jade, agate, and coral. They often hang a needle and thread box and sometimes a mouth harp from their belt.

Babies wear special embroidered hats with silver ornaments and bronze and silver bells, and a small fragrance bag.

Family and kinship relations

Although in the Qiang language traditionally there are no surnames, for several hundred years the Qiang have been using Han Chinese surnames. The clans or surname groups form the lowest level of organization within the village above the nuclear family. In one village there may be only a few different surnames. The village will have a village leader, and this is now an official political post with a small salary.

Kinship relations are quite complex, and while generally patrilineal, the women have a rather high status, supposedly a remnant of a matriarchal past. Only men can inherit the wealth of the parents, but women are given a large dowry. Marriages are monogamous, and can be with someone of the same surname, but

not within the same family for at least three generations. The general practice is to marry someone of the same village but it can also be with someone outside the village. Increasingly Qiang women are marrying out of the villages to Chinese or Qiang living in the plains to have an easier life, and many of the young men who go out to study or work marry Han Chinese women. In the past marriages were decided by the parents of the bride and groom, although now the young people generally have free choice.

The traditional form of marriage in the village is characterized by a series of rituals focused around drinking and eating. It is consists of three main stages: engagement, preparation for the wedding, and the wedding ceremony. On the third day after the wedding ceremony the bride returns to her parents' home and stays there for a year or so, until the birth of the first child or at least until around the time of the Qiang New Year (see below). The groom will visit her there and may live in the woman's house. She returns to her husband's family to

celebrate the birth or the New Year, and stays there permanently.

In recent years there has been movement away from traditional style marriage ceremonies towards more Han Chinese style or Chinese/Western/Qiang mixed style marriage ceremonies.

Mobility

Because the Qiang villages are generally high up on the mountains, and there often is no road to the village, only a steep narrow path, travel has traditionally been by foot, though horses are sometimes used as pack animals where the path or road allows it. In the summer the horses are taken to remote pastures to prevent them from eating the crops near the villages. In some cases there is a road to the village large enough for vehicles to pass, but the condition of the road is usually quite bad, and as it runs along the very edge of the mountain, it can be quite dangerous. On every field trip we saw at least one car or truck that had just fallen off the side of a mountain. Because the condition of the road varies with the weather and there are sometimes landslides, before attempting to drive to (or near) a village, one has to try to find out if the road is actually passable. The streams and rivers are too shallow to navigate, and so the Qiang do not make boats.

Livelihood

In general it was the work of the men to hunt, weave baskets (large back baskets and small baskets), shepherd the cows, gather wild plants, and do some of the harder labor such as plowing the fields, getting wood, and building houses, and it was the work of the women to weave cloth, embroider, hoe the fields, spread seeds, cook most of the food, and do most of the housework. In the winter men often went down into the flatlands to dig wells for pay (this often involved a twelve-day walk down to the Chengdu area!). Any trading was also only done by men. In the past the Qiang traded opium, animal skins and medicinal plants in order to get gold, silver, coral, and ivory. These items were often made into jewelry for the women. Nowadays both men and women cook and gather wild plants, and it is common for men to leave the village for long periods of time to go out to work in the flatlands or to sell medicinal herbs, wood, vegetables,



http://www.flickr.com/photos/steenheilesen/sets/72157603000080109/

animal skins or other items in exchange for money or rice.

Qiang women excel at embroidery, and Qiang embroidered wallets, handbags and local costumes.

References

Randy J. LaPolla (2001) "The Qiang Nationality Language and culture website" [www page] http://victoria.linguistlist.org/~lapolla/qiang/ethnointro.html

China Internet Information Center (2004) "The Taoping Stronghold" [www page] http://www.china.org.cn/english/travel/98372.htm

Chen, Shuyu. Culture of Qiang. Chengdu: Southwestern Jiaotong University Publising, 2008.

Built Environment

Architecture

Housing

The traditional Qiang house is permanent, built of piled stones, and usually has three stories. Generally one nuclear family will live in one house. The lowest floor houses the family's animals, and straw is used as a ground covering. When the straw becomes somewhat rotted and full of manure and urine, it is used for fertilizer. (Having the animals within the same building was to prevent theft and to maintain warmth, but as this is a rather unhygienic arrangement, the government has been encouraging the Qiang to build separate pens for the animals.)

A steep wooden ladder leads to the second floor from the back of the first floor. On the second floor is the fireplace and sleeping quarters. Beds are wooden platforms with mats made of straw as mattresses. The fireplace, which is the central point of the main room on the second floor, originally had three stones set in a circle for resting pots on, but now most homes have large circular three or four-legged iron potholders. In some areas, particularly to the north, enclosed stoves are replacing the old open fires. On the side of the fireplace across from the ladder leading to the second floor there is an altar to the house gods. This is also the side of the fireplace where the elders and honored guests sit.

The third floor has more rooms for sleeping and/or is used for storage. A ladder also leads from there to the roof, which is used for drying fungi, corn or other items, and also for some religious practices, as a white stone (flint) is placed on the roof and invested with a spirit.

Traditionally the Qiang relied on spring water, and had to go out to the spring to get it. In recent years pipes have been run into many of the houses, so there is a more convenient supply of water, though it is not like the concept of "running water" in the West. There are no bathrooms inside the house, though in some villages (e.g. Weicheng) a small enclosed balcony that has a hole in the floor

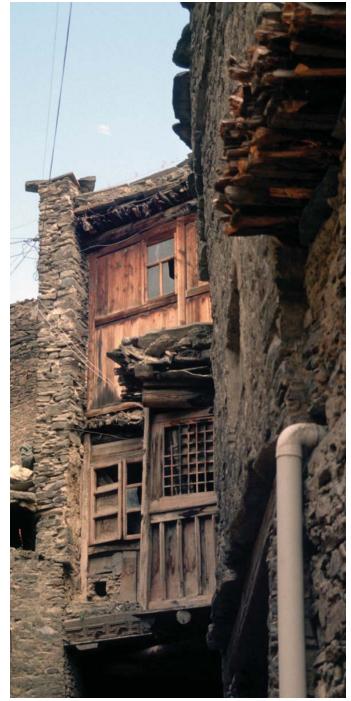


Photo by Dan Abramson.

has been added to the house to function as a second story outhouse. Many villages now have electricity.

Taken from the Qiang Nationality Language and Culture Site, http://victoria.linguistlist.org/~lapolla/qiang/ethnointro.html

Qiang Building Types:

Ji Long Housing, 20 to 30 feet high

Ban Wu Housing, interior timber

structure with sloped roof,

stone exterior wall

Tu Wu Housing, rammed walls

Diao Cao Combination of watch tower

and Ji Long

Diao Watchtower, around 100 feet

high

Examples in Taoping include:

Yang House (Ji Long). The Yang ancestors were originally Han who moved into the Qiang area, thus the Yang house has the unique character of a mixture of those two architectural styles. The general layout and material are typical of Qiang housing, so only some spots were designed as an expression of the owner's early ethnic character, such as a symmetrical main entrance, a less restricted arrangement of the shrine, and so on. Another interesting characteristic is that the whole house was developed over different time

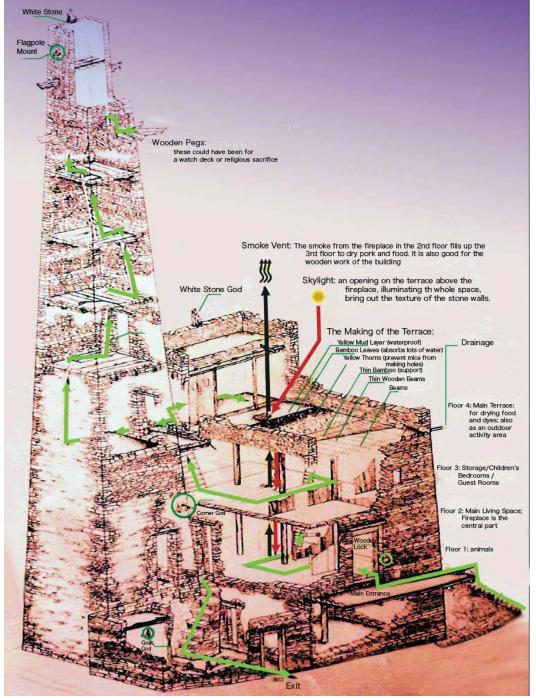
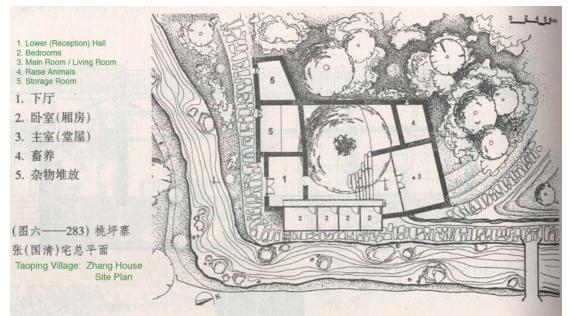


Diagram of Qiang Housing.



Zhang House Plan, Ji Fuzheng.

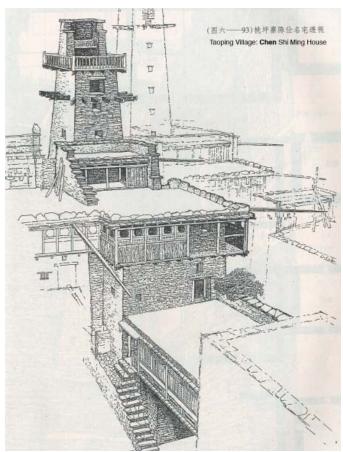
periods, so the layout of the floor plan is very unrestricted, built according to the specific site situations at each time.

Zhang House (Ban Wu). The Zhang House was used as a temple before the 1950s, but even before that, the construction was trying to mimic the traditional Chinese courtyard dwellings, with a poetic relationship to the nearby mountain and river. An attractive part of this project is the timber wing-room, which cantilevers over a creek bank, creating a formal, volume, and color contrast with the main antehall, a heavy stone structure.

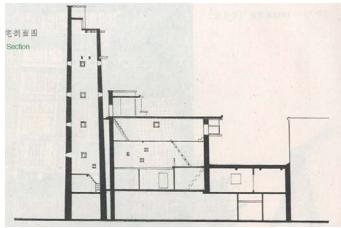
Chen House (Diao Cao). Chen was one of the earliest families when Taoping was originally forming. It sits in the central part of Taoping Qiang Zhai, and the whole construction group appears as cascading flat roof terraces. Exterior stone walls are the bearing system, supporting the interior timber structure. On the north side, there is a watch tower connected with residential rooms on the second floor



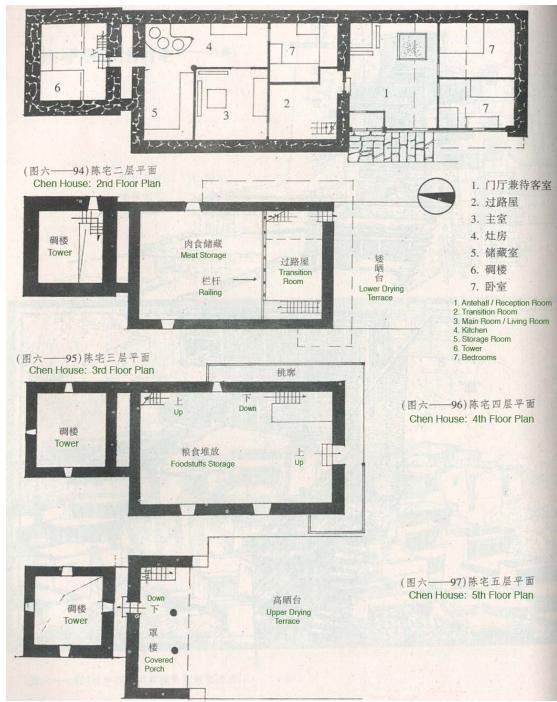
Zhang House, Ji Fuzheng.



Cheng Shi Ming House Perspective, Ji Fuzheng.



Chen House Section, Ji Fuzheng.



Chen House Floor Plans, Ji Fuzheng.

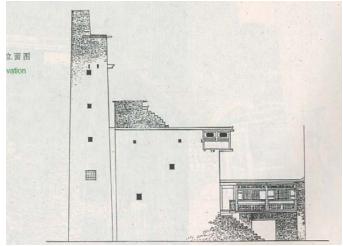
and a 3 foot-long stone bridge. The house has 4 floors while the watch tower has 7 floors. Because of the limitation of site width, the house was developed in a north-south direction, creating two flat roof terraces, a unique and unusual characteristic. On the sixth and top floors of the watchtower, boards are placed on top of two layers of cantilevered timber structures. This is also a unique creation, probably influenced by the double eaves style in Han architecture.

Watchtowers

Religious Meaning. The emergence and development of watchtowers in Qiang villages may account for their close connections with the religion of the Qiang and the important role played by the "Shibi" ("Xu", or "Duangong" in Chinese).

The Shibi is the spiritual leader of the Qiang and he has supreme authority over the planning, design and construction of any building. He believes that everything has a spirit, that the watchtower (or Qionglong) is the "palace of heaven", and that the God of the white stone is of greatest significance in their religion. For this reason, the building of watchtowers and houses is not just a normal building procedure but is also a ritual including sacrifice and the placing of white stones. Customarily, five white stones together symbolize the five tutelary gods of heaven, earth, mountains, trees (forests) and villages (man's world). The lofty watchtower elevates these tutelary gods to the nearest point to heaven like a scaling ladder or road leading upwards. Thus the religious aspirations and sentiments of the Shibi are all closely linked to the watchtower. Furthermore, by means of this tall, tapering structure, these religious thoughts and aspirations are projected into the place where the gods of heaven, fire, and the sun are located (Chen 2008).

Function. Freestanding watchtowers and watchtowers that are combined with dwellings have different functions, and usually the layout of the villages in which they are located is also different. Freestanding watchtowers are often positioned on strategic passes near one or several villages in an area. They are for communal use and serve as the eyes of the village, providing a wide-ranging view of the area, and therefore play an important defensive role against surprise attacks, hence the name "lookout towers." The primary function of the Qiang watchtowers is for defense, which also influences the position and layout of the villages. The most important principle is that the watchtowers must be visible



Chen House West Elevation, Ji Fuzheng.

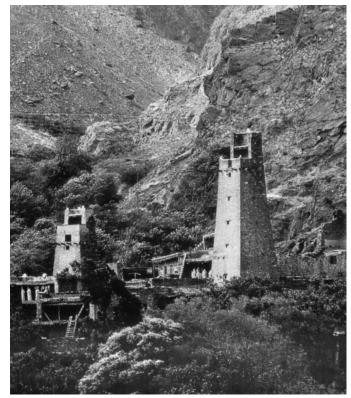


Photo by Wenjian Yan and Yuchuan Wan, from Taiping Qiang Pueble (Lee, ed. 2002).



Photo by Dan Abramson.

from every dwelling with nothing in between to block the line of sight.

Height. There is another type of freestanding watchtower which is usually located in the center of the village or at another appropriate position within the village. This type of tower serves not only as a lookout tower but also as a shelter and a defensive position for the villagers when enemies invade the village. As for the towers built on mountain ridges, if the height of a tower is increased even by a third of a meter, the field of vision from the tower can be extended by a few kilometers. Consequently, the height of the tower depends on the local topography and environment, which explains why so many watchtowers of the Qiang villages differ in height. No matter whether the towers are positioned in the village center or all around the village, or are freestanding or attached to people's dwellings, they give the village a sense of power and strong fortification.

Relationship to Housing. Looking at the relationship between the watchtower and the other dwellings, if one sees the free-standing watchtower erected in open space as the first line of defense, then those towers built as part of people's homes constitute the second line or point of defense.

In some places, each home in the village has a watchtower and where these differ from one another it can be an impressive sight. In Mao County in particular, some villages not only have a communal lookout tower but each home also has its own private tower and each of these homes and towers have their own distinctive architectural features. A large number of these combined watchtowers and dwellings can be found in the village of Qugu, Sanlong, Heihu, Baixi, Wadi, Chibusu, and Weicheng in Mao County, and in the townships and villages around the valley of the Heishui River where the core of traditional Qiang culture has been we preserved. A few watchtowers with dwellings are scattered in the villages around the lower reaches of the Zagunao River.

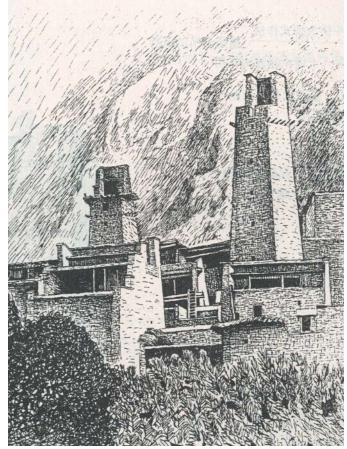
Where the watchtowers and dwellings are in close proximity, this could be seen as an architectural footnote from the time when the Qiang were moving towards a feudal agricultural economy. The architectural form of combined watchtower and dwelling, although possibly reflecting the small-scale peasant economy of the serf system, was also a form of self-protection, all of which indicates an early stage in social development. However, they all share the prerequisite that priority in spatial layout be given to the main rooms and the watchtowers, while

other rooms, such as for sleeping, storage and livestock, could be arranged as desired. It is this kind of clear ordering of primary and secondary level spaces which creates a wonderful sense of large and small, restricted and spacious, open and enclosed, light and dark.

Qiang Watchtowers in the Lower Zagunao River Area. The watchtowers around the lower reaches of the Zagunao River have been modified and display the following features:

- (1) most of the watchtowers are square and tapering
- (2) the walls of the watchtowers are made of rammed soil, as exemplified by the twenty to thirty meter tall group of watchtowers in Buwa village
- (3) the tops of the watchtowers are chair-shaped with one wall higher than the rest
- (4) the top two stories of the towers have lookout platforms made of wooden rods extending out from the walls, overlaid with wooden planks. These Buwa watchtowers use a system of brackets, which in traditional Chinese buildings is called "Dougong", to support the cornices at the top of the towers. Such structures show the influence of residential-style buildings and indicate a development in watchtower design in which aesthetic considerations complement the basic function of defense.

The Earthquake-Resistant Qiang Watchtower. Because the Qiang region is an area of seismic activity, it is important that the walls should be quake-resistant. To ensure the stability of the towers, the thick foundation and the base walls must be built as one structure and the corners are added as the walls narrow from one floor to the next. The depth of a tower's foundation depends on the hardness of the rock and the earth. Because of the steep nature of many Qiang areas, some watchtowers have no foundation on the side that is further up the hillside. For example, the watchtower in the village of Qiangfeng has a rear wall which has been built directly on to the rock face, while the other walls have proper foundations. The outline of many watchtowers is distinctive in that the lower part often has a sharper incline than the upper part, which is presumably in order to lower the tower's center of gravity, thereby increasing its stability. For this reason the outline of the watchtower does not always appear to be a straight line.



The watchtower style in Taoping is unique in that the top is truncated to form a partially enclosed, partially open shape, good for both observing outside and sacrificial offerings, Ji Fuzheng.



The Qiang people built their houses in multiple layers. For example, this roof has main beams, poles, Citrus medica, and bamboo. On top of the bamboo there is a layer of "Revive Grass" (Selaginella tamariscina), which does not die even after it is dried for several years. When constructing the house, the root of this grass must face up in a layer of mud to absorb water during the rainy season and thereby protect the wooden framework, making it more durable. (http://www.tudo.com/programs/view/fAaHFLXXOyk)



Section of Wall Showing Placement of Bricks, Alternating Directions, CCTV video.

Materials

The mountains are heavily wooded. Gingko, camphor, Chinese hemlock, and Chinese little leaf box trees grow wild in the valleys, as do 189 types of grasses and bushes, including some rare medical plants. Bamboo is also another widely available plant in Taoping. The suspension bridge which hangs over Minjiang River is constructed from bamboo.

The Qiang build their homes from stone, timber and mud, with a wooden staircase. The two mountains beside the village are a source of common but priceless construction materials. One mountain has abundant rubble, grey, broad and thin, that is highly durable. Used in construction, it is capable of altering its shape in accordance with changes in the forces it is subjected to, which serves to make the building more stable. The other mountain is abundant in loess. The village was built of rubble mixed with loess and mud.

The loess in Taoping Qiang Village, which contains 20% potassium nitrate, is very rare. It's used in construction because of its outstanding ability to resist light, heat and corrosion. Potassium nitrate is high-tensile and a powerful coagulant. Its use as a building material has been a key factor in the Taoping ancient Qiang Village's survival of 2,000 years of earthquakes.

Structure and Construction

Qiang people long ago became experienced in mitigating the effects of earthquakes. Construction foundations are square, hexagonal or octagonal, and are three or four meters deep. The foundation must stand on bare rock. The foundation stones are large pieces of rubble.

In the wall, the pieces of rubble fit one another naturally. The builders first select good quality rubble and hammer the irregular pieces to get rid of any fragments. They then put the various pieces into place, adjusting their positions constantly so as to maximize the cohesion between rubble and loess. The adjustment can be repeated anything up to fifty times.

Experienced engineers made precise calculations concerning the bases of the walls and the walls themselves. Every piece of rubble and every handful of loess

was carefully placed, the first layer lengthways and the second, sideways, so as to maximize the cohesion. Both sides of the walls had to be properly arranged, centred on large stones in the middle.

To increase the shock resistance of the walls, the Qiang craftsmen made them all slightly concave. They also formed a corner on every wall, known as the "wall stud." Wall studs placed at the edge of the houses would bear the full force of any earthquake, and would allow the Qiang houses to withstand both transverse and vertical shocks.

It was the practice, after each storey of a building was completed, for nothing to be built on top for at least a year. The Qiang people did this to allow the rubble and loess to settle, and bond more strongly. A wall would be deemed sufficiently stable only if it could withstand the climate changes and rainstorms of a whole year, without losing any of its loess. So it took three years to build a three-storey Qiang building and thirteen years to build a thirteen-storey one.

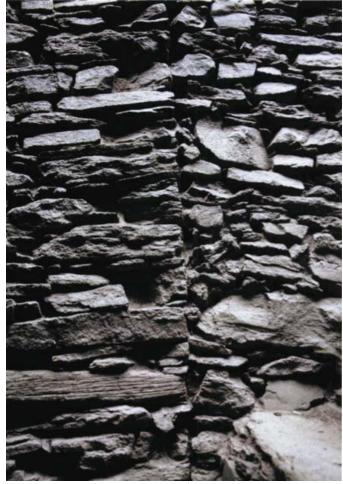
The rubble and loess walls, built over 2,000 years ago are extremely solid. To improve their resistance to earthquakes, Qiang houses were built in a pyramid structure, with a wide bottom and a narrow top. The walls in the bottom layer are 60 cm wide, and those in the top layer, 20 to 30 cm wide. The entire wall leans inwards, towards the middle.

In a five-storey building, there could be a horizontal difference exceeding 20 centimetres between the top and bottom walls. The walls, being solidly built and symmetrical, are capable of withstanding a force from any direction.

Besides the solid walls, Qiang buildings incorporate other, supplementary support. Three wooden pillars form a system that supports the floors and the roof.

Qiang buildings are usually just three stories. The inner structure adopts the "space cutting" technique combining stone walls and beams. The layers of wall are separated every "zhang" by beams, 20 centimetres in diameter with rafters above them.

A smooth groove was cut in the top of the wooden pillar on the first floor, and



Stone Wall. (www.cnki.net)



Plan View of Building with Concave Shape, Studs at Corners, CCTV video.



Wall studs, CCTV video.



Section Diagram of Building Showing Wooden Interior Floor Supports and Exterior Brick Walls, CCTV video.

another in the corresponding part on the bottom of the wooden pillar for the second floor. The main beam would be inserted between them. Sometimes a supplementary beam might be added, parallel with the main beam. This was in fact a primitive form of a bucket arch, which could disperse the pressure from the junction of the wooden pillars and beams so as to strengthen the beams.

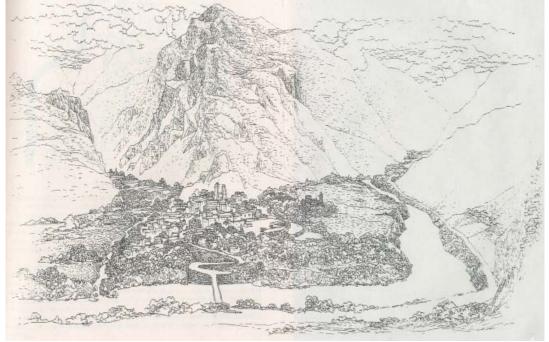
The interweaving of the beams and stone walls, combined with the joining of the beams and wooden pillars, effectively reinforced the whole structure and increased its capacity to withstand shocks.

The ancient Qiang village is a collection of buildings all forming a complete architectural complex. The various houses are linked to one another in an integrated whole. The buildings and alleys, by being connected, can better withstand earthquakes.

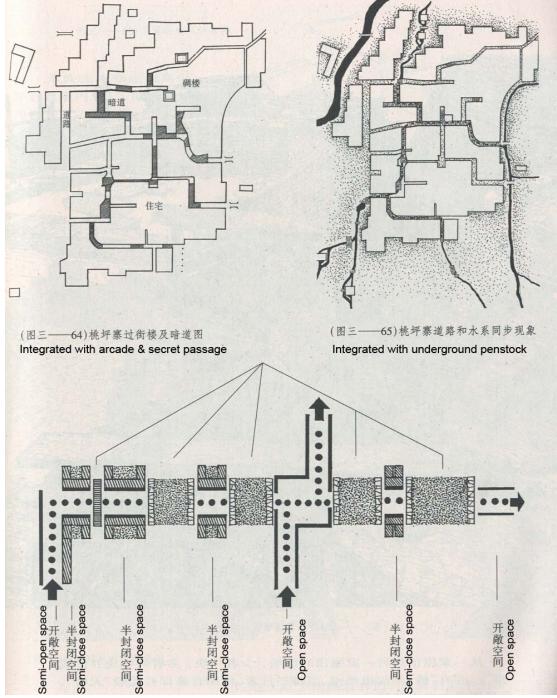
Compared with the interconnected ancient Qiang houses, later Qiang buildings are more independent, in order to accommodate tourists. However, being independent makes the buildings more vulnerable to earthquakes.



Taoping houses connected in an integrated whole, CCTV video.



Site selection based on river, fertile land, and mountain, Ji Fuzheng.



Street patterns, Ji Fuzheng.

References:

Xingqiang, Hong (2008) "Taoping Village" [www page] http://www.chinadiscover.net/chinatour/sichuanguide/sichuan-taoping-2.htm

CCTV (2008) "Taoping Ancient Qiang Village: The Secret of Surviving the Wenchuan Earthquake" [www page] http://www.cctv.com/program/e_ documentary/20081029/101426.shtml

Village Form

Site Selection. Siting of villages is based on:

- Proximity to water
- Proximity to arable land
- Ability to "lean" on mountains

Street Patterns. Taoping's complex and well developed path and road system integrates watchtowers, housing units, paths for pedestrians, and defense circulation. It also reaches the underground penstocks.

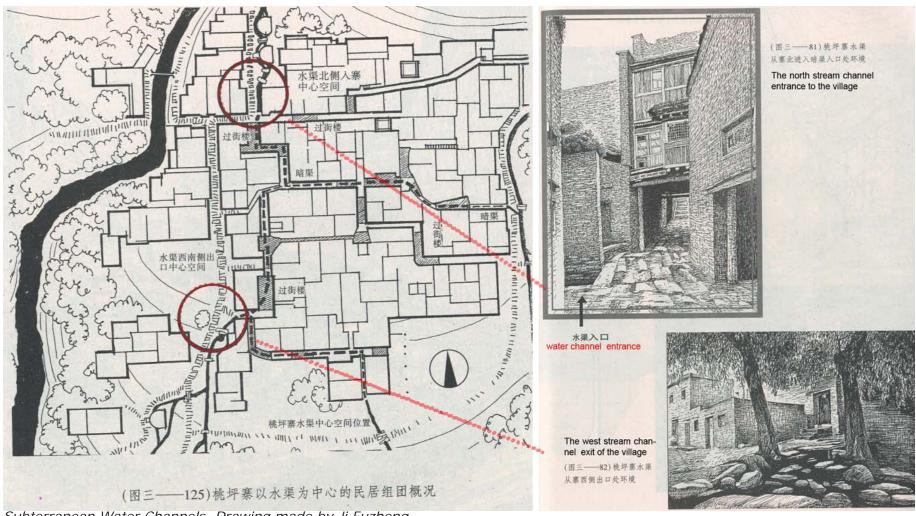
Roads may widen in areas, such as for stacks of firewood, and provide shade and breeze in others. Gravel is the most common road surface,



Aerial photo showing siting provided by Sichuan University. 29

appropriate for the arid climate. Some parts of the road are shaded by an arcade as long as 30 feet. This is good for defense but creates a dark and gloomy atmosphere.

Water channel system. The village site was selected with the intention to locate in the angular space between Zaogunao River and its tributary. The historical uniqueness is expressed in the changing volume of water flowing in the entrance of the underground penstock, the multidirectional and multi-functional considerations of water (fire protection, humidifying, defensibility during battle), and the high quality craftsmanship of the construction.



Subterranean Water Channels. Drawing made by Ji Fuzheng.



Taoping is mainly organized by the water artery system. It no longer functions for defensibility, but to benefit daily life and agricultural production. In the north entrance of the penstock, there are a cluster of different functional spaces, such as the mills, the bail spot, slab bridge, and so on, which are more related to production and water supply. The streams in the village area are usually hidden underground and highly protected all the way through the settlement, then exit at three directions in east, south, and west. Especially for the west exit, channels widen into a small artificial pond, and an open space is created here as



Photos of Taoping by Dan Abramson.

a significant gathering spot for the villagers.

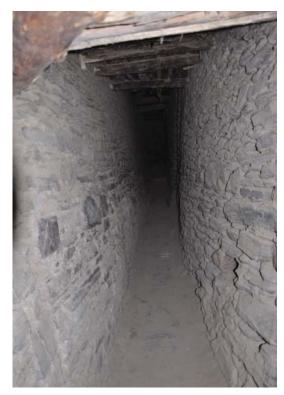
Source: Ji, Fuzheng, **Chinese Qiang Architecture**, Southwest Jiaotong University
Publication, 2000, ISBN 7-81057-414-0

Chen, Shuyu. Culture of Qiang. Chengdu: Southwestern Jiaotong University Publising, 2008.



Top three photos show spaces in Taoping, by Dan Abramson.







Gathering space. Provided by Prof. Li Wei, Sichuan University.



Brown shows traditional buildings, and white shows the new tourist village, Sichuan University.



Photos of the newer part of Taoping by Dan Abramson.







Regional and Governmental Context

Regional Tourism

See maps to right.

Regional Master Plan

See maps to far right.

Post Wenchuan Earthquake Policies

The information below was selected from "The Overall Planning for Post-Wenchuan Earthquake Restoration and Reconstruction" created by the Planning Group of Post-Wenchuan Earthquake Restoration and Reconstruction of the Earthquake Relief Headquarters under the State Council.

Chapter XIII Policies and Measures

Adhere to the principle of special cases with special methods, formulate and implement policies and measures with strong pertinence in accordance with the needs of restoration and reconstruction, strengthen coordination and form composition forces so as to provide policy support for realizing the target determined in this planning and achieving the reconstruction task.

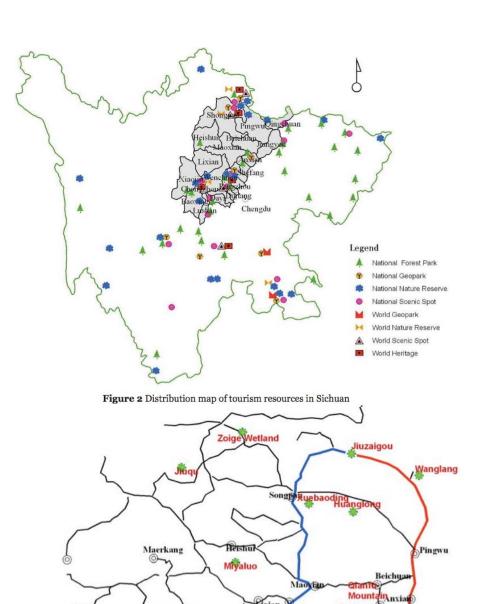


Figure 5 Map of the Ninth-circle Route in the earthquake affected areas

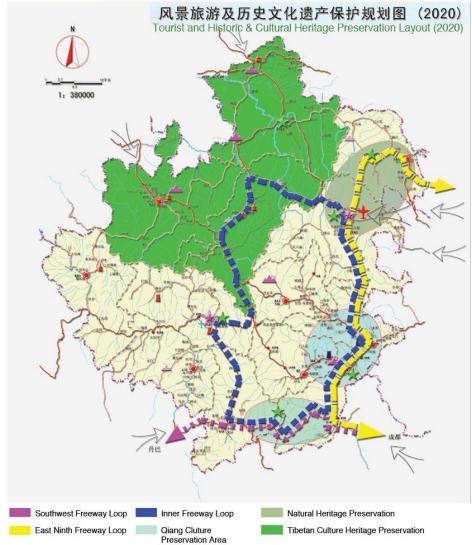
Yang Weiqiong et al. "Impact of the Wenchuan Earthquake
on Tourism in Sichuan, China"

Mianzh

the East Ninth-circle Route - the West Ninth-circle Route

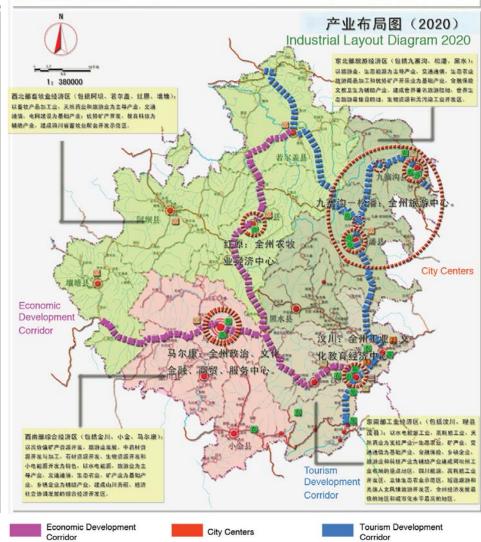
阿 坝 州 州 域 城 镇 体 系 规 划

URBAN SYSTEM PLANNING FOR ABA AUTONOMOUS PREFECTURE



阿坝州州域城镇体系规划

URBAN SYSTEM PLANNING FOR ABA AUTONOMOUS PREFECTURE



Post Wenchuan Earthquake Policies

§1. Fiscal Policy

- —— Establish the fund for restoration and reconstruction.
- —— Adjust the finance expenditure structure.
- —— Support the utilization of foreign loans.
- §2. Tax and Fee Policy
- —— Reduce the tax burden of enterprises.
- —— Alleviate the tax burden on individuals.
- —— Give support to the housing construction in urban and rural areas.
- —— Part of the government funds shall be exempted.
- —— Deduct partial administrative charges.
- §3. Financial Policy
- —— Resume the financial service function.
- —— Enhance credit support.
- —— Strengthen the ability of institutional loans.
- —— Bring the function of capital market into play.
- —— Strengthen the intensity of insurance innovation.
- —— Enhance the construction of credit environment.
- §4. Land Policy
- —— Readjust the land use planning.
- —— Implement special land supply policy.
- —— Use land economically and intensively.
- §5. Industry Policy
- —— Revitalize tourism economy.
- —— Promote agricultural production.
- —— Give support to key enterprises.
- —— Give support to medium- and small-sized enterprises.
- —— Promote technological innovation.
- —— Promote circulation of commerce and trade.
- —— Adjust industry entrance permission.
- —— Eliminate backward productivity.
- §6. Counterpart Assistance
- —— Make clear the assistance task.
- —— Encourage investments made by all walks of life.
- —— Furnish convenience.
- §7. Assistance Policy

Group Leader:

National Development and Reform Committee (NDRC)

Co-leader:

The People's Government of Sichuan Province Ministry of Housing and Urban-Rural Development (MOHURD)

Group Members:

The People's Government of Shaanxi Province People's Government of Gansu Province Ministry of Education, Ministry of Science and Technology

Ministry of Industry and Information Technology State Ethnic Affairs Commission

Ministry of Public Security

Ministry of Civil Affairs

Ministry of Finance

Ministry of Human Resources and Social Security Ministry of Land and Resources, Ministry of

Environmental Protection

Ministry of Transport

Ministry of Railways

Ministry of Water Resources

Ministry of Agriculture

Ministry of Commerce

Ministry of Culture Ministry of Health

National Population and Family Planning Commission

- —— Carry out educational aid.
- —— Implement assistance to the orphans and handicapped.
- —— Intensify employment assistance.
- —— Strengthen anti-poverty assistance.
- —— Offer social security.
- —— Provide legal aid.

§8. Other Policies

- —— Carry out social donations.
- —— Advance work relief.
- —— Ensure proper population resettlement.
- —— Implement the principle of equality and priority.
- —— Train and import talents.
- —— Encourage social participation.

Tourism

- —— Implement the tourism revitalization projects, strengthen the construction of key tourist areas and quality tourism itineraries, and restore and reconstruct key tourist attractions and key scenic spots as well as tourist towns and villages with distinctive ethnic features. Restore and develop the rural tourism in the major form of farmhouse enjoyment.
- —— Restore and reconstruct tourism transportation facilities and service areas and stations along the route. Do a good job in the reinforcement and reconstruction of tourist hotels and other facilities. Establish emergency and rescue system for tourism safety.
- —— Strengthen the promotion of tourism market and deliver timely report on the situation of tourism safety insurance, so as to restore the confidence of domestic and foreign tourists. Intensify the promotion of new tourism resources and products.

The restoration and reconstruction of the ecological environment shall be in line with the principle of respecting nature, regulations and laws as well as science. In addition, ecological restoration and environmental governance shall be intensified with a view to promoting coordinated development of population, resources and environment.

People's Bank of China State-owned Assets Supervision and Administration Commission State Administration of Taxation State Administration of Radio Film and Television General Administration of Press and Publication General Administration of Sport State Forestry Administration National Tourism Administration Chinese Academy of Sciences Chinese Academy of Engineering China Earthquake Administration China Meteorological Administration China Banking Regulatory Commission China Securities Regulatory Commission China Insurance Regulatory Commission State Electricity Regulatory Commission State Administration of Energy State Administration of Cultural Heritage State Food and Drug Administration State Council Leading Group Office of Poverty Alleviation and Development

Supportive Units:

State Wenchuan Earthquake Expert Committee State Bureau of Surveying and Mapping

Culturally, Environmentally, and Economically Responsible Tourism

Ecotourism

Principles of Ecotourism

- Involves travel to natural destinations.
- Minimizes impact.
- Builds environmental awareness.
- Provides direct financial benefits for conservation.
- Provides financial benefits and empowerment for local people.
- Respects local culture.
- Supports human rights and demographic movements.

Honey, Martha (2008). **Ecotourism and Sustainable Development: Who Owns Paradise?** Washington, DC: Island Press. pp.
29 – 31

Casa Torre del Cornone, Italy

Casa Torre del Cornone was built on the walls of the ancient medieval village of Fontecchio. It is located in the mountainous area of Abruzzo, Italy. The town offers apartments and rooms in the heart of the Velino Sirente Natural Park and a few miles from the Gran Sasso National Park and Campo Imperatore plateau. "This is a peaceful rural oasis, where you can spend your relaxing



Above: Rooms available to rent in Casa Torre del Cornone

holidays, enjoy the garden, the comfortable and quiet house and the village; or go for excursions, trekking and other activities, in a harmonious natural environment marked and shaped by traditional human activities for centuries."

Programs available to guests:

- Courses on Cooking, Landscape, and Local Culture
- Landscape reading workshops
- Bird Watching Excursions
- Conversational Italian Lessons
- Trekking and guided excursions
- Saffron harvest and preparation
- Truffle harvest and preparation
- Horse Rides

Information and Images taken from www.torrecornone.com

- Canoeing on the Tirino River
- Guided visits in the neighboring villages, mountains and valleys

Services:

- Short Dist. Shuttle Services
- Bikes to rent

Free Services:

- Info on Itineraries and walks
- Manuals and maps
- Library
- Internet

What to do in (and around) Fontechhio:

- Self-Organized/Organized Walks
- Visits to Fontechhio and nearby villages by horse
- Bike rides
- Excursions via train (+ bike) on secondary railway lines
- Skiing near Fontecchio
- Swimming in the Lake Sinizzo
- Caves of Stiffe
- Street Markets

Environmental Sustainability, Social Accountability, and Restoration Techniques:

Heating System. The heating system consists of a burner feuled with wood chips (locally harvested) and olive and grape residues left over after pressings. This system has a relatively low carbon footprint. In addition solar panels are used to heat water within the guesthouses in the summer.

Restoration. The town has preserved and restored most of the original structures and building techniques. There are original clay tiles floors within most of the houses. New plaster was removed from many of the doors and windows to expose the old stone frames. The walls of the guesthouses were painted with natural lime and earth. Roofs were reconstructed with traditional techniques. Some ceilings have vaults made with clay bricks covered in plaster,









Guided tour in Luang Namtha, photo by Rachel Miller and Liz Rogers.



Local food brought by tour guide, photo by Rachel Miller and Liz Rogers.

while the others have been consolidated with timber. The gardens showcase the local stone work.

Furniture, doors, and windows. Antique furniture and carpentry has been restored and the new furniture which is produced is done locally. Funds were allocated to restore original doors for reuse. Double paned windows were manufactured by a local joiner in order to insulate heat and cold more effectively.

Nam Ha, Laos

UNESCO-LNTA Nam Ha Ecotourism Project

- Launched in Luang Namtha during October 1999
- Implemented by the Lao National Tourism Administration (LNTA)
- Technical assistance and monitoring provided by the UNESCO Office of the Regional Advisor for Culture in Asia and the Pacific
- Funded by the government of New Zealand
- Involves the Ministry of Agriculture and Forestry, Ministry of Information and Culture and the Science, Technology and Environment Agency
- Recognized by the United Nations' Development Programme (UNDP) as a "best practice" poverty alleviation intervention and won UN and British Airways awards.

UNESCO Bangkok, "Namha Ecotourism Project." http://www.unescobkk.org/index.php?id=2094

Ecotourism Laos Website (http://www.ecotourismlaos.com/index.htm)

Goals of the Project

- 1) Tourists help reduce poverty by bringing money directly into communities by paying for food and lodging.
- 2) The Provincial Tourist Authority manages a separate fund, generated from tourist trekking fees, which is specifically designated to assist in livelihood improvement.
- 3) Tourism becomes a tool for forest biodiversity conservation. By giving

villagers a larger economic base, ecotourism helps to reduce their reliance on forest resources.

How

- The project team set precautionary limits on the number of villages, the number of treks and the number of tourists in each trek.
- It established clear mechanisms for the use of fees paid by the tourists that include direct payments to the villagers for food and lodging.
- It enlisted the assistance of the government body responsible for conservation of forest resources in project activities and provided incentives for villagers to adopt a number of forest and wildlife conservation practices.
- It formulated a thorough guide-training manual and trained a large cohort of guides to take the tourists on the treks and provide appropriate crosscultural information, assistance and supervision.
- It began running 1, 2, and 3 day treks and one boat-trip to villages in and around the National Protected Area.
- It developed a monitoring system for evaluating the impact of the treks in the target communities and mechanisms for consulting with village communities both before and during the trekking operations.
- It developed the capacity of the local tourism staff to manage sustainable ecotourism activities.

Challenges

- As the number of tourists and treks increases, cultural change due to greater access to money and the free market is harder to regulate in sensitive ways and environmental impact increases.
- More villages joining the framework will stress the current tourism office staff.
- Guides and tourists need careful attention and continuous support training to ensure positive social and material interchange.

Taken from Lyttleton, Chris and Alison Allcock. "Tourism as a Tool for Development: UNESCO-Lao National Tourism Authority, Nam Ha Ecotourism Project." External review. July 6-18, 2002. Available at UNESCO Bangkok, "Namha Ecotourism Project." http://www.unescobkk.org/index.php?id=2094



Photo from guided tour, by Rachel Miller and Liz Rogers.



Guided tour into participating village, photo by Rachel Miller and Liz Rogers. 41

Eco-village

AnLong Eco-Village, Pi County, China

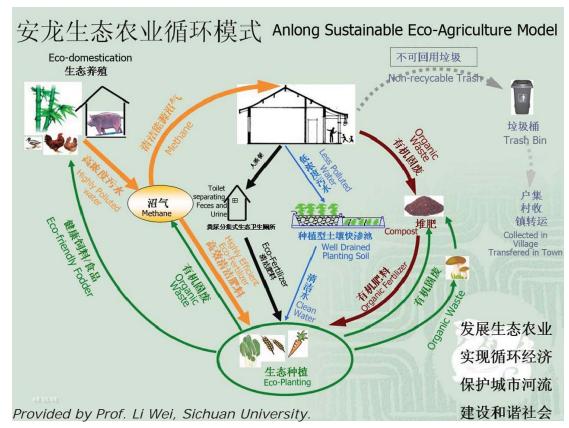
Primary pollution Source of Chengdu Plain: Agricultural plane source pollution (Overuse of nitrogenous & phosphate fertilizer)

Typical Residences are scattered. The dwellings are built with local materials, and they are adjacent to farmlands.

Environmental Issues: water pollution, waste of resources, lack of basic sanitary infrastructure, overuse of fertilizer

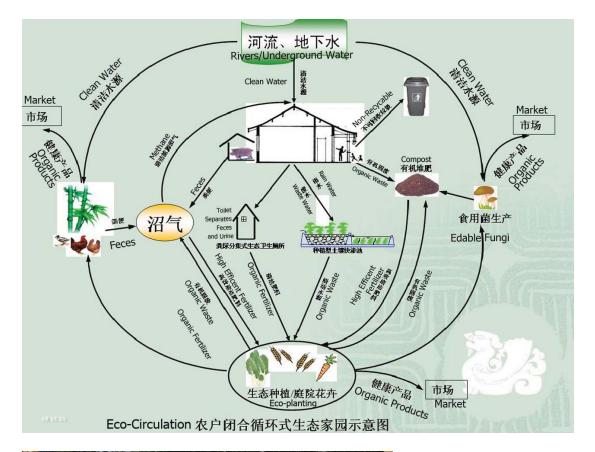
Project objectives:

- Creating an environment-friendly, nonpolluted, resource-conserving rural ecovillage
- Promoting communication between urban and rural residents
- Promoting the development of sustainable economy
- Promoting environmental & cultural education
- Creating an eco-farmland belt along the river as a protective corridor to the waterfront
- Creating a sustainable community by emphasizing the unique characters of West Sichuan





Site map of AnLong Eco-Village from Professor Li Wei, Sichuan University.





Lectures given by different professionals for training, by Prof. Li Wei.

Training & Education



Local Residents



Eco-agriculture & Sustainable Economy



Each month, local organic products are transported and sold in urban areas, such as Chengdu, by Professor Li Wei, Sichuan University.

Fertilizer limitation or prohibition Full use of organic waste (livestock breeding) Waste water emission reduction



Eliminate Agriculture Plane Pollution Sources |



Ecological Protective Belts to Rivers





Slow Movement

What is slow travel

Slow Travel allows the visitor an opportunity to become a part of local life and to find a role and connection to a place and the people who abide there.

Slow travelers stay in one place for at least a week. They usually choose holiday rentals that become a 'home away from home', in which you shop and cook just as you would at home.

Holiday rentals are often called by different names in different countries eg in the UK and Australia they are called 'self-catering'; in France, 'gites'; in Italy 'agriturismos"; in Switzerland and Germany 'ferienwohnungen'; and in North America 'vacation rentals'.

These rentals are fully equipped for the slow traveler to just move in and start living. They come with sheets, towels, crockery and cutlery etc. Some are stocked with food but it is better if they aren't. People have different tastes and may not like the food that is supplied. But more importantly, if the larder is not stocked the slow traveler has to go out into the community to shop. This is an important part of 'living' in your travel destination.

By living as opposed to 'staying' at your destination, you can experience the place more intensely. Not only do you have the opportunity to shop for your groceries, you see people in your community or village every day. You can go for a run each morning and stop at the same café for a coffee – meet the locals.

Slow travel is not restricted to urban settings

Many slow travel operators offer self-catering accommodation in rural areas sometimes on fully function farms.

One of the pleasures of slow travel is the slow and thorough exploration of the local area – it is like an immersion process. Most slow travellers start by exploring everything within a couple of hundred metres of where they are living. This can easily be done on foot and is the area that is given most time and attention. Next they explore out to a few kilometres – this can easily be done on a bike. If there is time slow travellers then explore further afield, perhaps by train or hire car.

This slow exploration is in direct contrast to conventional travel that seeks to 'hit' the major tourist features in a 20 km radius. Slow travellers are freed from these tedious pressures of standard tourism. By exploring on foot and by bike there are Traditional ways of doing things opportunities to talk to people and find out the points of interest from their perspective.

"Voluntourism"

If there is time, you can become involved in local activities eg take a language or cooking course, volunteer for a local organization or group, study Buddhism, volunteer at a local school to teach English or another language you know, or try wwoofing (willing workers on organic farms).

You could design your slow travel around working to support the community in which you're staying. Check out what you could do to help in a developing country such as India or Vietnam. Use your skills to help others (but not impose your vision but rather try to understand their vision and make it happen). In the process you will get to know another culture and its people. You will be working and living at the local level and so will develop relationships with local traders and local people. A new word has been coined to describe this kind of slow travel – voluntourism.

Information and photos taken from www.slowmovement.com/



