

Supplement I

Post-disaster recovery and reconstruction planning to achieve consistency survey form style

The thesis builds an evaluation index system for the recovery and reconstruction effect of major natural disasters, and evaluates the fit degree of the post-disaster recovery and reconstruction plan by determining the completion degree of the index. Based on the data provided by the "8·7 Zhouqu Debris Flow" post-disaster recovery and reconstruction project headquarters and the "Zhouqu Post-disaster Recovery and Reconstruction Master Plan" issued by the State Council, the completion of the post-disaster recovery and reconstruction plan is evaluated, and the post-disaster recovery and reconstruction plan list is compared to each The completion of indicators is evaluated. According to the Zhouqu debris flow reconstruction plan and the progress of the Zhouqu debris flow disaster recovery and reconstruction project, the statistics are as follows:

S1 Evaluation questionnaire of the coincidence of disaster recovery and reconstruction planning

Evaluation Form Number	"8·7 Zhouqu Debris Flow" Post-disaster Recovery and Reconstruction Project		
Evaluation index	Percentage completion	Remark 1	Remark 2
Housing supply restoration		The number of planned urban and rural residential housing and the total construction area accounted for the planned target value.	
Transportation facility restoration		The planned target value for the proportion of national roads and rural roads to be restored and reconstructed.	
Communication facility restoration		Repair the planned target value of the number of mobile communication base stations (a), fixed wireless access base stations (a), and communication line mileage (km).	
Energy supply restoration		Repair the planned target value of the number of hydropower stations (a) and the proportion of coal-fired power stations (a).	
Restoration of power facilities		Restore the water supply pipeline mileage (km), water supply area (m ²), repair damaged transformers (number), and power supply line mileage (km) to account for the planned target value.	
Restoration of water conservancy facilities		The mileage (km) of repairing water supply and main irrigation channels, and the mileage (km) of strengthening and renovating dams accounted for the planned target value.	
gross domestic product		Proportion of actual local GDP in the planned GDP target value	
Overall		Proportion of local agricultural production	

economic level		value The target value of local agricultural production value in the plan	
Industrial structure		Proportion of local agricultural production value The target value of local agricultural production value in the plan	
Growth rate of the tertiary industry		Proportion of the local tertiary industry's gross output value The target value of the local tertiary industry's gross output value in the plan	
Vegetation restoration		Complete the planned target value of vegetation restoration area (Square kilometers) as a proportion.	
Biodiversity		The total number of protected endangered species accounts for the total number of planned protected objects.	
Environmental Quality		The number of days (days) meeting environmental quality standards accounted for the planned target value.	
Land degradation		Land degradation prevention and control (Square kilometers) accounted for the planned target value.	
population growth		The population growth (ten thousand people) accounts for the planned target value.	
0		The number of newly-increased jobs (10,000 people) accounted for the planned target value.	
Urbanization		The urbanization rate accounts for the planned target value.	
Urban and Rural Medical Resources		Repair the number (a) of health centers and hospitals, and increase the proportion of new medical staff (persons) to the planned target value.	
Characteristic cultural protection		Repair the number (a) of health centers and hospitals, and increase the proportion of new medical staff (persons) to the planned target value.	
Reconstruction of cultural facilities		Natural heritage restoration and protection, forests, wetlands, and water ecological environment restoration plots (locations) account for the planned target value.	
Restoration of historical sites		The number of damaged cultural landscapes (number) and cultural activity centers (number) accounted for the planned target value.	
Monitoring and		Number of salvage restoration historical sites	

early warning		(places)	
Emergency response		The monitoring and early warning points (a) of hidden danger points of geological disasters account for the planned target value.	
Rescue		The construction of emergency response teams and emergency response plans accounted for the planned target value.	
Relief supplies		The number of emergency rescue teams (a) and the number of emergency shelters (a) accounted for the planned target value.	
Disaster management		Disaster relief material storage stations (a) and relief material reserves (quilts, tents) accounted for the planned target value.	
Disaster management		The construction of disaster management institutions (a) accounted for the planned target value.	

Supplement II

Post-disaster recovery and reconstruction effect evaluation questionnaire

Dear respondent:

Hello! Thank you very much for taking the time to participate in the completion of the questionnaire for the evaluation of the post-disaster recovery and reconstruction effect of major natural disasters. In order to evaluate and analyze the effects of post-disaster recovery and reconstruction more scientifically and comprehensively, this questionnaire survey adopts an anonymous method, and all the data and information collected by the survey are only used for academic research on graduation thesis. To ensure the reliability and objectivity of the data source, please answer based on your own experience and professional knowledge. Sincerely thank you for your support and help for this survey!

1. Basic situation:

(1) Your permanent residence: province city;

(2) Your occupation:

- a. Local residents (local urban residents/local rural residents/local pastoral residents/local semi-agricultural and semi-pastoral residents)
- b. Local leaders in post-disaster recovery and reconstruction
- c. Foreign tourists and tourism practitioners
- d. Experts in post-disaster recovery evaluation
- e. Leading Leaders in Disaster Area

Table 1 shows the content and format of the multi-subject participation evaluation survey form for the evaluation of the post-disaster recovery and reconstruction effect. Please tick “√” in front of the suitable option according to your real perception.

S1 Multi-subject participation evaluation questionnaire for disaster recovery and reconstruction effects

Time/	Questionnaire number	"8·7 Zhouqu Debris Flow" Post-disaster Recovery and Reconstruction Project	
Evaluation index	satisfaction level	comment content	Remark 1
Housing supply restoration	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Is the housing structure, area, and project quality satisfactory?	
Transportation facility restoration	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Is the road congested, driving speed, too wide or too narrow?	
Communication facility restoration	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Are the communication facilities complete and the signal quality of the mobile phone?	
Energy supply restoration	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Can gas stations, natural gas and other energy sources meet the needs of production and life?	
Restoration of power facilities	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Can the water supply network and power supply meet the requirements for production and	

		life?	
Restoration of water conservancy facilities	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Do agricultural production, urban drainage, and industry meet the requirements of normal industry and agriculture?	
Gross domestic product	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Does the gross domestic product meet public expectations?	
Overall economic level	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Does the GDP/residents meet expectations?	
Industrial structure	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Is the proportion of secondary and tertiary industries in the GDP better than before the disaster?	
GDP growth rate per capita	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Is the per capita GDP growth rate better than the pre-disaster level?	
Vegetation restoration	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Does the vegetation coverage rate in the disaster-stricken area meet public expectations, and is it better than the pre-disaster level?	
Biodiversity	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Has the total number of species and species density returned to pre-disaster levels?	
Environmental Quality	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Are the days with the best environmental quality and the public's satisfaction?	
Land degradation	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Has land degradation been curbed, and is it lower than the pre-disaster level?	
Population growth	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Is the population increase rate too fast, and is the population density crowded?	
Employment of urban and rural residents	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Is the employment rate of the urban and rural population at the expected level, and the employment situation of the right-age population?	
Urbanization	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Is the urbanization rate higher than expected?	
Urban and Rural Medical Resources	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Is the medical and health care at a reasonable level, is it easy to	

		see a doctor, and is it restored to its pre-disaster level?	
Characteristic cultural protection	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Whether the education level is satisfactory and whether the teaching order is restored to the pre-disaster level?	
Reconstruction of cultural facilities	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Has the damage to the natural environment been effectively managed and repaired?	
Restoration of historical sites	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Are the historical sites restored and protected?	
Monitoring and early warning	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Has the monitoring and early warning platform been put into operation and can it play a role in a timely manner?	
Emergency response	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Is the emergency response capability timely and the degree of public participation?	
Rescue	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Are the rescue and relief forces professional, do they hold emergency drills regularly, and do the people have a high degree of participation?	
Relief supplies	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Are the rescue reserves sufficient and reasonable replacement?	
Disaster management	<input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Medium <input type="checkbox"/> Poor	Is the disaster relief management business sound and reasonable?	