2010 年

全国水利发展统计公报

2010 Statistic Bulletin on China Water Activities

中华人民共和国水利部　编

Ministry of Water Resources, People' s Republic of China

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Contents

I. Investment in Fixed Assets 27
II. Key Water Projects 31
III. Key Water Structures 37
IV. Utilization and Protection of Water Resources 41
V. Flood Control and Drought Relief 42
VI. Water Management and Reform 44
VII. Current Status of Water Sector 49

2010 STATISTIC BULLETIN ON CHINA WATER ACTIVITIES

Ministry of Water Resources, People' s Republic of China

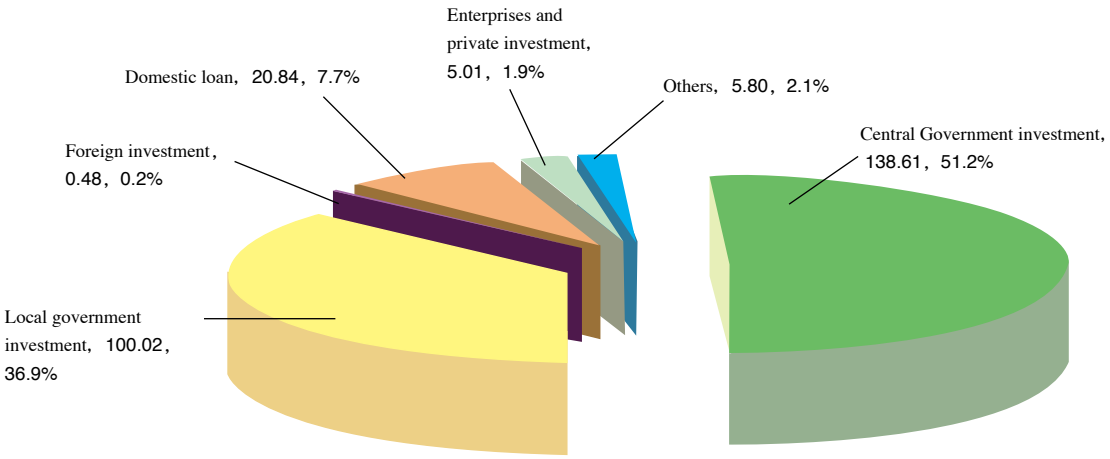
2010 is the final year of the 11th Five-Year Plan and crucial period for the Ministry of Water Resources and water management agencies at all levels for the implementation of scientific outlook of development and strategy of sustainable water resources management, and promoting water development centered on people's livelihood. The targets defined in the 11th Five-Year period are completed that creates a good start for the implementation of 12th Five-year Plan. A new prospect was drawn in the respects of water development and reform.

I. Investment in Fixed Assets

The total investment in fixed assets from the water sector was up to 270.76 billion Yuan in 2010 (including 52.81 billion Yuan for South-North Water Diversion Project), a 59.0% increase comparing to the year of 2009. Divided by sources, 138.61 billion Yuan was financed by the Central Government, a 110.9% increase; 100.02 billion Yuan financed by local governments, a 27.3% increase; 480 million Yuan of foreign investment, a 37.1% increase; 20.84 billion Yuan of domestic loans, a 8.5% increase; 5.01 billion Yuan from enterprises and private sector, a 33.6% increase; and 5.8 billion Yuan from other financial sources, a 114.0% increase. Regarding to the purpose of usage, 98.01 billion Yuan was allocated to flood control, a 31.7% increase comparing to that in 2009; 117.01 billion Yuan allocated to water resources projects that rose 59.7%; 11.53 billion Yuan for soil and water conservation and ecological projects that increased 73.6%, and 44.21 billion Yuan for hydropower and other special projects that rose 177.2%.

Total fixed assets investment plan of water sector

unit:billion Yuan



A total of 98.406 billion Yuan was allocated from Central Government Investment Plan in 2010, with an increase of 54%. Among which 70.106 billion Yuan from the Central Government budget, with an increase of 46% comparing to that in 2009; 1.50 billion Yuan from water construction funds with an increase of 25%; and 26.80 billion Yuan from Special Funding of Central Government budget with an increase of 85%.

Water projects under construction in 2010 were 10,704, with a total investment of 996.6 billion Yuan, with a 27.4% increase comparing to that of the year before. The projects with Central Government finance were 5,218 with a 13.6% increase comparing to the year before. The total funds used by the projects under construction reached 554.19 billion Yuan and increased 65.9% comparing to the year before. There were 5,811 newly-constructed projects in 2010 with a 3.0% decrease, and newly-added investment was 242.63 billion Yuan with a 18.4% increase.

The completed investment in water project in 2010 was 231.99 billion Yuan, with an increase of 42.59 billion Yuan or a 22.5% increase comparing to that of the year before. In which, 152.49 billion Yuan was invested in construction project with a 17.6% increase; 10.96 billion Yuan for installation with a 3.4% decrease; 12.45 billion Yuan for purchase of machinery, electric equipment and instruments with a 0.4% decrease; and 56.09 billion Yuan for other purposes (including compensation of resettlement and land acquisition) with a 56.5% increase.

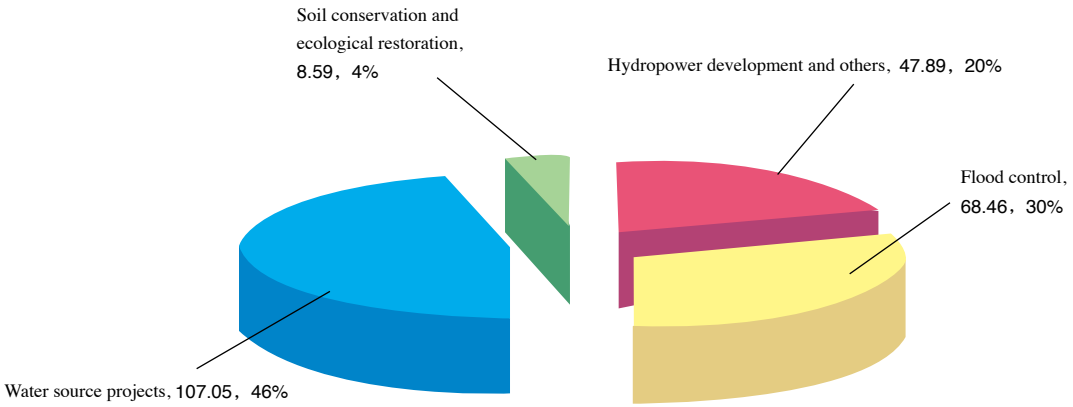
	2006 (billion Yuan)	2007 (billion Yuan)	2008 (billion Yuan)	2009 (billion Yuan)	2010 (billion Yuan)	increase (%)
Yearly completed	79.38	94.49	108.82	189.40	231.99	22.5
Construction Projects	58.37	67.25	78.15	129.72	152.49	17.6
Erection Projects	3.19	4.65	6.74	11.34	10.96	-3.4
Equipment and tools	3.84	5.68	6.00	12.50	12.45	-0.4
Others (including compensation for resettlement and land expropriation)	13.98	16.90	17.93	35.84	56.09	56.5

In the total completed investment, 68.46 billion Yuan was allocated to the construction of flood control projects, 107.05 billion Yuan for the construction of water resources projects, 8.59 billion Yuan for soil and water conservation and ecological restoration, and 47.89 billion Yuan for some special purposes such as hydropower development and capacity building.The completed investment for seven major river basins reached 195.98 billion Yuan, of which 36.01 billion Yuan was invested in river basins in the southeast, southwest and northwest of China. Moreover, the completed investments of eastern, northeast, middle and western regions were 81.38 billion Yuan, 11.66 billion Yuan, 64.60 billion Yuan and 74.35 billion Yuan respectively, accounting 35.1%, 5.0%, 27.8%, and 32.1% of the total.

Of this total competed investment, the Central Government contributed 44.28 billion Yuan, and local governments contributed 187.71 billion Yuan. The investment in large-and medium-sized projects was 68.79 billion Yuan, and 163.20 billion Yuan for small-sized and other projects, 164.93 billion Yuan for newly

Completed investment of projects in 2010

unit:billion Yuan

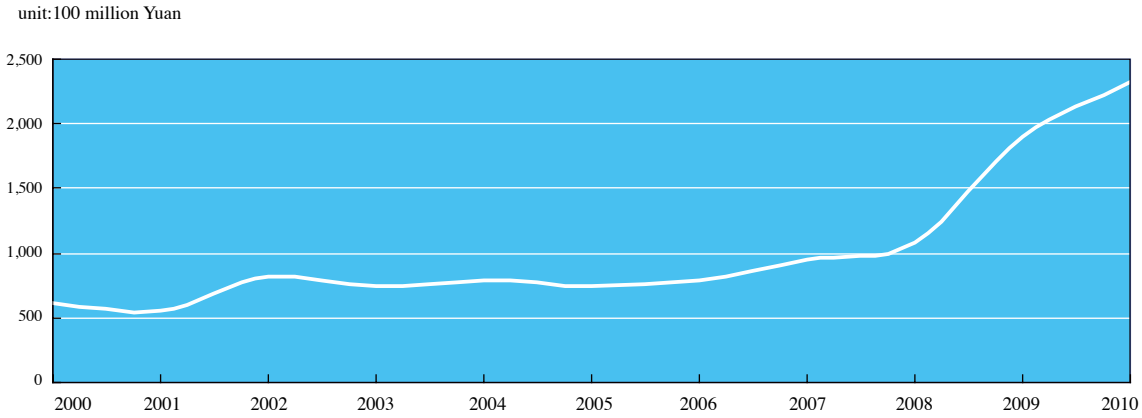


construction projects, and 67.06 billion Yuan for reconstruction and expansion projects or others.

The projects that has partially put into operation were 979. The projects put into full operation were 6,346 with a newly increased fixed asset of 94.99 billion Yuan. The newly-added fixed assets was totaled 184.98 billion Yuan in 2010, and the rate of investment transferred into fixed assets was 79.7%. By the end of 2010, the accumulated investment in projects under construction was 566.94 billion Yuan, and the completion rate was 56.9%, a 2.2% decrease over 2009. The newly increased fixed assets of projects under-construction were worth 387.15 billion Yuan, and the rate of investment transferred into fixed assets was 68.3%, an increase of 0.6% comparing to 2009.

The civil works completed of earth, stone and concrete structures in 2010 were 2.26 billion m^3, 310 million m^3, and 50 million m^3 respectively. By the end of 2010, the ratio of complete quantity of earthwork, stonework, concrete of the under-construction projects were 54.5%, 68.3%, and 60.6% respectively.

Completed of Fixed Assets Investment



II. Key Water Projects

Harness of large rivers and lakes. There were 1,628 river harness projects under construction that had spent 106.89 billion Yuan, accounting for 60.7% of the total completed investment. The length of reinforced embankment was 4,530 km, of which the newly added up to class-I and class-II standard embankment was 1,609 km long. There were 3,210 km of river channels were trained in 2010, and 2,237 km of which were completed. The accumulated investment in the Huaihe River harness project completed 98%. *Guidelines for Recent Activities of Furthering Huaihe River Harness* and *Implementation Plan for Furthering Huaihe River Harness* were completed. Improvement of lowland in major plain was initiated in the Huaihe River Basin. Training of main tributaries of major rivers such as four rivers in Hunan, five rivers in Jiangxi, five rivers and one stream, Weihe River and restoration of Dongting Lake and Poyang Lake are undertaken.

Reservoir projects. There were 382 water complexes under construction in 2010, with an accumulative investment of 101.40 billion Yuan, accounting for 52.8% of the total completed investment. Of those, 221 are reservoir projects with an accumulated investment of 76.11 billion Yuan, accounting for 54.2% of the total completed investment. The projects of Haibowan in Huanghe, Qingshan in

Liaoning, Qincun in Zhejiang, Lechangxia in Guangdong, Qianzhong in Guizhou, Pangduo in Tibet and Kensiwate in Xinjiang Production Construction Corps were initiated for construction. There were 3,021 hazard reservoirs completing repair or reinforcement, with an accumulated investment of 53.55 billion Yuan, accounting for 80.7% of the total completed investment. The Central Government investment spending on reinforcement of large and medium reservoirs as well as some small reservoirs of great significance reached to 12.643 billion Yuan. The completed reinforced reservoirs were 1,823.

Water allocation projects. The yearly investment for water allocation projects reached to 182.02 billion Yuan. The completed investment in these projects had accumulated to 96.8 billion Yuan, accounting for 53.2% of the total completed investment. There were 110 designed units out of 20 individual schemes of phase-I of eastern and middle routes of South-to-North Water Diversion Project initiated, with a total of 175.16 billion Yuan put into construction. The completed investment of this project accumulated to 79.84 billion Yuan, of which the completed investment in 2010 was 40.84 billion Yuan, and the project was undergoing smoothly. The construction of water source projects namely Sanwan in Liaoning, Hadashan in Jilin, Water Recharge to Lijiang in Guangxi, Yutan in Chongqing, Water Diversion from Tao River in Gansu, continuation of water diversion works from Yellow River to four counties in Shaanxi, Gansu and Ningxia has been accelerated.

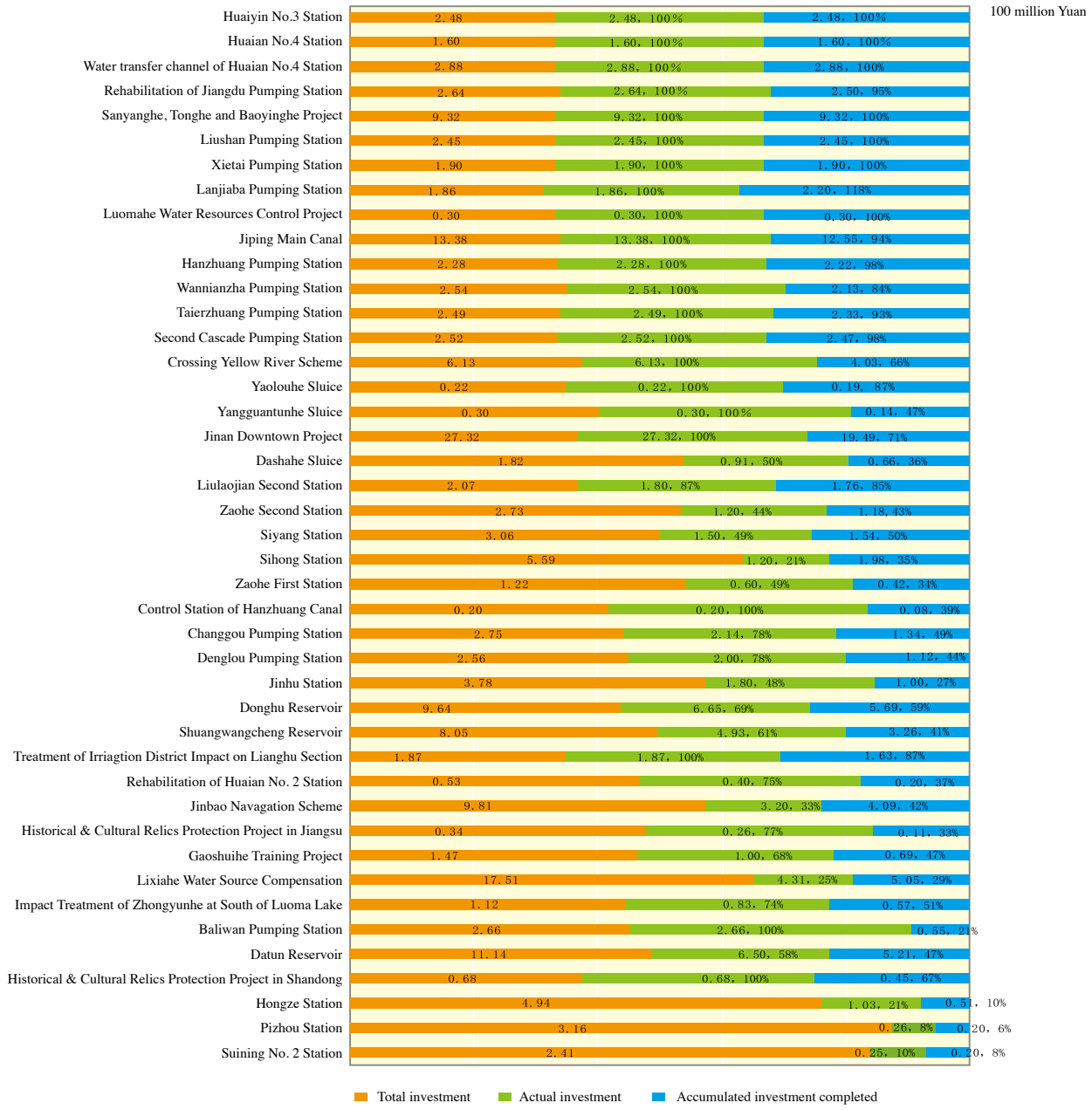
Irrigation, drainage and rural water supply. A yearly investment of 59.25 billion Yuan was allocated to the under-construction projects for providing safe drinking water, with an accumulated investment of 53.7 billion Yuan. In 2010, there were 67.17 million people accessed to safe drinking water. By the end of 2010, the rural population with safe drinking water increased to 670 million. The rural population that have tap water amounted to 54.7%. The Central Government allocated 7.1 billion Yuan to the key water infrastructures construction in rural areas such as rehabilitation of large irrigation districts for water conservation purpose, demonstration project of water-saving irrigations and pilot projects in pastureland. A special subsidy funding of 7.8 billion Yuan from Central Government

budget for small on-farm water facility construction. A total of 144.91 billion Yuan were invested in projects under construction, with an accumulated investment of 61.78 billion Yuan. The completed investment in 2010 was 27.70 billion Yuan. The expanded effective irrigated area was 1,721,600 ha, and new-increased water-saving irrigated area reached to 2,311,600 ha. In the Yangtze River Basin, 96 schistosome prevention projects were conducted. The Central Government investment for the rehabilitation and modernization of 99 large pumping stations was 1.0 billion Yuan.

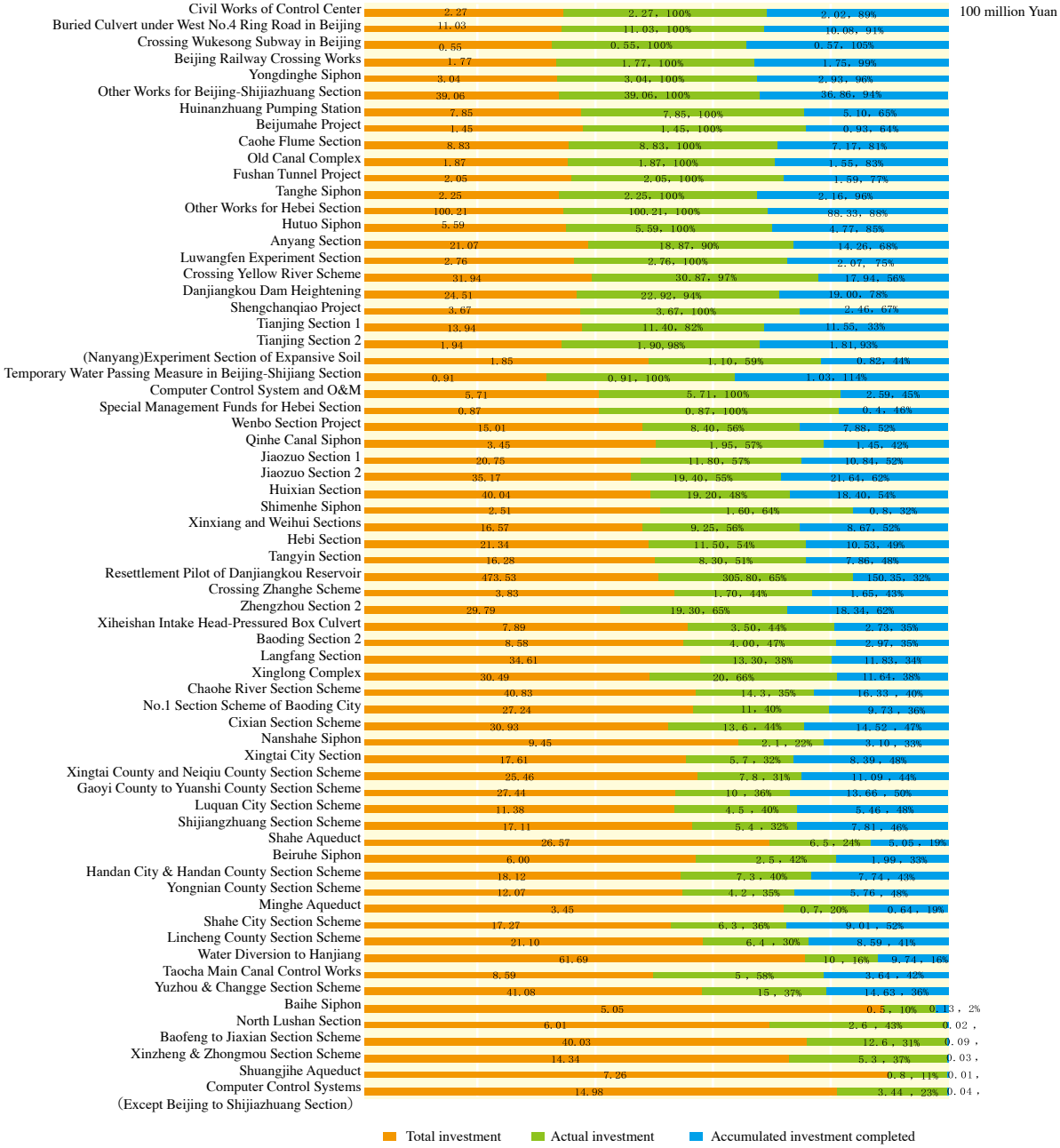
Rural hydropower and electrification. There were 300 million Yuan of Central Government investment allocated to 373 rural hydropower and electrification projects in 25 provinces (autonomous regions, municipalities). There were 300 million Yuan of Central Government allocated to 139 hydropower for fuel projects in 18 provinces (autonomous regions, municipalities) and Xinjiang Production Construction Corps. The completed investment to rural hydropower station construction was 23.0 billion Yuan in 2010; the newly increased hydropower stations were 817, with 3.79 million kW installed capacity putting into production. Hydropower stations under construction were 1,963, with an installed capacity of 13.70 million kW. The completed investment for rural electricity network in the whole country was 6.0 billion Yuan; the newly increased capacity of 110 kV substation or above was 4.33 million kVA; the newly increased capacity of 35 kV substation was 1.58 million kVA; the capacity of distribution transformer was 2.98 million kVA. The newly increased 10 kV high voltage transmission line was 34,000 km and low voltage line was 82,000 km. There was 0.32 million people being able to access electricity.

Soil and water conservation and ecological restoration. A yearly investment of 31.11 billion Yuan was allocated to soil and water conservation and ecological restoration projects, with a completed investment of 16.30 billion Yuan. The land with soil conservation measures increased to 40,000 km^2, of which the area with small watershed approach reached to 14,000 km^2. The newly increased protected area was 24,000 km^2 in 2010. Small watershed with comprehensive measures of soil and water conservation was 3,516. The newly built silt retention dams on the Loose Plateau were 268. Newly built terraces were 401,000 ha and silted land of

Investment schedule of schemes of SWIM East Route Prase-I



Investment schedule of schemes of SWIM Middle Route Prase-I



check dams was 42,000 ha. Newly-created forestland reached 1,500,000 ha and grassland 409,000 ha. There are more than 600 counties listed as project areas for soil and water conservation. The pilot project formally initiated for erosion control on slope farmland covers 20 provinces and 70 counties. Key project with soil and water conservation measures such as small watershed, improvement of slope farmland, silt retention dam and landslide control are undertaking.

Capacity building. The completed investment for capacity building was 2.37 billion Yuan in 2010, of which 260 million Yuan was spent on procurement of communication equipment, 630 million Yuan for hydrological facilities, 140 million Yuan for scientific research and education, 830 million Yuan for early-stage work, and 510 million Yuan for others.

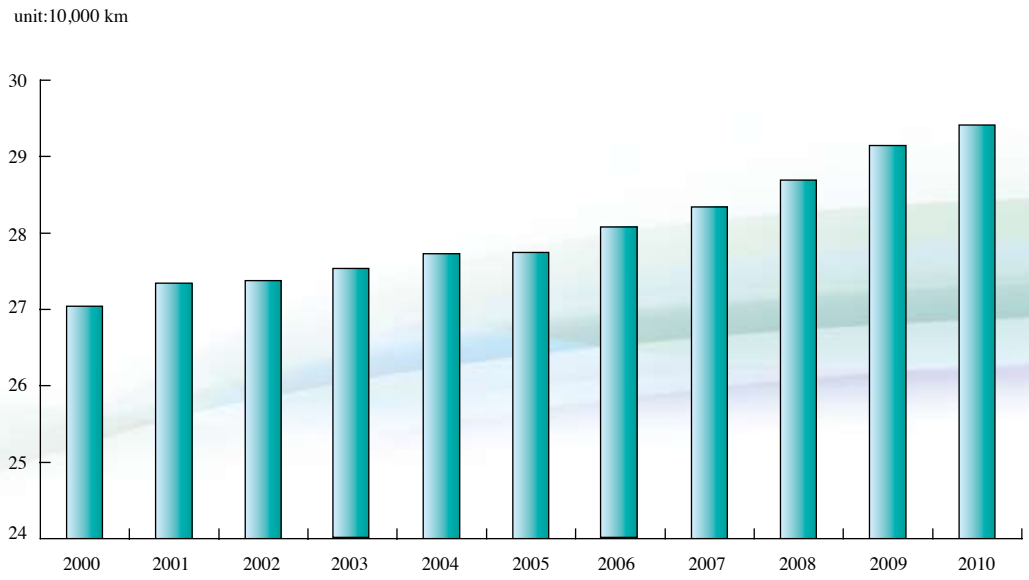
New progress has been made in the construction of information system. There were 61,806 personal computers and 2,624 servers connected to internet. Inner network of E-government websites were built by the Ministry of Water Resources and seven river basin commissions. The E-government websites of river basin commissions covered 98.9% of the outside network of organizations directly under their jurisdiction. The E-government websites of provincial water administrative department covered 76.7% of the outside network of municipal water administrative departments. The storage capacity of all kinds of on-line storage devices equipped by water departments at and above provincial levels reached 335,884.6 GB. The collecting points of all kinds of water information were 63,336 and watchers of project video system reached 2,928. Video conference systems in river basin commission and provincial water departments reached 25 that cover all institutions under their jurisdiction. The licensing systems publicized on the websites of all levels reached 768, among which 422 administrative permits are preceded through internets. The administrative system operated by water departments at provincial level or above in a total of 781 covered all aspects of water administration.

The new satellite communication platform was completed and put into operation. The new platform, installed with 27.2 MHz satellite resources, is suitable for emergency usage, and applied to small river and reservoir improvement, hydrological forecasting, data broadcasting, video consultation and monitoring.

III. Key Water Structures

Embankments and water gates. The length of river embankments constructed in the whole country reached to 294,100 km. Of which, 121,400 km of embankment met the standard, and the rate of up-to-standard accounts to 41.3%. The length of embankment met the standard of Grade-I and Grade-II was 27,900 km, accounting for 78.4% of the total Grade-I and Grade-II embankment. These embankments are able to protect 600 million people and 47 million ha of cultivated land. Water gates of all kinds constructed all over the country was 43,300, of which 567 were large water gates. The water gates includes 2,797 flood diversion sluices, 14,676 drainage sluices, 4,694 tidal barrage, 8,182 water diversion intakes and 12,951 controlling gates.

Length of embankment



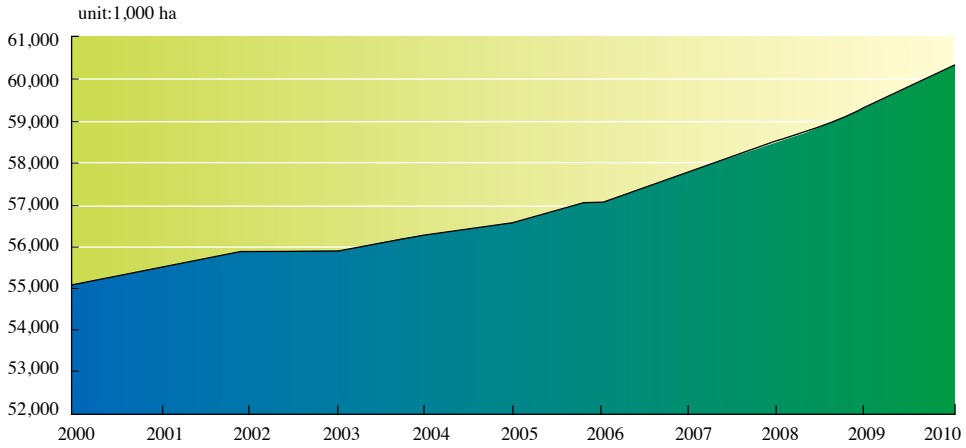
Reservoirs and water complexes. The total number of reservoir all over the country was 87,873, with a storage capacity of 716.2 billion m^3, of which 552 were large reservoirs with a total capacity of 559.4 billion m^3, accounting 78.1% of the total; 3,269 medium-sized reservoirs with a total capacity of 93.0 billion m^3, accounting 13.0% of the total. The percentage of large and medium reservoirs up to the safety standard was 91.6% that 21.6% higher than that of the year before.

Irrigation. The irrigation district with an area equal or above 10,000 mu were 5,795, with a total effective irrigated area of 29.415 million ha. Of which large irrigation districts equal or above 500,000 mu were 131, with a total effective irrigation area of 10.918 million ha; large irrigation districts covering an area of 300,000-500,000 mu were 218, with a total effective irrigation area of 4.740 million ha. By the end of 2010, the total effective irrigated area reached to 60.348 million ha that accounted to 49.6% of the total cultivated area. Water-saving irrigated area reached to 27.314 million ha that accounted for 45.3% of the total effective irrigated area. In the area applied with water-saving irrigation technologies, 11.580 million ha of land had lined canals, 6.680 million ha were equipped with low-pressure pipes, 5.141 million ha were equipped with sprinkler or drip or infiltration irrigation, 3.912 million ha were equipped with other water-saving methods. The percentage of lined canals in the irrigation districts equal or above 10,000 mu accounted 24.1% of the total, of which the length of lined main and branch canals accounts to 34.8%.

Tube wells and pumping stations. There were 5.337 million tube wells of all kinds in the country, of which 4.872 million was installed electricity-lifting equipment for groundwater abstraction. Their installed capacity was 51.45 GW. By the end of 2010, the fixed electro-mechanical pumping stations reached to 469,000, with an installed capacity of 37.84 GW. The tube wells for irrigation purposes were 5.012 million, with an installed capacity of 43.21 GW. The fixed pumping stations were 435,000 with an installed capacity of 23.31 GW. The installed capacity of movable equipment of irrigation and drainage or drip amounted to 20.68 GW.

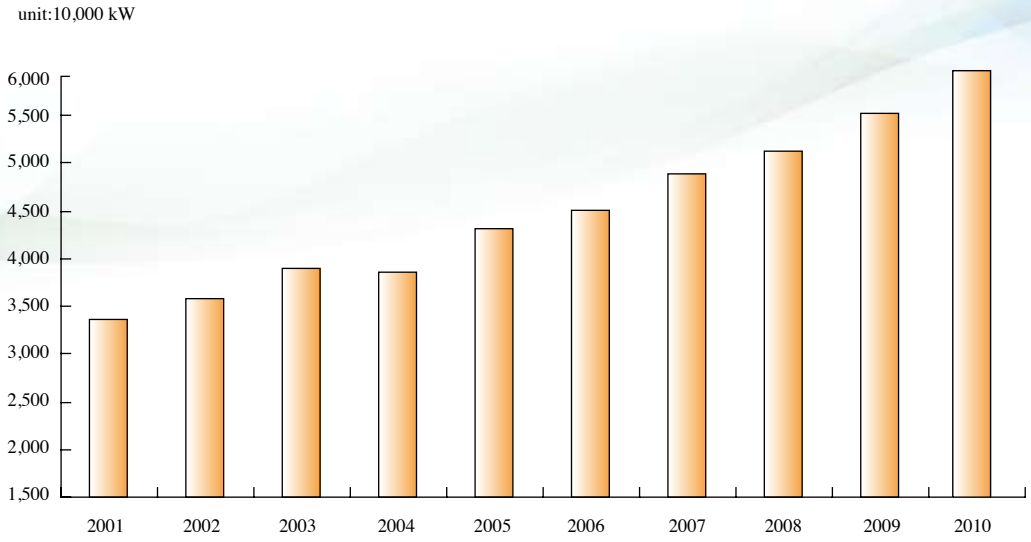
Rural hydropower and electrification. By the end of 2010, the total hydropower

Effective irrigation area



stations built in rural areas were 44,815, with an installed capacity of 59.24 GW, accounting for 28% of the total. The annual power generation by these hydropower stations reached to 204.4 billion kW · h, accounting for 30% of the total power generation of the whole country.

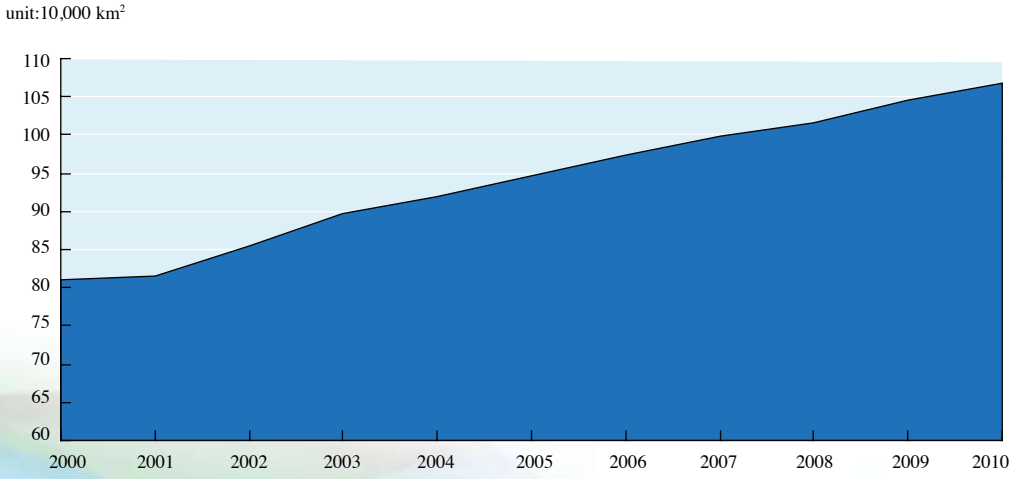
Rural installed capacity



Soil and water conservation. The improved eroded area reached to 1.068 million km^2 in 2010, of which small watershed amounted to 416,000 km^2. Ecological restoration areas accumulated to 720,000 km^2. There were 268 silt-retention dams constructed on the Loess Plateau Region in 2010. Phase-II of Soil and Water Conservation Network and Information System was completed with 738 monitoring sites.

Hydrology and informationization. By the end of 2010, there were 42,682 hydrological stations of all kinds in the whole country, including 3,193 national hydrologic stations, 1,467 gauging stations, 17,245 precipitation stations, 6,535 water quality stations, 12,991 groundwater monitoring stations, 12 evaporation stations and 57 experimental stations, and 1,182 soil moisture monitoring stations. There were 12,786 telegram reporting stations and 1,005 hydrologic forecast stations. The completed water environment monitoring centers (sub-center) were 241, which cover nearly all major rivers, lakes and reservoirs in China.

Improved eroded areas



IV. Utilization and Protection of Water Resources

According to preliminary statistics, total quantity of water resources in 2010 was 2,965.8 billion m^3, 7.0% more than normal years and a 22.7% increase comparing to that of the year before. The mean annual precipitation was 679.9 mm, 5.8% more than normal years and 15.0% more than the year before. By the end of 2010, total water storage of 519 large reservoirs was 292.9 billion m^3, increase 35.0 billion m^3 compared with that of the year before.

In 2010, the total water supplied by waterworks was 599.8 billion m^3, while 81.2% of which was abstraction of surface water, 18.3% was groundwater and 0.5% other water sources. The total water consumption was 599.8 billion m^3, an increase of 3.3 billion m^3 compared with the year before, of which domestic use was 77.3 billion m^3 (in which urban domestic water use takes 60.4%) or 12.9% of the total; industrial use 140.7 billion m^3 or 23.4% of the total; agricultural water use 370.7 billion m^3 or 61.8% of the total and environmental flow of 11.1 billion m^3 or 1.9% of the total. Comparing to that of the year before, domestic water use increased by 2.5 billion m^3, industrial use increased by 1.6 billion m^3, agricultural water use increased by 1.6 billion m^3 and environmental flow increased by 0.8 billion m^3. The average water consumption per capita in 2010 was 448 m^3. Comparing with that in 2009, water use of 10,000 Yuan GDP (at comparable price of 2005) was 191 m^3, a 8.8% decrease. Water use of industrial production value added per 10,000 Yuan (at comparable price of 2005) was 105.0 m^3, a 9.8% decrease comparing to that of the year before.

According to the result of water quality assessment on river sections of more than 172,000 km, rivers with better water quality that comply with or supper than class-III standard accounted for 62.1% of the total.

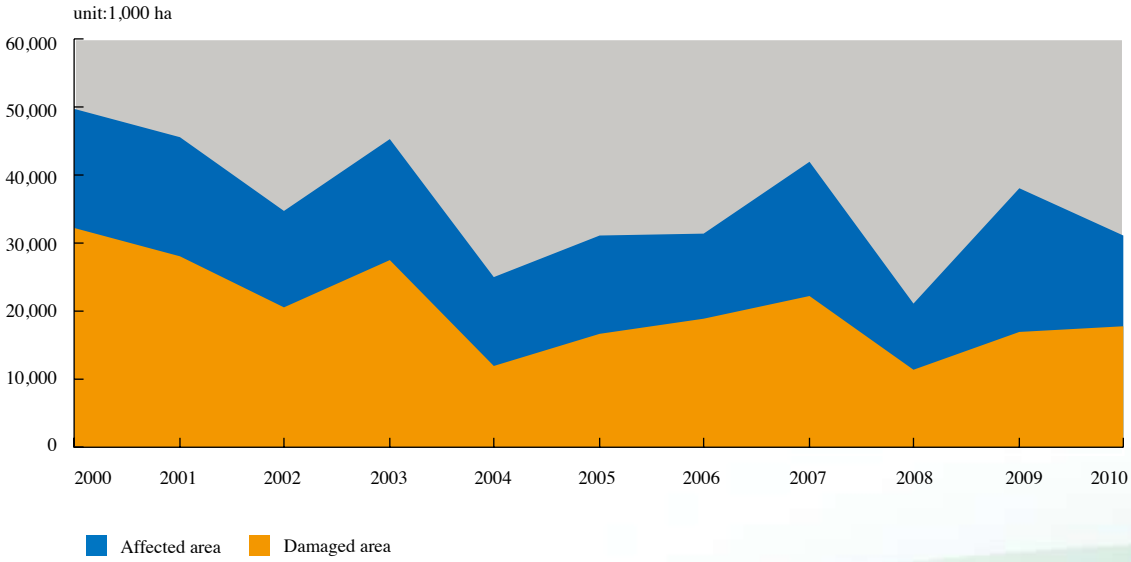
Supervision and management of water function zones were further strengthened. On May 7, 2010, the State Council approved the proposal of Water Function

Zoning of Taihu Basin (2010-2030), which was issued by the Ministry of Water Resources and the Ministry of Environment Protection, for the implementation of two provinces and one municipality within the basin. Reassessment of water function zones of major rivers and lakes was conducted based on the above. Comments from provincial people's government and central government departments have been seek for further consultation, before reporting to the State Council for approval, together with National Development and Reform Commission and Ministry of Environment Protection. The survey on the changes of surface water quality in function zones over the past ten years has completed, in order to provide a base for determine the redline of pollution carrying capacity of water function zone. Water resources protection departments of river basin commissions placed more emphasis on monitoring of water quality of boundary rivers and made regular notification to the water administrative department within the basin. Safety management of drinking water sources has been highlighted by conducting inspection on major water sources. The third name-list of National Major Drinking Water Sources has approved and the first and second name-lists were rechecked and issued to each provincial government. Protection and restoration of aquatic ecosystem has achieved some result. The pilot project of Harbin and Hefei ecosystem protection and restoration has approved that increases the total number of pilot projects to 12.

V. Flood Control and Drought Relief

2010 is regarded as disasterial year as flood and waterlogging disasters of varied degree occurred in 30 provinces (autonomous regions, municipalities) and Xinjiang Production and Construction Corps. The affected cultivated land by flood was 17,866,000 ha, among which 8,727,000 ha were disaster-stricken areas. The affected population was 210 million. There were 3,222 people died and 1,003 missing. The collapsed houses were 2.27 million. The counties suffered from inundation reached 258. The disasters resulted in 374.5 billion Yuan of direct economic losses, among which the loss with water infrastructures was 69.168 billion yuan. The provinces of Jiangxi, Fujian, Sichuan, Hunan, Hubei, Jilin,

Flood or drought affected and damaged areas in 2000-2010



Liaoning, Shaanxi and Gansu suffered heavily from disasters. Mountain flood happened frequently, especially in the southwest of China.

The year of 2010 is regarded as medium level drought. Severe spring drought occurred in the southwest region; summer drought occurred in the northeast and eastern part of northwest. The farmland affected by droughts were 26,553,000 ha, of which 13,259,000 ha were affected, 8,987,000 ha damaged and 2,672,000 ha had no harvest, resulting in grain loss of 16.8 billion kg and crop economic loss of 38.8 billion Yuan. The direct economic losses caused by drought disaster reached to 150.9 billion Yuan. There were 33.35 million urban and rural population and 24.41 million man-feed big animals and livestock suffered from temporary drinking water difficulties due to these droughts.

The Central Government allocated 2.984 billion Yuan through funds for water infrastructure construction and funds for extraordinary flood and drought relief, of which 793 million Yuan for emergency flood control, 1.711 billion Yuan for extraordinary floods, and 480 million Yuan for extraordinary droughts.

In 2010, State Flood Control and Drought Relief Headquarters together with flood control headquarters at all levels, under the guidance of the Central Party Committee and State Council, took effective measures for minimizing the loss from flood and drought disasters, by insisting on putting people at the center and giving priority to people's life and property, making full use of flood control facilities, by means of scientific management, regulation and decision making. In 2010, the protected population was 41.03 million; protected cities 183; the avoided potential death was 22,000; reduction of grain loss was 38.31 million ton; the economic benefit of flood control was 247.934 billion Yuan. A total of 18,103,000 ha of drought affected farmland were irrigated, which prevented a grain loss of 18 billion kg and economic loss of crop damage of 25.7 billion Yuan. By effective measures and emergency response, drinking water was provided to 29.1 million people and 17.39 million big animals and livestock.

VI. Water Management and Reform

Water resources planning and early-stage work. The approved plans of varied kinds were 18 in 2010, among which 6 master plans were approved by the State Council; 7 plans were approved by Ministry of Water Resources (MWR) and other Ministries jointly; 5 plans were approved and issued by the Ministry of Water Resources.The Master Plan for National Water Resources was formally approved by the State Council. Technical approval was completed for the revised master plans of seven major river basins. The National 12th Five-Year Plan for Water Development has been worked out. There were 40 projects were reported to NDRC for approval and 32 of which was approved, with a total investment of 67.036 billion Yuan, among which 5 were cost estimation, 18 were feasibility study reports, 9 were project proposals.

Water legislation and administrative enforcement. The revised Law on Soil and Water Conservation of the People's Republic of China came into effect. The Ministry of Water Resources promulgated four regulations, namely *Decision on*

Amendment of Managerial Regulations for Sand Excavation in Yangtze River Course (MWR Order No. 39), *Decision on Amendment of Management Method of Qualification for Supervision in Water Project Construction* (MWR Order No. 40), *Management Method of Licensing for Use of Operating Hoist in Water Project Construction* (MWR Order No. 41), *Decisions on Abandon and Revision of Some Rules and Regulations* (MWR Order No. 42). The list of effective rules and regulations issued by the Ministry of Water Resources was published. The ministry handled 16 cases for administrative disputes and 15 cases were settled. The ministry approved to extend 943 administrative water permits: 52 qualification identifications for water resources assessment organizations; 3 water resources assessment reports of construction project; 21 pre-evaluation report for environment impact analysis of hydropower development projects; 241 qualification certificates of supervisors for water and hydropower project construction; 278 soil and water conservation plans of water development and construction projects; 127 check and acceptance of soil and water conservation plan of construction project; 44 qualification of supervisors for water and soil conservation and ecological environment; 130 qualification certificates of quality inspection for water and hydropower project construction; 47 headstock gear utilization licenses. The planned sand excavation zones in the middle and lower reaches of the Yangtze River are 33, with an annual excavation permission of 755 million kg. In 2010, one license was issued and three ships got the licenses. The investigated illegal cases were 59,385 and 53,559 of them were resolved that accounts for 90.2% of the total. The retrieved economic loss was 245.7 million Yuan. There were 6,800 water disputes resolved, and 105.8 million Yuan were retrieved.

Water affairs management. There were 1,817 water affairs bureaus or water resources bureaus established at or above county level and assigned the responsibilities of water affairs management, which accounted for 74.56% of the total cities and counties. Among 1,351 bureaus, 4 are at provincial level, 7 are at sub-provincial level, 207 at prefecture or city level, and 1,133 at county level. The utilities managed by water affairs bureaus were 3,584 water plants, 368,000 km of water supply pipes, with a daily water supply of 183.27 million m^3 and annual water supply of 29.51 billion m^3. There were 1,059 sewage treatment plants, with a total pipeline of 182,000 km long and daily treatment capacity of 94.41 million

m^3/d. The annual sewage treatment reached to 17.47 billion m^3 in total. There were 2,059 water enterprises or companies under these water affair bureaus, with fixed assets worth 122.33 billion Yuan, annual income of 31.5 billion Yuan and a loss of 170 million Yuan. The total investment to the urban water industry was 76.46 billion Yuan. There were 6,207 water sources for cities and counties in the country with an annual water supply of 93.7 billion m^3. The annual use of recycled water after wastewater treatment in cities (counties) in the whole country 2.83 billion m^3. Water supplied by un-conventional sources despite of recycling of sewage water was 40.99 billion m^3. Water tariff of these water supply schemes was ranged from 0.009 to 6.0 Yuan/m^3, among which water resources fees of surface water were ranged from 0.01 to 2.0 Yuan/m^3 and water resources fees of groundwater resources were ranged from 0.01 to 4.71 Yuan/m^3.

Reform in project construction and management. The reform of national water project management system has been completed and passed check and acceptance. Estimation of total managerial staff and operation and maintenance cost for all 11,422 water project management units was completed and 99.6% of these organizations completed division of its type of operation, i.e. either totally self managed business or operated with government subsidy. The two estimation costs of 13.415 billion Yuan had been covered, with a rate of 89%, among which managerial staff at 8.096 billion Yuan, accounting 94% of the total; O&M cost at 5.319 billion Yuan, accounting 81% of the total. More than 7,197 organizations completed reorganization by separating functions of management and maintenance of water utilities (include separation of managerial and maintenance functions within the organization), accounted for 63% of the total. The total number of water and hydropower construction companies awarded AAA Qualification of General Construction Contracting were 10; Class-A Professional Contracting companies were 171. There were 8,437 people received Class-I Registered Certificate of Constructor in specialty of water and hydropower project. In 2010, there were 26 enterprises awarded the Class-A qualification of supervisors for water and hydropower project construction, 44 awarded the Class-B qualification and 95 awarded the Class-C qualification. There were 7 enterprises awarded the Class-A qualification of supervisors for water and soil conservation project construction, 14 awarded the Class-B qualification, and 17 awarded the Class-C

qualification. There were 4 enterprises awarded the Class-A qualification of supervisors for electromechanical and metal equipment manufacture and 7 awarded Class-B qualification. There were 27 enterprises awarded the qualification (no grading is defined) of supervisors for environment protection of water project construction. In 2010, there were 38 Class-A quality inspection organizations for geotechnical engineering approved; 52 Class-A quality inspection organizations for concrete structures; 10 Class-A quality inspection organizations for metal structures; 6 Class-A quality inspection organizations for mechanical and electronic equipment; and 24 Class-A quality inspection organizations for measuring and gauging tools.

Reform of rural water resources management. The total number of Water User Associations (WUAs) established in the whole country reached more than 52,000, The irrigated area under administration amounts for 23% of the total effected irrigated area in the country. Reform of property right has been applied to more than 7 million small on-farm water structures along with the promotion of reform of small on-farm water structures management system.

Soil and water conservation. There were 23,000 Soil and Water Conservation Plans in water development projects examined and approved, of which 278 are large-scale construction projects developed by MWR and cover an area of 4,626 km^2. There were 127 large and medium soil and water conservation projects completed check and acceptance. Capacity building for soil and water conservation supervision and management has been reinforced and first lot of 510 counties had further strengthened its functions of supervision and management. A total of 49 science and technology demonstration zones were approved in the whole country along with promotion of construction of pilot project construction. Two regulations, namely *Temporary Management Provisions on Silt Retention Dam Construction and Operation in Loess Plateau Region* and *Norms on Check and Acceptance of National Key Soil and water Conservation Project.*

Water pricing reform. In 2010, reform of irrigation water pricing had been promoted. New water pricing mechanism such as two parts water tariff and added charging for accumulated usage, had been initiated. The tap water charge had been enhanced. Methods and implementation provisions for water pricing management came into effect in 25 provinces (autonomous regions, municipalities). In 2010, the average water charge for industries of 36 large and medium cities was 3.68 Yuan/m^3. The average charge for tap water was 1.9 Yuan/m^3.

Reform and management of hydropower. Transformation of water use right on parable basis has been implemented in 16 provinces (autonomous regions, municipalities). Relevant implementation regulations were worked out by 10 provinces (autonomous regions, municipalities). Administrative rules and regulations for water-power resource development and utilization were promulgated by 16 provinces (autonomous regions, municipalities). There were 12 provinces clearly defines that water administrative departments are responsible for integrating management of water energy resources. Correction was made by all 3,415 hydropower stations that have no permits according to order of the Ministry of Water Resources. At the same time, another 1,785 hydropower stations that violating the relevant rules and regulations were cleared out for correction. More than 5,200 hydropower stations that were not satisfactory to relevant rules and regulations had completed correction.

Water safety supervision. There were 31 accidents with 42 people dead. There were 87 inspection teams that completed inspection of 304 construction projects. The inspected projects covers 28 provinces (autonomous regions, municipalities), and involved a total investment of 14.8 billion Yuan. The completed inspection report reached to 304. There were 304 notification were released for the correction of violating activities of work safety laws and regulations.

Reservoir resettlement. In 2010, the resettlements were 81,000 people. Land acquisition and resettlement of national under-construction dam projects, namely Zaoshi, Baise, Ni'erji, have involved resettlement of 120,900 people of 32,000 household in 216 villages of 28 townships in 8 counties of 6 provinces, with an

accumulated number of 120,700 people relocated by the end of 2010, accounting 99.83% of the total planned population.

Water science and technology. There was 437 million Yuan allocated to science and technology projects, among which the approved National Key Technology R&D Program was 1, public-interest scientific research projects of the water sector were 82, and the approved "948 Plans", National Agricultural Science and Technology Achievements Transformation Fund Programs and MWR Key Technological Achievements Extension Plans etc. were more than 140. There were 7 water technological achievements won the National Sci-Tech Advance Award, among which, I was the first. By the end of 2010, seven national level or ministerial level labs were formed. Twelve technical research centers were established. The total allocated scientific and research funds of basic construction was 94.61 million Yuan. Special funds for capacity building or procurement of equipment for national scientific institutions were 72.9 million Yuan. There were 632 technical norms and standards still effective. There were 93 institutions of quality supervision and inspection passed the national metrology authentication.

International cooperation. There were about 15 multilateral international exchange activities that successfully organized or participated. There were 3 bilateral agreements signed with other countries for cooperation. Six bilateral meetings were held between MWR and governmental agencies of other countries. Two projects with loans from international financial organizations were under the implementation with a total loan of 300 million US dollars. Key plain and low-lying land harness project in Huaihe River Basin was completed by the World Bank with a loan of 200 million US dollars from the World Bank. The implemented grant projects were 13, with a total grant of 81 million US dollars.

VII. Current Status of Water Sector

Employees and salaries. The employees of water sector were totaled 1.0663 million, a 0.01% increase comparing to that of last year. Of which, the employees

with long-term post amounted to 1.0369 million, a 0.05% decrease. In the employees with long-term post, the staff working in the agencies directly under the Ministry of Water Resources was 74,200, a 3.12% increase over last year; the staff working in local agencies was 0.9626 million, a 0.29% decrease. The total salary for the employees with long-term post in the whole country was 29.791 billion Yuan in 2010, a 12.53% increase comparing to that of 2009. The average salary per employee with long-term post was 28,816 Yuan, a 12.42% increase over 2009. Of which the per capita salary of agencies directly under MWR was 59,553 Yuan, a 9.78% increase, and the average salary per employee with long-term post of local agencies was 26,447 Yuan, a 12.6% increase.

Employees and Salaries

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
number of in-service staff(10^4 persons)	138.1	131.4	128.9	122.9	118.2	110.5	109.2	106.76	105.57	103.74	106.63
of which, staff of MWR and agencies under MWR(10^4 persons)	6.8	6.6	6.4	6.4	6.4	6.6	6.8	7.15	7.22	7.20	7.42
local agencies(10^4 persons)	131.4	124.9	122.5	116.5	111.8	103.9	102.3	99.61	98.35	96.54	96.26
salary of in-service staff (10^8 Yuan)	115.5	129.3	136.3	140.6	157.1	159.8	184.3	211.28	234.37	264.74	297.91
average salary (Yuan/person)	8,430	9,838	10,652	11,443	13,054	13,969	16,776	19,573	22,143	25,633	28,816

Reconnaissance and design. There were 97 reconnaissance's and design institutions awarded the Class-A qualification, and 416 institutions warded class-B qualification, with a total staff of more than 70,000. According to statistics and data collected from 40 Class-A reconnaissance and design institutes directly under the Ministry of Water Resources, river basin commission (share controlling) and provinces (autonomous regions, municipalities), in the income of reconnaissance and design in 2010, 14% came from projects entrusted by the water administrative department, 63% came from the market and 23% from consultation or supervision services. The work completed by these institutes included 775,200 standard m of drilling, 28,000 standard m of audits, 22,300 standard m of shafts, 549,600 standard m^3 of pits, 35,700 standard km^2 of engineering survey, and 839,200 standard points of geophysical prospecting.

Water scenic spots. There were 423 water scenic spots were approved at national level, among which 237 were reservoir recreation areas, 79 were natural rivers and lakes, 44 were urban rivers and lakes, 28 were wetlands, 20 were irrigation districts, and 15 were water and soil conservation areas.

Notes:

1. The data in this bulletin do not include those of Hong Kong, Macao and Taiwan.
2. Parts data of water supply and utilization are sourced from 2010 China Water Resources Bulletin.
3. Effective irrigated area is based on the number of irrigation districts at 10,000 mu and above and its irrigated area.
4. Statistics of rural hydropower is an installed capacity of 50,000 kW and < 50,000 kW.