APPENDIX A
SUMMARY OF BE LAB ACTIVITIES PRIOR TO THIS STUDIO

The University of Washington – Sichuan University collaboration in Taoping was based on both the sister-state/province relationship between Washington and Sichuan, and a longstanding teaching and research exchange between the two universities, centered in anthropology, biology, forestry, hydrology and environmental science. Now, with the need for post-earthquake reconstruction in Sichuan, faculty of UW's departments of architecture, construction management, landscape architecture, urban design and planning, and civil engineering sought to explore an increased role. With this goal in mind, Prof. Dan Abramson of Urban Design and Planning visited Chengdu in June 2008 to meet with Profs. LI Wei, LUO Qian, AI Nanshan, and LI Yongxian and students in Architecture, Planning and Archeology at SU to discuss possible collaboration. They agreed that a focus on the resilience of minority ethnic settlements and methods of engaging them for more participatory planning and reconstruction would make the best use of our expertise and would have the most significant impact.

On a second trip to Sichuan in December 2008, Prof. Abramson traveled up the Min and Zagunao Rivers with Prof. Li, and TAO Tao, Chairman of the Beijing-based design and planning firm WuHe International, to meet with residents, county government and development officials in the village of Taoping, in Li County, Aba Prefecture. Taoping's prominence as a symbol of Qiang culture and a potential World Heritage Property, and the willingness of these local stakeholders to form a partnership, convinced the SU and UW faculty to focus the BE Lab on Taoping.

BE LAB SEQUENCE AND TIMELINE

UW Profs. Dan Abramson and Jeff Hou conceived the BE Lab as a sequence of courses over three academic quarters in 2009 to address the challenges facing Taoping, and develop a model of resilient, sustainable disaster recovery for fragile mountain valley settlements throughout the region and beyond. The sequence involved a preparatory seminar and expert workshop and charrette at UW in Spring Quarter; a Summer Quarter field studio with a study tour of cultural and natural heritage preservation districts and reserves in southwest China, and survey work and a design charrette in Taoping and the Zagunao River valley; and a 3-month design and planning studio at UW in the Autumn Quarter.

March 30 – June 12	**Pre-Studio Preparatory Seminar, UW (URBDP 598J) - Spring Quarter**
May 5-9	China-US Professional Workshop on Regional Sustainable Development / Taoping-Snoqualmie Exchange Charrette, Seattle
June 25 – July 21	**Field Studio in China - Summer Quarter A-term**
June 25-26	Orientation at Sichuan University; study tours of urban historic preservation districts in Chengdu
June 27-July 5	Study Tours of Lijiang, World Heritage City, and Jade Dragon Snow Mountain Wenhai Ecolodge, Yunnan province; Jiuzhaigou, World Man and Biosphere Reserve, and Dujiangyan hydro-engineering, World Heritage Site, Sichuan province
July 6-7	Survey of Zagunao Watershed Qiang and Tibetan Villages, Sichuan
July 8-12	Survey of Taoping Qiang Village, Sichuan
July 13-14	Taoping Charrette
July 15-16	Presentations to County Government and Village
July 17-20	Documentation and wrap-up, Sichuan University
September 30 – December 18	**Full-quarter Studio, UW (URBDP 508) - Autumn Quarter**

PREPARATORY SEMINAR AND CHARRETTE

UW students wishing to enroll in the Summer Field Studio and/or the Autumn Quarter UW studio were required to take the Spring Quarter prep seminar and charrette. The course objectives were to build interdisciplinary faculty-student teams and develop collaboration and fieldwork ethics, strategies and protocols; build background knowledge of field studio context; build skills and a research/design toolkit appropriate to the field studio problem; build relations with Seattle professional community and visiting Sichuan experts concerned about sustainable disaster recovery planning and design.

Fifteen students took the seminar, which was led by Dan Abramson, assisted by Built Environments PhD candidate Josh Miller, and included lectures by Jeff Hou (Landscape Architecture), Carrie Dossick and Ken-yu Lin (Construction Management), Rob Peña (Architecture), Ben Spencer (Landscape Architecture), Bob Freitag and Manish Chalana (Urban Design and Planning), Stevan Harrell (Anthropology), and Jeff Berman (Civil Engineering). Built Environments PhD student Jewel Yang, and visiting Chinese professional planners Luo Danheng and Sun Wen from WuHe International also gave lectures. Topics included: seismic hazards mitigation planning and structural design, ethnocultural landscapes, watershed ecology, low-cost infrastructure, climate-responsive building, fieldwork methods for community-based planning, urban planning in China, Chinese minority ethnicities and governance, local knowledge and sustainable development in mountain valleys, and cultural preservation and tourism in Lijiang. The students ranged in level of education from junior-year undergraduates to first-year doctoral students, concentrating in art, architecture, construction management, civil engineering, landscape architecture, and urban design and planning.

附录 A
建成环境工作室
春夏季互动交流研讨会总结

华盛顿大学与四川大学的合作是基于华盛顿州与四川省的友好联谊、两校之间在人类学、生物学、森林学、水文学与环境科学长期的互换教学与研究。现在，由于四川灾后重建的需要，华盛顿大学额建筑、施工管理、景观建筑、城市规划与设计以及土木工程学科力图探索一个新的合作关系。 带着这样的愿望，城市设计与规划系的艾丹教授于2008年六月拜访了四川大学建筑、规划于考古系的李伟、罗谦、艾南山、李永宪几位教授以及学生。我们同意关注于少数民族的灾后重建、协助他们参与到规划与重建之中能最好利用我们的知识并起到最显著的影响。在2008年12月第二次前往四川的旅途中，艾丹教授与李伟教授一道考察了岷江与杂谷脑河。同行的还有北京五合国际设计与规划的主席陶涛先生。我们拜访了当地居民、县政府以及阿坝州理县桃坪村的开发官员。桃坪以其独特的羌族建筑和碉楼而闻名。她位于四川的西部并被列入联合国教科文组织的候选名单中，也是国家级文化保护遗址之一和著名的区域旅游胜地。学者和桃坪村民一致认为建成环境研究小组能将桃坪作为研究重点的话将会收到显著的效果。

建成环境工作室的时间表

华盛顿大学的艾丹和侯志仁教授将建成工作室的序列课程安排在2009年的3学术季度。研究工作阐述了桃坪所面临的挑战，并为区域以及超越区域范围的破碎的自然环境建立一个可持续的灾后恢复的模型。这一序列包括筹备研讨会、专家参与的工作室和春季的互动交流讨论课；夏季的实地调研和在中国西南地区的自然遗产保护考察、在桃坪的设计互动交流讨论课；秋季为期3个月的规划与设计工作室。

3. 30 – 6.12	**工作室准备讨论课, UW (URBDP 598J) - 春季**
5. 5-9	中美专家区域可持续开发工作室/桃坪-Snoqualmie 互动交流讨论会— 西雅图
6. 25 – 7. 21	**在中国的实地调研 - 夏季 A期**
6. 25-26	四川大学准备介绍；成都城市历史保护区的学习之旅
6. 27- 7. 5	丽江，玉龙雪山文海生态旅栈，九寨沟，都江堰的考察学习之旅
7. 6-7	调研测绘杂谷脑河流域羌与藏族村寨
7. 8-12	桃坪羌寨测绘
7. 13-14	桃坪设计规划交流讨论课
7. 15-16	在县与村政府作报告
7. 17-20	于四川大学整理资料与文件
9. 30 – 12. 18	**秋季设计规划课, UW (URBDP 508)**

工作室准备讨论课与互动交流研讨会

参与夏季工作室和/或秋季设计课的同学被要求参加春季研讨会和互动交流研讨课。本课程的目标是建立跨学科团队、师生合作和发展合作与田野工作的理论、策略和规章；建立田野调查的背景知识领域、技巧和设计/研究领域的工具以解决调查中遇到的问题；在西雅图专家社团和四川访问专家之间建立可持续的灾后重建规划与设计的交流联系。

十五名学生参加了由艾丹教授主持的研讨会。建成环境博士生Josh Miller担任助教。研讨会包括以下老师的授课内容：侯志仁(景观建筑）、Carrie Dossick and Ken-yu Lin(施工管理),Rob Peña(建筑),Ben Spencer(景观建筑),Bob Freitag and Manish Chalana (城市规划与设计),Stevan Harrell(人类学),Jeff Berman(土木工程)。建成环境博士生杨娇艳,到访的中国五合国际的规划师罗丹衡和孙雯也也做了专题报告。这些课程与报告的主题包括:地震防灾的规划结构设计、文化景观、流域生态学、低成本的基础设施建设,适应气候的设计、以社区为基础的田野调查方法,中国城市规划,中国少数民族和治理、地方性知识和乡村的可持续发展,丽江文化保护与旅游。学生在教育程度不等：从一年级本科生到博士生,他们的专业集中在艺术、建筑、工程管理、土木工程、建筑景观、城市规划与设计。

本课程的核心是2009年五月5-9日的,中美专家学者区域可持续开发研讨会(http://courses.washington.edu/uschina/）。这个研讨会是一个非盈利的交流计划,除了有学生和助教的支持外,工作室得到了来自美国教育部并通过华盛顿大学国际关系即Jachson 学院、华盛顿州king县、西雅图可持续发展培训学院,西雅图的规划、设计与可持续发展的企业如Mithun Collins、Woerman、JC Mueller LLC等。这个工作室与四川大学老师、五合国际规划师和其他中国专家,在可持续发展规划和设计领域以及自然灾害预防恢复等方面进行了深入交流研讨。

为桃坪和受历史性洪水影响的Cascade山脉一带的Snoqualmie社区，学生们准备了交流研讨的案例材料。他们也与中国专家合作，参加了互动交流研讨会,并使用角色扮演和其他互动交流规划理念与中国的实情联系起来。他们最后提出了与桃坪社区成员一道进行规划的建议模型。学生们还通过测试可持续和弹性发展规划以及跨文化和语言的团队合作的技术方法，以为暑期在中国的工作做准备。(见附录B，桃坪互动交流成果)

图1 2009年五月5-9日，中美区域可持续发展交流研讨会的专家学者学生们

2010年3月30日草稿

The centerpiece of the course was a special unit devoted to the May 5-9, 2009, China-US Professional Workshop on Regional Sustainable Development (http://courses.washington.edu/uschina/). The workshop was a non-profit exchange program that, in addition to being supported by BE Lab students and TAs, received sponsorship from the U.S. Department of Education through the University of Washington Jackson School of International Studies; from King County, Washington; the Seattle Sustainable Development Training Institute; and the Seattle planning, design and sustainable development firms CollinsWoerman, Mithun, and JC Mueller LLC, among others. The workshop brought SU faculty, WuHe staff, and other experts from China to visit UW for an intensive exchange and charrette with BE Lab students and Seattle-area professionals on sustainable development planning and design in areas recovering from natural disaster.

Students prepared case materials for charrette teams working on hazard-resilient planning for Taoping and the historic flood-prone Cascade Mountain community of Snoqualmie, Washington. They also participated in the charrette, using role-playing and other interactive ways to communicate planning ideas with the Chinese participants, and to model possible ways of planning with community members in Taoping. Students tested technical approaches to sustainable and resilient development planning as well as cross-cultural and cross-lingual teamwork in advance of their actual field work in China. (See Appendix B for the Taoping teams' charrette products.)

Figure 8A.1 Participants in the China-US Professional Workshop on Regional Sustainable Development charrette, May 5-9, 2009.

SUMMER FIELD STUDIO

The field studio itself involved study tours of key natural and cultural heritage preservation sites of varying sizes and levels of urbanization in Sichuan and Yunnan provinces, before focusing on Taoping. The studio itinerary included historic neighborhood preservation projects in Chengdu; the UNESCO World Heritage City of Lijiang and the natural conservation area of Jade Dragon Snow Mountain and Wenhai Ecolodge (Yunnan Province); the UNESCO World Heritage Site and Biosphere Reserve of Jiuzhaigou, Sichuan; and both the headwaters of the Min River and its outlet into the Sichuan Plain at Dujiangyan, another UNESCO World Heritage Site. Arriving in Taoping, the studio first toured villages neighboring Taoping at different elevations and distances along the Zagunao river. Students then spent four days surveying Taoping itself, and then a day and a half conducting a charrette on planning and design ideas, and two days presenting the ideas to county government officials and village residents.

Thirteen students from UW enrolled in the field studio. More than forty students from SU participated. UW Profs. Abramson and Hou and SU Prof. Li led the field studio, accompanied by UW Profs. Chalana and Freitag. Chalana provided expertise in historic preservation and rural mountain valley community development, and Freitag provided expertise in hazard mitigation and floodplain management planning. Doctoral students Miller, Yang, and Yue Gong assisted, as did WuHe staff Luo Danheng and Sun Wen.

Study Tour in Sichuan and Yunnan

A major factor in Taoping's recovery, preservation and development is its designation as a national-level heritage site and a tentative UNESCO World Heritage site. Accordingly, the UW BE Lab group visited the already-designated UNESCO World Heritage sites at Lijiang, Jiuzhaigou and Dujiangyan first, in order to gather information on how natural and cultural heritage is defined and managed in China, how it relates to the growing tourism industry, and how sites and communities respond to these levels of designation and to tourist impacts. Also, Lijiang and Jiuzhaigou, like Taoping, each present cases of the majority Han Chinese society encountering ethnic minority communities. Finally, Lijiang suffered through an earthquake in 1996, and offers lessons for Taoping in the relation historic preservation, tourist development and disaster recovery.

In Lijiang and Jiuzhaigou, the group not only experienced the sites as tourists, but also read and discussed reports on the impact of tourism and preservation policies on local communities;[1] had extensive interviews with numerous stakeholders in each site, including management officials, residents, entrepreneurs, indigenous religious authorities, and scholars; and conducted surveys – in the case of Lijiang, surveys of touristic and regulatory impacts on the environment and activities of the old town and surrounding villages; in the case of Jiuzhaigou, a survey of the visitor center and the way in which the significance of the site was interpreted. In Dujiangyan, the group received a special tour led by staff of the municipal hydraulic authority.

暑期实地调研工作室

在开始研究桃坪之前，我们的工作室参观学习了四川、云南的自然和文化遗产保护区。这些保护区有着不同的大小和城市化水平。我们的行程包括在成都历史保护区、联合国教科文组织世界文化遗产丽江与自然保护区云南玉龙雪山及其中的生态旅栈；联合国教科文组织世界遗产和生物圈保护区九寨沟、岷江源头与灌溉成都平原以及联合国教科文组织世界遗产都江堰。工作室在到达桃坪之后首先参观了杂谷脑河流域的村寨。学生们花费了4天时间调查测绘了桃坪，然后话费一天半的时间进行了交流讨论规划和设计理念，并且在两天内向政府官员和乡村居民做了汇报。

十三名华盛顿大学的学生参加了暑期的实地调研。超过四十名四川大学的学生参与其中。华大的艾丹和侯志仁教授，四川大学的李伟教授主持了这一次的活动。华大的Chalana教授和Freitag老师也参与其中。Chalana教授关注于历史保存和农村社区发展；Freitag老师关注于灾害预防恢复、河滩管理计划。博士生Josh Miller、杨娇艳、龚岳承担了助教的工作，五合国际的罗丹衡和孙雯也参与其中。

四川与云南的参观学习之旅

桃坪灾后恢复、保护和发展因其作为国家级自然遗产、联合国教科文组织世界遗产候选名录者而倍受重视。因此，工作组拜访了联合国教科文组织世界遗产丽江、九寨沟和都江堰，以调研自然和文化遗产管理在中国的情况、它们如何应对旅游业的增长，以及如何应对这些地点和社区的社会影响力和旅游者对其的影响。同样，丽江、九寨沟、像桃坪一样，都有大量的汉人居住在少数民族社区中。最后一点是，丽江在1996年遭遇地震，这为桃坪在保存历史遗迹，旅游开发和灾难恢复上提供了范本。

在丽江和九寨沟，小组不但进行了丰富的实地体验，也阅读和讨论了对当地社区有影响的旅游和保护政策；进行了广泛的采访：这包括管理官员、居民、企业家、土生土长的宗教权威和学者等利害关系者。在调查丽江旅游和管理之中，小组对环境受到的影响进行了调研和探讨了古老城镇和村庄的重要价值。在九寨沟，小组测绘了游客中心和解释了基地的重要意义。在都江堰，当地水利局的官员带领小组进行了深入的参观学习。

在丽江，联合国教科文组织划定的界线涵盖整个旧城中心的大研和通往玉龙雪山的两个村庄：束河、白沙。传统的古镇被定义为一个有形的，特别是建筑化的城市，而非物质文化遗产明显缺少承认和保护。这是在某种程度上是1996年地震的产物。而有点讽刺的是，1996年的地震提供了一个机会更严格按照传统施工工艺来重建城市，而忽略了古镇其它更重要的特点。同时，重建是紧密结合和强劲地迎合国内迅速发展的旅游市场。在很短的时间里，几乎所有的古老的城镇中心都由外地人拥有、迎合游客的企业占据。当地的纳西族人已经逃离了游客占据的空间和迪斯科舞厅；游客们如洪水般拥挤进古城，占领了这些居住区。当建筑法规的保留了大研的历史建筑，日常生活的纳西文化却被拙劣地置换了。另一个变化的丽江的象征是古老的城镇的著名的水系统。这一水系统原来包括河道的复杂网络：净水、灰水和黑水三种渠道；现在却被合并在一起，虽然保持清洁，但更多的是仅作为景观服务于旅游业了(比较图8A.2a和b)。

同在世界遗产名录中的束河与白沙，并不需要象大研一样服从这样严格的建筑法规。在这两个村庄里，传统的日常生活正在消失，但一种更有创新性的社区经济与文化的融合与进化存在于这些村庄中。这一融合包括当地居民以及外来企业家，持续发展的农业以及当地的咖啡馆和工艺画廊(图8A.3)。

甚至更远的地方，从大研古城出发的高山峡谷-文海还提供一个不同的角度来看待这个互动的环境和文化保护以及旅游开发(图8A.4)。小组成员们骑马来到了玉龙雪山的文海：这里有着三个纳西族的村庄和一个中外合作开发的生态旅游客栈。合作方包括the Nature Conservancy，加州大学Davis分校，日本政府和福特基金会。这个客栈是由合作双方，特别是当地居民共同管理，吸引准备向深山行进的旅游者。

这个客栈已经在商业上取得了一定的成功，尽管它有增村民的现金收入，但畜牧业仍然是村民的主要收入来源。这是缘于这个广阔的平原湿地能够支撑成群的牦牛、羊和猪。然而，就是在这里，城市的发展也能被感觉到。根据村民与团队的成员的交谈，政府计划在大坝平原湿地创建一个水库已供水到下面的城市，这将结束他们的畜牧的生活方式。

图8A.3　丽江束河村的国际性擦咖啡厅和当地农民的自由市场。Rachel Miller摄影。

图 8A.2（a，左）丽江大研城1987年的街景；（b，右）2009年同一条街有酒吧、卡拉ＯＫ厅以及跳舞俱乐部。Dan Abramson （艾丹）摄影。

2010年3月30日草稿

In Lijiang, the UNESCO site boundary encompasses the entire old town center of Dayan, along with Shuhe and Baisha, two outlying villages on the way to Jade Dragon Snow Mountain. Heritage in Dayan old town has been defined in an especially tangible – specifically, architectural – way, leaving intangible heritage significantly less recognized and protected. This is in some respects an outcome of the 1996 earthquake, which somewhat ironically provided the city with an opportunity to rebuild according to more rigorously traditional construction techniques than those that actually characterized the city up to that point. At the same time, reconstruction was closely integrated with a strong drive to cater to a burgeoning domestic tourist market, and in a short time nearly all the old town center was occupied by non-locally owned businesses catering to tourists. The indigenous Naxi population have fled from the tourist gaze, discotheques and the tourist crowds that flood the old town, and taken up residence in newer suburbs. While the architectural regulations in Dayan have preserved much of the historic architecture, the daily life of the Naxi culture is therefore poorly represented. Most emblematic of this change is the old town's famous system of waterways, which once consisted of a complex network of freshwater, graywater and blackwater channels; they are now uniformly clean but serve little purpose other than as scenery (compare Figure 8A. 2a and b).

The villages of Shuhe and Baisha, while still within the World Heritage site, were not subject to such strict building regulations as the old town. Here, too, traditional aspects of daily life are disappearing, but there is also a more creative and community-based evolution of economy and culture in these villages that includes residents as well as outside entrepreneurs; continued local agriculture as well as arty cafes and craft galleries (Figure 8A.3).

Even farther from Dayan old town, the remote high valley of Wenhai provided yet a different perspective on the interaction of environmental and cultural preservation and tourist development (Figure 8A.4). Reached by the BE Lab group on horseback up the flanks of Jade Dragon Snow Mountain, Wenhai is the site of three Naxi villages and an "ecolodge" joint venture development between the villagers and various outside agencies including the Nature Conservancy, UC Davis, the Japanese government and the Ford Foundation. The Lodge is run by a cooperative owned jointly by most of the households in Wenhai, and marketed to backpacking mountain trekkers.

The ecolodge has been only a moderate commercial success, although it has augmented the villagers' cash income from animal husbandry, which is still considerable, as the valley is a broad wetland capable of supporting herds of yak, goats and pigs. Even here, however, the impacts of development down in the city were being felt. According to villagers who spoke with the group, the government plans to dam the valley wetland to create a reservoir for water supply to the city below, which would put an end to their herding lifestyle.

Figure 8A.2 (a, left) Canal-side street in Dayan old town, Lijiang, in 1987; and (b, right) the same street, viewed in the opposite direction, with bars and discotheques in 2009. Photos by Dan Abramson.

Figure 8A.3 Coffeehouses and local produce vendors in Shuhe, Lijiang. Photo by Rachel Miller

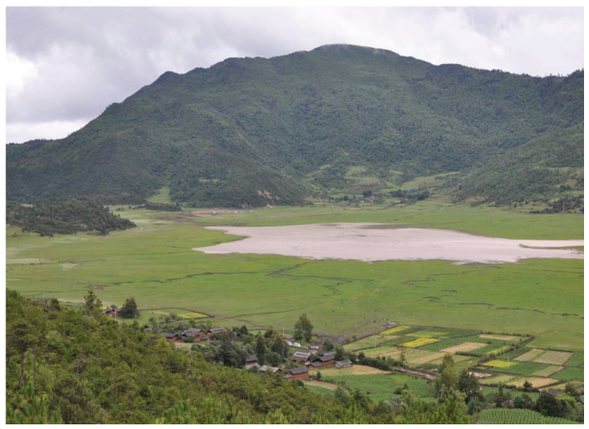

Figure 8A.4 Wenhai valley on Jade Dragon Snow Mountain, Lijiang.

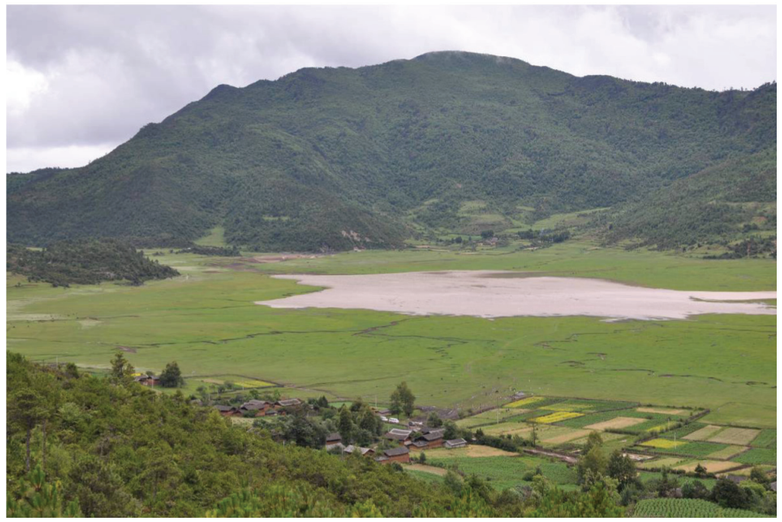

图8A.4 丽江玉龙雪山上的文海山沟。

图8A.5 九寨沟国家公园生态、环境和可持续发展中心与华盛顿大学有长期的合作，联系人是杨洁（图中最左）。

小组的下一站是位于四川北部的国家公园-九寨沟(图8A.5)[2]。联合国教科文组织的世界遗产名单将九寨沟定为自然遗产，它在联合国教科文组织的人与生物圈计划中被指定为一个生物圈保护区。网络装的山谷是九寨沟最出名的自然景色壮观：喀斯特地貌，瀑布和有沉积钙碳酸氢钠的水池。但九寨沟也有着非常重要的生物多样性和几个历史性的藏族村庄。当地藏民原以传统的放牧，种植、打猎和采集为生。既有的保护政策和旅游经济已经基本上杜绝这些活动。虽然观光者确实能碰到藏文化，公园也在努力使用九寨沟来提高公众环境意识，日益普及的九寨沟旅游的目的主要仍是它的优美的风景。

为容纳于大量的游客和保护脆弱的环境，公园当局禁止私人车量进入，并要求游客使用公共汽车或使用步行道。这一系统已经在区域内减少了绝大多数的影响，但均达到极限的承受能力。在不久的将来，中央政府计划的灾后重建和刺激经济的投资将扩展公路、机场，建造新的铁路线，吸引更多的游客来公园。作为对应，公园管理者正在开发更复杂的系统来管理在短期内到访的大量游客，方法包括从高技术途径使用无线电监控游客数量、更全面的旅游线路，如多元化公园内部和外部的旅游线路，调整价格和其他政策来控制不同季节的游客负荷，减少高峰季节压力。然而，大量的访客正创造严峻的生态环境的挑战。

建成环境小组的最后一站是都江堰。小组成员来到了九寨沟风景区附近、海拔3600m的岷江源头。从这里出发，岷江穿过狭窄的山谷流入肥沃的成都平原。都江堰位于海拔800m，控制流域337公里举例来说，在都江堰标志不到800米以上，337km下游。都江堰也是工作室第一个参观的受地震严重损害的城市，成员们将从这里向震中映秀出发，参观的岷江河谷、汶川和桃坪。

联合国教科文组织在2000年刻将都江堰列为“文化遗产”（不是自然遗产），尽管它实际上是体现人类工程与自然工是如何尽可能密切配合，并能维持一个巨大的地区人口的生存长达数千年的时间。都江堰是这一大约建于公元前三世纪水利工程的基地名称。原有工程继续发挥作用的今天，通过它对江水的分流控制、巧妙地利用河道淤积高程、季节性水位变化，而不会妨碍导航或生态物种的运动。借助于一些现代化的扩展的系统，都江堰能提供洪水控制和灌溉一百多万公顷的农业、城市土地，养育约有三分之一的四川水稻产量(中国最大的水稻产量的省份)。在公元前256年，四川的行政长官兼工程师李冰最初设计都江堰这一项目。李冰后来被神化和供奉在俯瞰都江堰的寺庙中。都江堰水利机关工作人员带领的小组都江堰受到的地震影响及随后的修复状况。通过参观学习，学生们获得了对自然空间尺度和人类系统的认识和尊重，了解自然、文化、政治经济、科学和技术整体性的长期的历史意义。

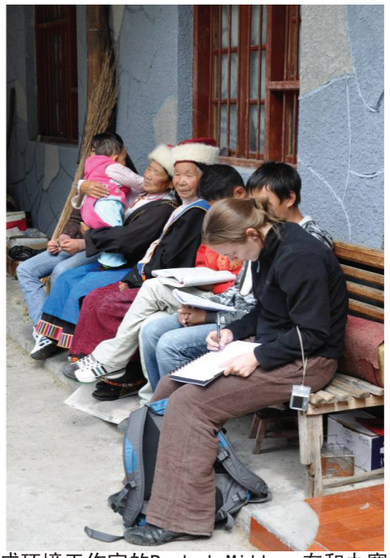

图8A.6 建成环境工作室的Rachel Miller 在和九寨沟藏族老人和少年交流并记录。

2010年3月30日草稿

The visit to Wenhai proved to be an important preparation for the BE Lab's next tour stop, the Jiuzhaigou National Park and Scenic and Historic Interest Area in northern Sichuan (Figure 8A. 5).[2] UNESCO's World Heritage List includes Jiuzhaigou as a "natural heritage property,"[3] and it is designated as a Biosphere Reserve under the UNESCO Man and Biosphere Programme. The network of valleys at Jiuzhaigou are most famous for natural scenery – spectacular karst landforms, waterfalls and pools with travertine deposits and suspended calcium bicarbonate – but they are also important for their biodiversity and home to several historic Tibetan villages that traditionally subsisted through a combination of herding, planting, hunting and gathering. Both conservation policy and the tourist economy have largely put an end to these activities. Although tourists do encounter Tibetan culture, and park authorities strive to use the site to enhance public environmental awareness, the growing popularity of Jiuzhaigou as a tourist destination is based primarily on its scenery.

To accommodate the large numbers of tourists in the fragile environment, park authorities ban private vehicles for non-residents, and require tourists to use a system of buses and boardwalks. These systems have reduced most impacts in the most popular areas, but are reaching their limit of capacity. In the near future, the central government's planned disaster recovery and economic stimulus investments will expand highway and airport access and build a new rail line, bringing even more tourists to the park. In response, the park authorities are developing even more sophisticated systems of managing the spatio-temporal distribution of tourists, from highly technical approaches such as the use of radio-frequency monitoring, to more more comprehensive ones, such as diversifying tourist routes inside and outside the park, and adjusting pricing and other policies to spread peak visitor loads over more seasons. Still, the park's current mandate of accepting every tourist creates daunting ecological challenges.

The final stop in the study tour portion of the field studio was Dujiangyan. Near Jiuzhaigou, the BE Lab group passed the headwaters of the Min, at an elevation of 3600m. Dujiangyan marks the point, at less than 800m above sea level and 337km downstream, where the Upper Min River leaves its arid narrow mountain valleys and enters the broad and fertile Chengdu plain of central Sichuan.[4] Dujiangyan also was the first city visited by the studio to have suffered severe damage in the 2008 earthquake; it marks the entry point to the disaster zone traveling from Chengdu towards the epicenter at Yingxiu, further up the Min River valley, on the way to Wenchuan and Taoping.

UNESCO inscribed Dujiangyan in 2000 as a world "cultural [not natural] heritage property", even though it actually demonstrates how human engineering working as closely with nature as possible can sustain an enormous region and population for many millenia.[5] Dujiangyan is the site of an irrigation works dating from the 3rd century BC. Its original engineering continues to function today, through its ingenious use of river currents, silting patterns, and seasonal water elevation changes, without damming or obstructing navigation or species movement. With the aid of some modern extensions to the system, the works control flooding and provide irrigation to over a million hectares of agricultural and urban land, and for approximately one-third of all of Sichuan's rice production (the largest of any province in China). Li Bing, the governor and engineer who initially designed the project in 256 BC, was later deified and honored in a temple complex overlooking the irrigation works. Staff from the Dujiangyan hydraulic authority led the BE Lab group on a tour of the irrigation works, and explained the impact of the earthquake and subsequent repairs to the system. Through this site, students gained an appreciation for the spatial scale of the natural and human systems at stake; and for the long-term historical integration of nature, culture, political-economy, and science and technology.

Figure 8A. 5 UW BE Lab with community liaison Yang Jie (far left) at Jiuzhaigou National Park's Laboratory for Ecology, Environment and Sustainability, in which UW is a partner.

Figure 8A.6 BE Lab student Rachel Miller taking notes with Jiuzhaigou Tibetan elders babysitting and schoolboys doing homework.

Draft 30 March 2010

在桃坪的测绘调研和设计

在桃坪的12天中，华盛顿大学和四川大学的师生们进行了的四个阶段的勘测设计工作：第一，参观学习在理县和汶川之间沿杂谷脑河流域的羌藏村寨；第二，收集有关桃坪的信息；第三，互动交流研讨设计课程；第四，与理县政府官员和村民交流汇报。小组在理县文化馆馆长的帮助下收集信息；采访当地村民、各级政府官员、旅游业开体验了乡村生活的诸多不便：电力会时常不足、泥石流、断供的自来水，从泉水处人力取水等。

小组在杂谷脑乡村的调研显示了清晰的河谷流域内村寨自我维持和演化的模式。通过认识这些模式，小组成员能够更好地认识到居住模式的革新所面临的限制和可能的自由度。桃坪调查研究集中在14主题：土地使用、物质肌理、建筑类型学、社会空间边界、空间的文化意义、社会问题和重点、生态和气候的反应、水与生态、水网、植被和农业、植被和动物资源、历史环境保护措施、旅游设施、地震的影和应对措施。学生们被分为3-4人一组，并且通常华大学生和川大学生相混合，对应以上的主题收集信息，最后汇聚成一份报告。

在完成报告之前，作为调查过程的一部分，学生们重组队伍，进行了交流研讨设计并为乡村居民和理县官员的汇报提交了思路。学生们被要求总结他们在丽江、九寨沟、都江堰以及杂谷脑山谷观测到信息。学生们基于不同的规划设想，选择四种设计方案其中之一来进行设计交流。这些设计方案是：完全重建，恢复自然特征、均衡发展、区域性的综合规划。

完全重建构想是指被地震摧毁的新村会被重建到相同或是更高的密度。该模型着重于旅游经济和创造适宜旅游者的环境。特别的构造物和其它展示区域的开发将优先于不直接服务旅游业的农业用途。在这种情况下，历史文化保护可以包括原有结构的复原和新建建筑物的仿旧。

第二个构思“恢复自然特征”假设未来的开发不是重建新村， 而是恢复从前占主导地位的农业土地利用。在该模型中，旅游和其他的经济增长点取决于和次要于农业。

均衡发展是第三种选择。它是对前两个选择的一种综合，并且将新村开发和传统的农业相结合。在这种情况下，新村建设规模缩小为仅容纳不再想留在旧村的居民。旅游业存在于新和旧的村庄，但不会支配她们中的任何一个。

区域一体化规划并不是一个要替代前面三种构思，而是让学生有机会专注在更大的尺度上的考量。这种构思显示区域内的所有社区都可以分享旅游业发展的成本和收益，以及减灾、反应和重建工作。

老师们将互动交流设计成一种教育方式、测绘调研的一部分、一种从利益相关者处收集信息的一种方式；也是一种和当地社区分享构思的有用的尝试。我们发现在村民和当地政府官员之间存在着交流和理解的巨大差距，也觉查到目前在杂谷脑河流域的快速和大规模的旅游设施发展模式，所以老师和学生们感到有必要澄清一些基本原则。在此基础上，真正的可持续发展无论处在何种特定的情况之下都可能奏效。老师学者们提出了以下一套桃坪规划的原则——“桃坪五点”：未来桃坪羌寨开发的宣言。 小组首先对理县的政府官员、而后是桃坪村民们进行了交流汇报。

1．桃坪新村的开发不应该过于急促，而要循序渐进。在适当的步骤中，地震后必须首先和快速解决居民的居住；但是这种快速的住宅重建努力不应被误认为是长期与适宜的可持续发展的规划。

2．经济发展可以采用多种方式，旅游、农业和生态保护应有机结合。他们并不是相互排斥的，也不能互相隔离。

3．保存历史应该把桃坪羌寨视为一个活着的实体。应该允许居民生活和使用历史保护区；历史桃坪羌寨不应该仅仅成为一个博物馆展出的文化遗产，这些遗产也并不限于只有建筑，也应包括她的文化景观；其遗产是自然也是文化的。

4．计划和管理杂谷脑河流域为综合性的一体，将其设计为一个完整的生态旅游廊道，而不是作为一个个分散的小点。为了避免河流变窄，道路宽度应被限制；可借鉴九寨沟的规划经验、限制和减少私人机动车交通和使用公共交通系统连接各景点。

5．考虑建立一个区域管理单位，将血缘亲属关系作为一种联系模式，以确保所有的居民获取平等利益与发展，而后积极参与管理建设。

理县官员对汇报的回应的并非交流而是指导性的。小组的建议与县政府的规划相抵触，因为县政府需要尽快的投资巨大的灾后重建资金于杂谷脑河谷的基础设施建设。县市委书记承认，大规模的建设将对环境造成影响，但坚信这将是暂时的。他的经济发展模式之一是要打造包括“桃坪五星级国际会议设施”。

在这之后，小组在桃坪的主要的会议厅邀请了村民参与了同样的汇报活动。当我们通过当场的民意测验询问当地村民优先考虑何种开发模式时。多数村民都表达了更偏爱“均衡发展”的态度，但两倍的居民倾向于“恢复天然性格”而非“完全重建新老村庄”。尽管旅游业带来了越来越多的财富，村民并不愿放弃他们以农业为基础的生活，也不想以牺牲环境作为旅游开发的妥协。年长的居民尤其想继续生活在历史老村中。令村民大感沮丧的是缺乏重建的信息，虽然他们已经收到了重建的计划但他们无法影响开发的形式和时机。许多村民说我们的研究小组是第一批与他们交流重建的人员。村民们有着一种无法控制他们村庄命运的恐惧。目前村民们不得不面对呆在临时房屋中的困难，却不知道会如何或在什麽时候修理他们的老房子。

NOTES/注释

1 Jeffrey Hou and Chiao-Yen Yang, “Remaking of a Historic Ethnic City: World Heritage Site in Lijiang as a Contested Space,” in Traditional Dwellings and Settlements Working Paper Series, No. 153, “Tension in Preservation” (Berkeley, CA: International Association for the Study of Traditional Environments (IASTE), 2002); Feng Jing and Yukio Nishimura, “Mission Report: UNESCO WHC-ICOMOS Reactive Monitoring Mission to the Old Town of Lijiang, China, 10-19 January 2008; Presented at the 32nd Session of the World Heritage Committee; Quebec City, Canada, 2-10 July 2008,” in World Heritage, No. 32 COM (Paris: United Nations Educational, Scientific and Cultural Organization (UNESCO), 16 May 2008); Fung Mei Sarah Li, Leask Anna, and Fyall Alan, “Tourism Development, Empowerment and the Tibetan Minority: Jiuzhaigou National Nature Reserve, China,” in Managing World Heritage Sites (Oxford: Butterworth-Heinemann, 2006); WenJun Li, “Community Decisionmaking Participation in Development,” Annals of Tourism Research 33, no. 1 (2006); Geoffrey Read and Katrinka Ebbe, “Post-Earthquake Reconstruction and Urban Heritage Conservation in Lijiang,” Sage Urban Studies Abstracts 29, no. 3 (2001).

2 http://www.jiuzhai.com/

3 http://whc.unesco.org/en/list

4 T. Lu et al., “Differential Responses of Shrubs and Herbs Present at the Upper Minjiang River Basin (Tibetan Plateau) to Several Soil Variables,” Journal of Arid Environments 67, no. 3 (2006).

5 W. E. Willmott, “Dujiangyan: Irrigation and Society in Sichuan, China,” The Australian Journal of Chinese Affairs, no. 22 (1989).

2010年3月30日草稿

Survey and Design Work in Taoping

With 12 days in Taoping, the combined UW and SU BE Lab group conducted four phases of survey and design work: first, a tour of Qiang and Tibetan villages at various points along and above the Zagunao River, between Wenchuan and Li County Town; second, the gathering information in Taoping itself; third, a design charrette; and fourth, the presentation of charrette products to government officials and villagers. The group gathered information through tours guided by the curator of the county museum and by residents; interviews with village, township and county government and tourist development officials, residents, building craftsmen and vendors; informal socializing; observation; photography; mapping and sketching. The group also experienced the inconveniences of village life: electricity was occasionally cut off, and mudslides disrupted the piped water, requiring students and faculty to carry water from a spring.

The tour of Zagunao villages revealed clear patterns in the way human settlement has evolved and sustained itself in the watershed. Recognizing these patterns, the BE Lab was better able to identify the constraints and degrees of freedom available for innovative settlement form. The survey of Taoping itself focused on fourteen topics: land use; physical fabric; built form typology; socio-spatial boundaries; cultural meanings of space; social issues and priorities; ecology and climate response; water and ecology; water networks; vegetation and agriculture; vegetation and animal resources; historic preservation measures; tourism amenities; and earthquake impacts and responses. A team of 3-4 students – usually a mix from UW and SU – gathered information on each of these topics, and produced a report.

Before producing their reports, and as a part of the survey process, the students recombined teams and undertook a design charrette for presentation of ideas to county officials and village residents. The students were asked to draw on their observations of development in Lijiang, JiuZhaiGou, and Dujiangyan, as well as the Zagunao valley. For the charrette, students chose to design according to one of four development scenarios or directions, each based on different planning assumptions. These were: Complete Reconstruction, Restore the Natural Character, Balanced Development, and Regionally Integrated Planning.

The “Complete Reconstruction” scenario assumed that the new village, whose construction the earthquake aborted, was to be rebuilt at the same or higher density. This model embraces the tourist economy and emphasizes a tourist-friendly environment. Specialized structures and other display areas would take precedence over agricultural uses that do not directly serve tourists. In this scenario, historic preservation could include both reconstruction of old structures and new construction in the old style.

The second scenario, “Restore the Natural Character,” assumed that rather than rebuild the new village, the formerly dominant agricultural land use should be restored. In this model, tourism and other bases for economic growth are dependent on and secondary to agriculture.

“Balanced Development” provided a third option to integrate the first two options, and combine new tourist development and traditional agricultural practices. In this scenario, the construction of a scaled-down new village would primarily serve residents who no longer wish to remain in the old village. Tourism could be accommodated both in the new and old village, but would not dominate either.

“Regionally Integrated Planning” was not really an alternative to the previous three scenarios, but rather an opportunity for students to focus on a larger scale of considerations. This scenario would illustrate how all communities in the watershed could share in the benefits and costs of developing and accommodating tourism, as well as of hazard mitigation, response and rebuilding.

The faculty intended the charrette to be as much a pedagogical exercise and a part of the surveying activity – a means of gathering information from stakeholder reactions to the students’ ideas – as an attempt to share useful ideas with the community. Discovering a great gap in communication and understanding between villagers and local government officials, however, and also alarmed by the current rapid and heavy-handed approach to developing the Zagunao valley and expanding tourist facilities in Taoping, the faculty and students felt it necessary to clarify some basic principles on which truly sustainable development should proceed, regardless which specific scenario might prevail. The faculty therefore developed the “Taoping Five Points”: a Statement on the Future Development of Taoping Qiang Village, to present along with the student scenarios, first to Li County government officers and Party officials, and then to Taoping Villagers:

1. The development of New Taoping Qiang Village should not be rushed, but should proceed gradually, in a proper sequence of steps, bearing in mind that re-housing residents after the earthquake must be addressed first and quickly; immediate re-housing efforts should not be confused with long-term plans for appropriate sustainable development.
2. Economic development should be approached in multiple ways; tourism, agriculture, and ecological preservation should be combined organically; they are not mutually exclusive, nor can they be addressed in isolation from each other.
3. Preservation should treat historic Taoping Qiang Village as a living entity. Residents should be allowed to continue living within and using the historic district; historic Taoping Qiang Village should not simply become a museum to exhibit to visitors; Taoping’s heritage is not limited to its architecture, but includes its cultural landscape as well; its heritage is both natural as well as cultural.
4. Plan and manage the the Zagunao River Watershed as an integrated whole, and design it as a complete ecological tourist corridor, not as a collection of dispersed individual points. In order to avoid the channelization of the river, roadways should be limited in width; drawing on the experience of planning in Jiuzhaigou, restrict and reduce private motor vehicle traffic and use public transport to link up each attraction.
5. Consider establishing a regional management entity that would take current inter-village kinship-based relations as a model to ensure all residents obtain benefit from development and actively participate in it.

The county officials' response to the studio's principles and scenarios was non-committal, but instructive. The BE Lab group's proposals conflicted with county-level interests in spending large sums of disaster (and economic) recovery funds as quickly as possible, primarily on infrastructure construction throughout the Zagunao valley. The County Party Secretary conceded that construction at this scale would have environmental impacts, but believed that these would be temporary. The model of economic development he envisioned for Taoping included "five-star international conference facilities".

Following the presentation to county officials, the BE Lab group presented the Five Points and four development scenarios to villagers in Taoping's main assembly hall. Approximately 30 residents attended. The group asked the residents for a straw poll on which of the scenarios they preferred. Although most raised their hands in the end for "balanced development," twice as many preferred "restore the natural character" to "complete reconstruction" of both new and old parts of the village. Despite the greater affluence that tourism brings, many residents did not want to abandon the agricultural base of their livelihood, or to compromise the environment. Older residents especially wished to continue living in the historic part of the village. Residents spoke with great feeling and frustration over the lack of information they had received about plans for their village, and their inability to affect the form and timing of development. A number claimed that the BE Lab had been the first group to present any plans to them at all. The most heartfelt expressions concerned fear that residents were losing control of their village's fate. It was especially difficult for them to remain in their temporary housing, not knowing how or when their old houses would be repaired.

NOTES/注释

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