

An adaptation framework for China

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To support national adaptation objectives, researchers have developed an adaptation framework for China. The framework comprised by five steps: (a) adopt the latest climate change knowledge and research to assess the risk of climate change; (b) integrate development and adaptation goals; (c) identify the potential adaptation options at national, subnational and local level; (d) build up an assessment system to filter the priority adaptation; (d) implement the adaptation; (e) monitoring and evaluation.

Under the guidance of adaptation framework, we have implemented five dome projects to analyze effect of adaptation, also including the cost and benefits of these dome adaptation projects.

Tab. The dome projects of adaptation in China

Demo. areas	Heilong jiang	Heihe basin, GS	Tailanhe basin, XJ	Naqu Tibet	Qinghai-Tibet Railway
CC Risk	Cooling dec. getting dryer	Water consuming increase for oasis	More water coming now and will decrease	Grassland dryer, lake level rise	permafrost layer thawing by warming
Adap. Target	Go benef, avoid disaster	Water saving & cultivat	Saving water and ecolog. protect	Protect grassland ecology	to minimise the amount of heat absorbed
Poten. Adapt.	Structure adjusting	Low consuming technology	Integrated water management	pasture animals with water use	insulation and cooling systems
Adp. Asse.		300 million m ³		4 times of passture	1 □
Demon.	700 hm ² x 4	20 hm ² land	10 reserv. 60 hm ² land	sprinkled Irrigat. 12hm ²	Project design in railway

We find that the cost of adaptation can be count by calculate the input to each parts, such as labor, Agricultural facilities, energy consumption and relative service. But the benefits of adaptation are difficult to evaluate because the effects of adaptation are non-monetary, such as saving water to improve water safety, irrigation to protect regional ecological environment.