

2013 STATISTIC BULLETIN ON CHINA WATER ACTIVITIES

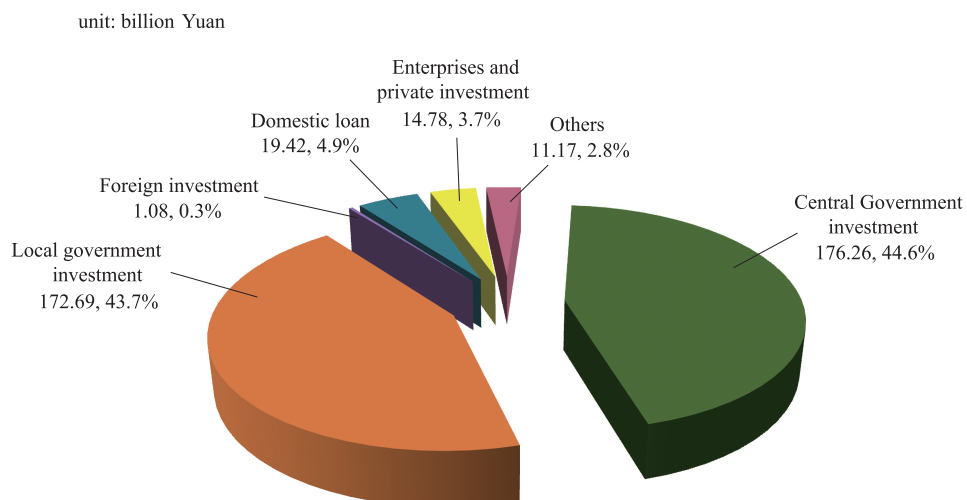
Ministry of Water Resources, P. R. China

In the year of 2013, we got off to a good start of implementing the essential ideas of the 18th national congress proposed by the Communist Party of China (CPC). This year is of milestone significance to the progress of reform and opening-up of China and had made outstanding achievements in continuously sustaining large scale of investment for water project construction as well as reform and development of the water sector. Under the wise leadership of the Central Committee of CPC and the State Council, the water departments at all levels have braved difficulties and conducted solid work for new progress of water development in all aspects. The support provided by the water sector has ensured the realization of “ten consecutive growth” of grain production, enabled further enhancement of people's well being, and kept healthy and continuous development of economy as well as social stability and harmony in China.

I. Investment in Fixed Assets

In 2013, the total investment for water project construction from the whole society was 395.40 billion Yuan, a 4.0% decrease comparing to the year of 2012. Divided by sources, 176.26 billion Yuan was financed by the central government with a decrease of 17.4%, 172.69 billion Yuan financed by local governments, 6.1% increase; 1.08 billion Yuan of foreign investment, 208.6% increase; 19.42 billion Yuan of domestic loans, 3.8% increase; 14.78 billion Yuan from enterprises and private sector, 42.7% increase; and 11.17 billion Yuan from other sources, 82.5% increase.

Total fixed assets investment plan of water sector



The total investment of Central Government for water project construction was 176.26 billion Yuan in 2013, among which 140.83 billion Yuan from MWR, 28.18 billion Yuan from construction funds of South – North Water Diversion Project and 7.25 billion Yuan from investments of other ministries; The total investment of MWR was 140.83 billion Yuan, including 71.71 billion Yuan of fixed assets investment of Central Government Budget, 2.23 billion Yuan of Water Construction Funds and 66.90 billion Yuan of Special Funding of Central Government Budget; Divided by the types of projects: 61.90 billion Yuan for flood control, taking 43.95%; 68.82 billion Yuan for water resources project, taking 48.87%; 7.82 billion Yuan for soil and water conservation and ecological improvement, taking 5.55%; and 2.30 billion Yuan for special projects, taking 1.63%.

A total of 20,266 water projects were under construction in 2013, with a total investment of 1534.60 billion Yuan, with an increase of 12.0% comparing to that of the year before. The projects with Central Government finance were 10,974 with an

increase of 40.0% comparing to the year before. The total funds used by projects under construction reached 976.40 billion Yuan and increased 21.8% comparing to the year before. There were 12,199 newly-constructed projects in 2013, with a decrease of 8.7% and newly-added investment was 464.59 billion Yuan with a increase of 38.8%.

Completed investment for water project construction in 2013 amounted to 375.76 billion Yuan, with a decrease of 20.66 billion Yuan or 5.2% decrease comparing to the year before. In which, 278.28 billion Yuan put into construction project with a 1.7% increase; 17.36 billion Yuan for installation with a decrease of 27.0%; 16.11 billion Yuan for purchase of machinery, electric equipment and instruments, with an decrease of 9.5%; and 64.02 billion Yuan for other purposes (including compensation of resettlement and land acquisition), with a decrease of 21.1%.

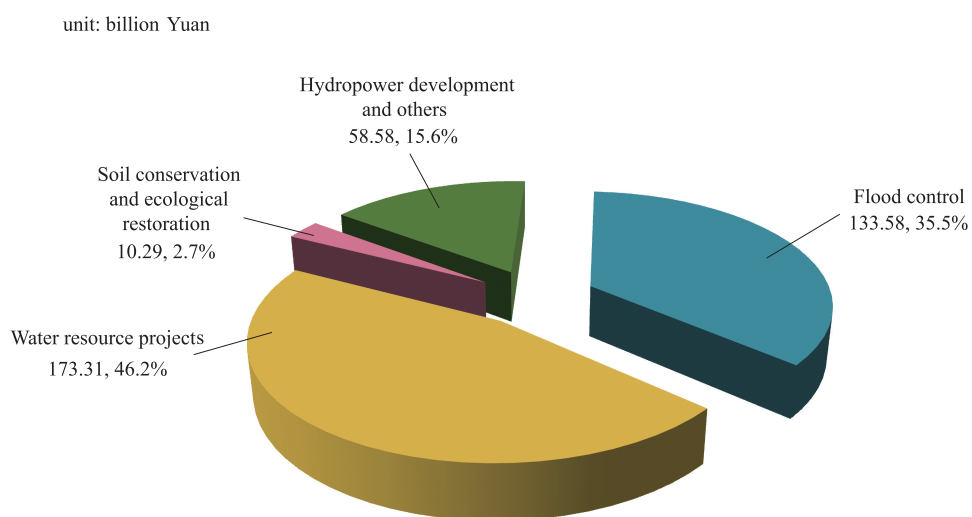
	2007 (billion Yuan)	2008 (billion Yuan)	2009 (billion Yuan)	2010 (billion Yuan)	2011 (billion Yuan)	2012 (billion Yuan)	2013 (billion Yuan)	increase (%)
Yearly Completed	94.49	108.82	189.40	231.99	308.60	396.42	375.76	-5.2
Construction project	67.25	78.15	129.72	152.49	210.32	273.65	278.28	1.7
Installation project	4.65	6.74	11.34	10.96	12.17	23.78	17.36	-27.0
Procurement of instruments and equipment	5.68	6.00	12.50	12.45	11.52	17.81	16.11	-9.5
Others (including compensation for resettlement and land expropriation)	16.91	17.93	35.84	56.09	74.59	81.18	64.02	-21.1

In the total completed investment, 133.58 billion Yuan was allocated to the

construction of flood control projects, 173.31 billion Yuan for the construction of water resources projects, 10.29 billion Yuan for soil and water conservation and ecological restoration, and 58.58 billion Yuan for special projects, such as hydropower development and capacity building.

The completed investment for seven major river basins reached 328.44 billion Yuan, of which 47.32 billion Yuan was invested in river basins in the southeast, southwest and northwest of China. Moreover, completed investments in eastern, northeast, middle and western regions were 111.72 billion Yuan, 21.12 billion Yuan, 105.60 billion Yuan and 137.32 billion Yuan respectively, accounting 29.7%, 5.6%, 28.1%, and 36.5% of the total.

Completed investment of projects in 2013



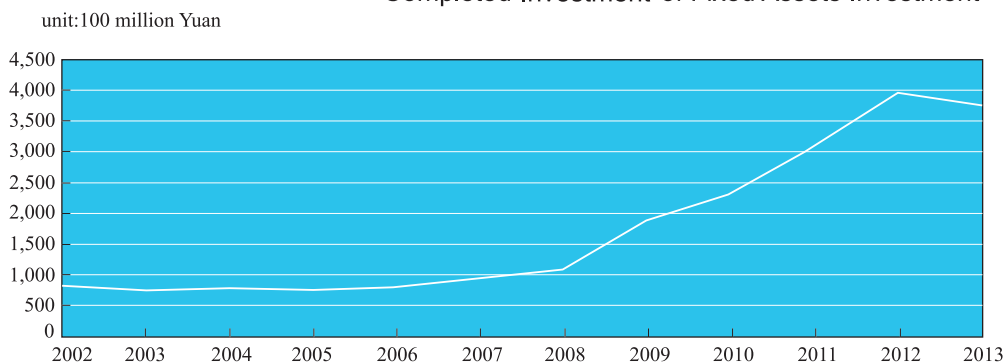
Of this total completed investment, the Central Government contributed 43.04 billion Yuan, and local governments contributed 332.72 billion Yuan. Large and medium sized projects completed investment of 90.59 billion Yuan; small-sized

and other projects completed 285.17 billion Yuan. Newly-constructed project completed 255.53 billion Yuan; and reconstruction and expansion completed 120.23 billion Yuan.

In 2013, the newly-added fixed assets totaled 278.04 billion Yuan. By the end of 2013, the accumulated investment in projects under construction was 1014.23 billion Yuan, and the rate of completed investment reached 61.3%, an increase of 2.8% Comparingto 2012. The newly increased fixed assets of projects under-construction valued 557.71 billion Yuan, and the rate of investment transferred into fixed assets was 55.0%, an decrease of 9.8% comparing to 2012.

In 2013, the completed civil works of earth, stone and concrete structures were 3.60 billion m³, 540 million m³, and 70 million m³ respectively. By the end of 2013, the ratio of complete quantity of earthwork, stonework, concrete of the under-construction projects were 71.2%, 56.7%, and 66.9% respectively.

Completed Investment of Fixed Assets Investment



II. Key Water Projects Construction

Harness of rivers and lakes. In 2013, there were 3,977 river harness projects under construction that had spent 179.11 billion Yuan, accounting for 59.2% of the total completed investment. There were 11,009 km of river channels trained and 8,969.7 km of which completed. Among 3,977 projects, there was 427 embankments projects, 498 large rivers projects, 2,921 middle-small river harness projects, others was 131. Implementation Plan for Furthering Huaihe River Harness was jointly issued by the National Development and Reform Commission and Ministry of Water Resources in 2013. A total of 13.12 billion Yuan was allocated according to the investment plan and 9.36 billion Yuan was actually completed with a completion rate of 70.9%.

Reservoir projects. There were 348 reservoir projects under construction in 2013, with an accumulative investment of 155.39 billion Yuan, accounting for 65.7% of the total completed investment. There were 4,530 hazard vulnerable reservoirs completing repair or reinforcement, with an accumulated investment of 35.09 billion Yuan, accounting for 82.0% of the total completed investment. The Central Government spending for reinforcement of large and medium reservoirs as well as some small reservoirs of great significance reached to 4,317 projects. The plan for reinforcement of major small reservoirs that are vulnerable to hazard was initiated and 15,887 reservoirs had completed reinforcement by the end of 2013.

Water allocation projects. The yearly investment for water allocation projects reached to 330.44 billion Yuan. The completed investment in these projects had accumulated to 250.39 billion Yuan, accounting for 75.8% of the total completed

investment. The scale of under-constructed projects of phase-I of eastern and middle routes of South-North Water Diversion Project reached to 249.34 billion Yuan. The accumulated completed investment was 243.41 billion Yuan and the completed investment in 2013 was 40.49 billion Yuan. Water source projects, including Shuangfengsi in Hebei Province, Water Diversion from Songhua River in Jilin Province, Water Diversion II from Zhoushan in Zhejiang Province and Water Diversion from Niulan River to Dianchi Lake in Yunnan Province, all 23 projects accelerated pace of construction.

Irrigation, drainage and rural water supply. The investment to the under-constructed projects for providing safe drinking water reached to 79.66 billion Yuan, with an accumulated investment of 69.12 billion Yuan. The newly increased capacity helped 63.43 million people access to safe drinking water. By the end of 2013, the beneficial rural population who have centralized water supply made up a percentage of 73.1% of the total. The Central Government allocated 10.73 billion Yuan for completion of counterpart systems and rehabilitation of 211 large irrigation districts for water conservation and water saving, newly-construction of 19 irrigation districts in Sanjiang Plain, rehabilitation and continuous construction of counterpart systems for 153 medium irrigation districts for water saving purpose, rehabilitation of large irrigation and drainage pumping stations in 14 provinces, construction of demonstration projects for large-scale extension and benefit increase of water-saving irrigation systems as well as pilot projects in pastureland. In addition, 24.33 billion Yuan from central government finance invested to build small-scale farmland waterworks for irrigation and drainage and water supply in rural areas. The newly-added effective irrigated area reached 1,552,000 ha; moreover, new-added water-saving irrigated area was 2,406,000 ha.

Rural hydropower and electrification. In 2013, the completed investment of rural

hydropower station construction amounted to 19.8 billion Yuan; the newly increased hydropower stations were 389, with a total installed capacity of 2.46 million kW. The completed investment for rural electricity network in the whole country was 6.5 billion Yuan; the newly increased capacity of 110 kV substation or above was 4.72 million kVA; the newly increased capacity of 35 (66) kV substation was 1.29 million kVA; the capacity of distribution transformer was 4.43 million kVA. The newly constructed 10 kV high pressure transmission line was 25,000 km and low pressure line was 43,000 km.

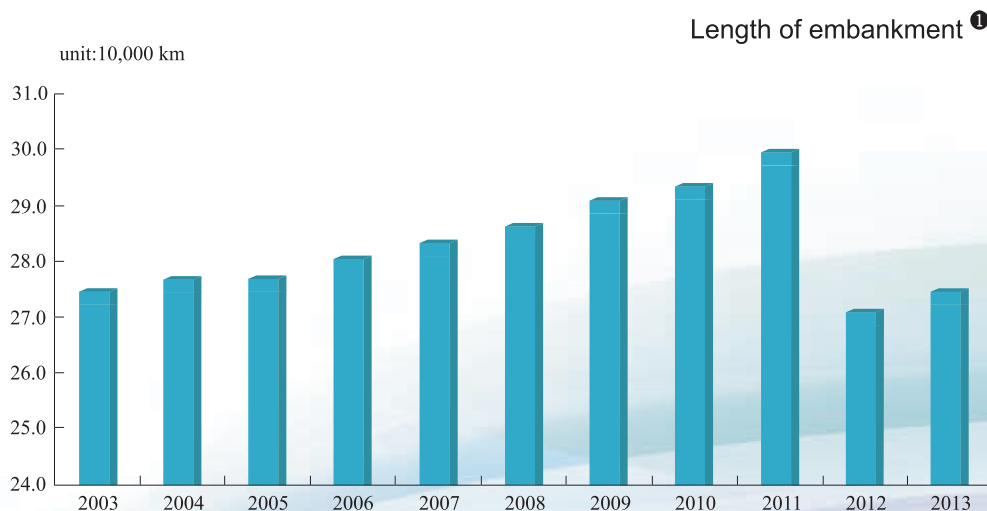
Soil and water conservation. In 2013, the allocated funds for soil and water conservation and ecological restoration projects under construction was up to 30.63 billion Yuan; the completed investment was 22.74 billion Yuan. The newly-added areas with soil conservation measures were up to 53,000 km², of which the areas under National Major Project for Soil Conservation were 13,200 km². The newly-added forest protected areas reached 16,800 km². There had been 2,153 small watersheds with comprehensive measures of soil and water conservation; 285 silt retention dams built on the Loess Plateau; and more than 2,000 landslides brought under control. The newly built basic farmlands were 727,000 ha (of which 553,000 ha were terrace lands and 16,000 ha were silted land). Newly-created forestland for soil conservation reached 1,411,000 ha and grassland 340,000 ha. More than 700 counties had been listed as national major project counties for soil and water conservation. The pilot project construction for erosion control in slope farmland extended to 160 counties in 22 provinces. The completed areas of slope for terraced field were 72,670 ha.

Capacity building. The completed investment for capacity building in 2013 was 6.11 billion Yuan, of which 1.95 billion Yuan was spent on procurement of communication equipment for flood control, 2.06 billion Yuan for hydrological

facilities, 150 million Yuan for scientific research and education facilities, 1.67 billion Yuan for early-stage work, and 280 million Yuan for others.

III. Key Water Structures

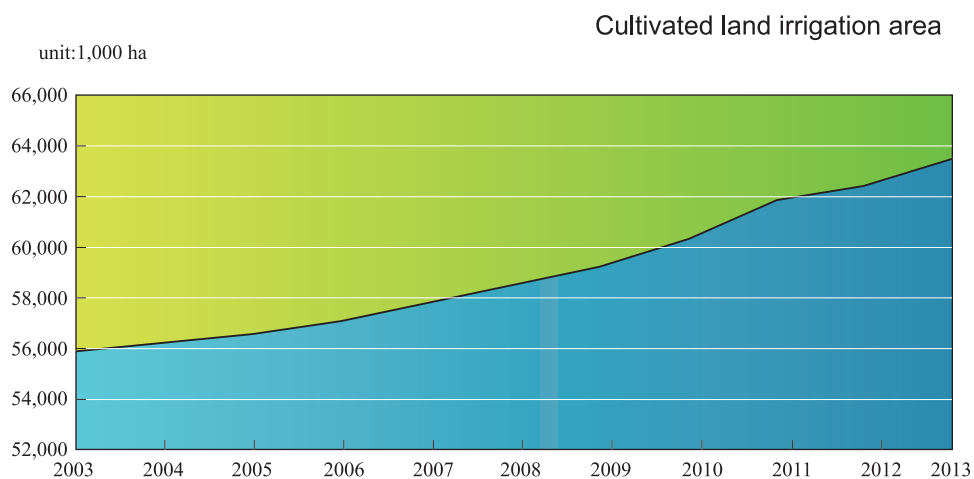
Embankments and water gates. In 2013, the completed river embankments from Grade-I to Grade-V in the whole country had a total length of 276,800 km^①. Of which, 179,800 km of embankment met the standard, with a percentage of 65.0% of the total up to standard. The length of embankment met the standard of Grade-I and Grade-II were 29,500 km, with a percentage of 76.8% of the total. These embankments can protect 570 million people and 43,000 ha of cultivated land. The number of water gates with a flow of 5 m³/s increased to 98,192, of which 870 were large water gates, 7,985 flood diversion sluices, 17,509 drainage/return water sluices, 5,834 tidal barrages, 11,106 water diversion intakes and 55,758 controlling gates.



① The length of embankment before 2011 includes embankment below Grade-V.

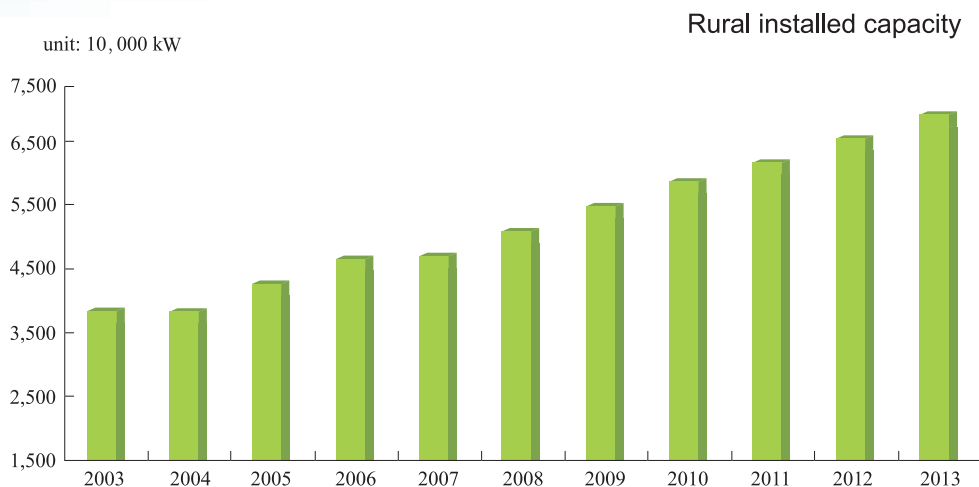
Reservoirs and water complexes. The total number of reservoir in China boosted to 97,721, with a storage capacity of 829.8 billion m^3 , of which 687 belong to large reservoirs with a total capacity of 652.8 billion m^3 , accounting for 78.7% of the total; 3,774 medium-sized reservoirs with a total capacity of 107.0 billion m^3 , accounting for 12.9% of the total. The percentage of large and medium reservoirs up to the safety standard ranked 96.8% of the total.

Irrigation. Irrigation districts with an area equal or above 2,000 mu added to 22,387, with a total cultivated land irrigated area of 33.928 million ha. In which, the irrigation districts equal or above 500,000 mu were 176, with a total cultivated land irrigated area of 6.241 million ha; the irrigation districts covering an area from 300,000 to 500,000 mu were 280, with a total cultivated land irrigated area of 5.010 million ha. By the end of 2013, the total cultivated land irrigated area reached to 63.473 million ha that accounted to 52.9% of the total cultivated area in China. The areas with water-saving irrigation facilities was totaled 27.109 million ha, among which 6.847 million ha equipped with sprinkler or micro irrigation systems and 7.424 million ha installed low-pressure pipes.



Tube wells and pumping stations. A total of 4.584 million water supply tube wells, with a daily water abstraction capacity equal or larger than 20 m³ or an inner diameter larger than 200 mm, were excavated in the whole country. A total of 90,650 pumping stations that have an installed flow of 1 m³/s or installed voltage above 50 kW had been installed, among which 366 belong to larger pumping stations, 4,161 medium-size and 86,123 small-size pumping stations.

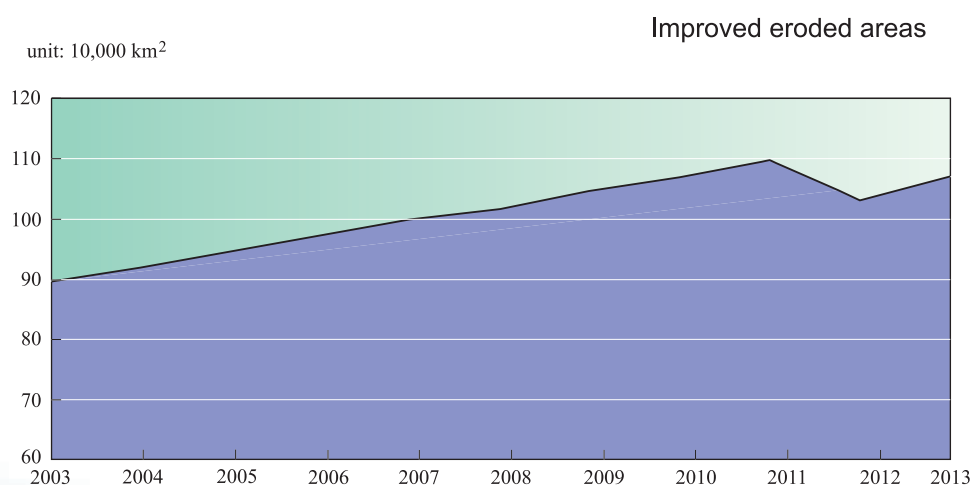
Rural hydropower and electrification. By the end of 2013, hydropower stations built in rural areas totaled 46,849, with an installed capacity of 71.19 million kW, accounting for 25.4% of the total in China. The annual power generation by these hydropower stations reached to 223.3 billion kWh, accounting for 24% of the total power generation of the whole country, which helped 470,000 people being able to obtain electricity.



Soil and water conservation. In 2013, the restored eroded areas equaled to 1.0689 million km²; ecological restoration areas accumulated to 770,000 km². A total of 160 ecologically-sound small watershed had been constructed. With the

completion of check and acceptance of Phase-II of National Soil and Water Conservation Network and Information System, four center stations for river monitoring in the Huaihe, the Songliao, the Pearl and Taihu basins were built, including 18 master stations in 18 provinces, 75 monitoring substations and 715 monitoring points. Database systems for soil and water conservation had been built and developed.

Hydrology and informationization. By the end of 2013, the number of hydrological stations of all kinds increased to 86,554 in the whole country, including 3,195 national basic hydrologic stations, 816 special hydrologic stations, 9,330 gauging stations, 43,028 precipitation stations, 11,795 water quality stations, 16,407 groundwater monitoring stations, 14 evaporation stations and 57 experimental stations, and 1,912 soil moisture monitoring stations. China has built 24,518 telegram reporting stations and 1,207 hydrologic forecast stations. A total of 286 water environment monitoring centers (sub-centers) were put into operation that cover nearly all major rivers, lakes and reservoirs in China.



The water conservancy informatization which had opened a new era for an all round

and multi-layer development. The PCs and servers of varied kinds that connected to the internet reached 74,964 and 3,273 respectively. The on store capacity of equipment installed in the water resources departments at or above the provincial level reached 2,057,971.9 GB. A total of 105,930 information gathering points were installed for water departments at or above the provincial level, among which 63,461 were automatic information gathering points. Database under routine operation reached 706, with a storage capacity of 333,528.7 GB.

IV. Water Resources Utilization and Protection

According to preliminary statistics, the availability of water resources in 2013 totaled 2,795.79 billion m^3 , 0.9% less than normal years. Mean annual precipitation was 661.9 mm, 3.0% more than normal years and 3.8% less than the year before. By the end of 2013, total water storage of 588 large reservoirs reached 300.54 billion m^3 , 23.29 billion m^3 less compared with that of the beginning of the year; total water storage of 3,271 medium-size reservoirs were 39.53 billion m^3 , 7.1 billion m^3 less than that of the beginning of the year.

In 2013, the total water supply amounted to 618.34 billion m^3 , among which 81.0% came from surface water, 18.2% from underground aquifers and 0.8% from other water sources. The total water consumption increased to 618.34 billion m^3 , of which domestic use amounted to 75.01 billion m^3 (in which urban domestic water use took 75.5%) or 12.1% of the total; industrial use 140.64 billion m^3 or 22.8% of the total; agricultural water use 392.15 billion m^3 or 63.4% of the total and environmental flow of 10.54 billion m^3 or 1.7% of the total. Comparing to that of the year before, the total water use increased by 5.22 billion m^3 , of which domestic water use increased by 1.04 billion m^3 , industrial use increased by 2.57 billion m^3 , agricultural water use increased by 1.90 billion m^3 and environmental flow decreased by 0.29 billion m^3 .

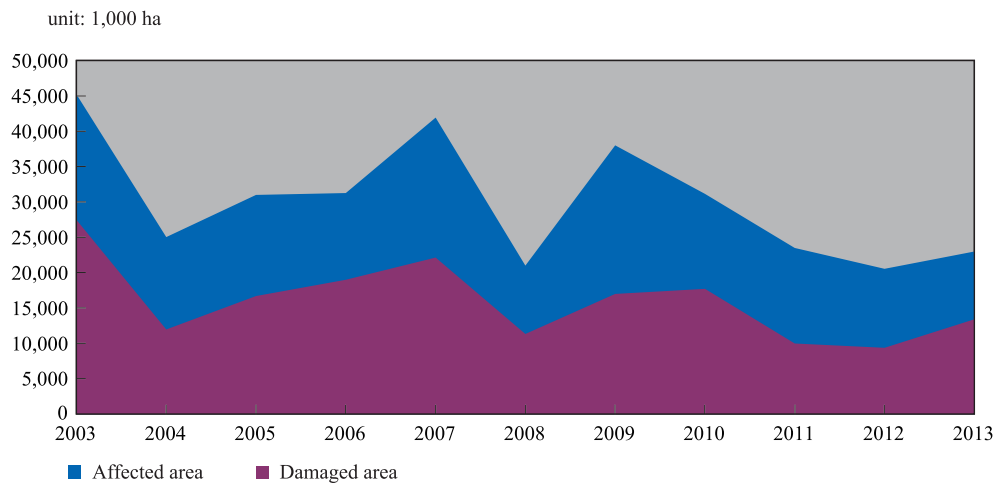
Water consumption per capita in 2013 was 456 m³ in average. Water use of 10,000 Yuan GDP (at comparable price of the same year) was 109 m³, a 7.6% decrease comparing with that in 2012. Water use of industrial production value added per 10,000 Yuan (at comparable price of the same year) was 67.0 m³, 5.3% less comparing to that of the year before.

According to the result of water quality assessment on river sections of more than 208,000 km, rivers with better water quality that comply with or better than Class-Ⅲ standard occupied 68.6% of the total. Compared with that of 2012, the Class-I, Class-II, Class-Ⅲ is increased by 0.6%, the Class-V is decreased by 0.8%.

V. Flood Control and Drought Relief

Generally speaking, no large scale damages occurred as a result of flood and water-logging disasters in 2013. Nevertheless, a total of 11.901 million ha of cultivated land were affected by floods, resulting in 6,623 million ha damaged, 120 million people affected, 775 people dead, and 374 missing. A total of 530,000 houses were destroyed and 243 cities suffered from inundation. The disasters resulted in 314.6 billion Yuan of direct economic losses, among which the loss with water infrastructures reached 44.5 billion Yuan. The flood stricken areas include northeast parts of China and provinces of Sichuan and Guangdong etc. The death toll or the number of missing caused by mountain flood took 72% of the total in 2013. Economic loss caused by typhoon equaled to 40% of the total direct economic loss of flood and waterlogging disasters, which was the worst case since 2006.

Flood or drought affected and damaged areas



In 2013, no large scale drought occurred in the whole country. However, some areas in the Yangtze River Basin, Huaihe River Basin, southern part of Yangtze River and Hanjiang River suffered from severe droughts. The farmland affected by droughts reached 11.220 million ha, of which 6,971 million ha damaged, with a direct economic losses of 127.5 billion Yuan. A total of 22.41 million urban and rural population and 11.79 million man-feed big animals and livestock suffered from temporary drinking water difficulties due to water shortage caused by these droughts.

In 2013, the funds allocated to flood control and drought relief amounted to 9.889 billion Yuan, among which 592 million spent on structural measures, 2.587 billion Yuan for extraordinary flood defense, 1.626 billion Yuan for extraordinary drought relief, 4.3 billion Yuan for mountain flood prevention and control and 784 million Yuan for emergency water diversion to ease the drought.

The flood control works protected 3.967 million ha of cultivated land and 156 cities

from flooding. The efforts of flood control and disaster reduction generated 235.8 billion Yuan of economic benefits. Safe drinking water was provided to 20.07 million people in rural and urban areas as well as 9.36 million big animals and livestock for alleviating temporary water shortage. The area with anti-drought measures reached 24.667 million ha that prevented a loss of 39.9 billion kg of grain.

VI. Water Management and Reform

Water resources planning and early-stage work. In 2013, there were 26 plans of varied kinds approved, among which 7 approved by the State Council, 6 approved by the National Development and Reform Commission (NDRC) and 13 approved by the Ministry of Water Resources (MWR). Preparation and revision of master plans of seven river basin commissions has made considerable progress. The revised master plans of seven major river basins were all approved by the State Council, including the master plans of Yellow River, Huaihe River, Haihe River, Peral River, Songhua River and Taihu Lake approved in 2013. Preparation work for compiling the National 13th Five-Year Plan on Water Development was initiated. National Plan for Modern Irrigation Development was entering appraisal stage. National long and medium term plans of balancing water supply and demand had achieved some results. Summary reports of National Plan for Water Resources Protection were finished.

The Implementation Plan for National Drought Relief (2014–2016) was submitted to the State Council for approval. Sand Excavation Plan of National Major River Courses was issued. The revision and approval of National Plan for Groundwater Utilization and Protection is still undertaking. Inspection and appraisals have been conducted for the National Plan of Soil and Water Conservation, National Plan for River Estuary and Seashore Development and Management and Water Distribution

Plan of Major River Basin (25 rivers in Phase – I). The National Plan for Water Development in Pasture Areas was completed. The formations of National Plan for Water Modernization Outlines and National Plan for Water-logging Control have been started.

A total of 46 projects were delivered to NDRC for approval, with a total investment of 146. 149 billion Yuan. Among which NDRC approved 39, with a total investment of 107. 733 billion Yuan, including 12 project proposals with a total investment of 42. 806 billion Yuan, 18 feasibility studies with a total investment of 45. 112 billion Yuan and 14 preliminary designs with a total investment of 28. 831 billion Yuan.

Water legislation and administrative enforcement. In 2013, MWR approved/ extended 1,420 administrative water permits, among which 119 qualification identifications for water resources assessment organizations; 2 water resources assessment reports of construction project; 355 qualification certificates of supervisors for water-related project construction; 159 qualification certificates of quality inspection of water-related project; 42 qualification certificates of supervisors on soil and water conservation of constructed project; 19 pre-approvals of environmental impact assessment reports of water and hydropower project; 285 approvals of soil and water conservation plan of production and construction projects; 179 check and acceptance of soil and water conservation plans of construction projects; 172 qualification certificates of survey and assessment for hydrology and water resources; and 72 licenses of headstock gear utilization.

In 2013, a total of 41 sand excavation zones were approved in the middle and lower reaches of the Yangtze River planned. There were 32 permits issued for allowing

sand excavation business, with a total sand mining of 96.058 million ton. The sand mining boats that got licenses were 190. The investigated illegal cases totaled 55,437 and 50,036 or 90.26% of them resolved. The retrieved economic losses reached 182.99 million Yuan. A total of 5,537 water disputes resolved, and 48.15 million Yuan retrieved. There were 52 administrative reconsideration cases received by the Ministry of Water Resources that all being settled.

Water affairs management. So far, a total of 1,942 water affairs bureaus or water resources bureaus have been built at or above county level and assigned the responsibilities of water affairs management, which accounted for 79.7% of the total cities and counties. Among 1,479 established bureaus, 4 at provincial level, 7 at sub-provincial level, 213 at prefecture or city level, and 1,255 at county level. The utilities managed by water affairs bureaus own 4,039 water plants, 534,000 km of water supply pipes, with a daily water supply of 254.52 million m^3 and annual water supply of 37.96 billion m^3 . A total of 2,159 sewage treatment plants were under operation, with a total pipeline of 263,000 km long and daily treatment capacity of 93.65 million m^3/d . The annual amount of sewage treatment reached to 25.41 billion m^3 in total.

A total of 2,761 water enterprises or companies under these water affair bureaus, with fixed assets equal to 238.96 billion Yuan, and annual income of 50.44 billion Yuan as well as a total profit of 430 million Yuan. The total investment putting into water industry in urban area amounted to 122.44 billion Yuan. Water sources for cities and counties totaled 4,566, with an annual water supply capacity of 112.40 billion m^3 . The amount of recycled water use in cities (counties) increased to 4.82 billion m^3 ; while water supplied by unconventional sources despite of utilization of recycled water also added to 69.47 billion m^3 .

Reform in project construction and management. The reform of national water project management system had completed and passed check and acceptance, which had reduced the number of water utilities within the scope of reform from 14,325 to 12,979 through merger or reorganization, with a decrease of 9%. A total of 12.96 billion Yuan had been used for covering the managerial staff and operation and maintenance cost of 12,979 water project management units, which covered 92% of the total cost. The expenses for operation and maintenance of public-good waterworks were 7.57 billion Yuan that covered 73% of the total cost. There were 8,995 organizations completed division of its type of operation, i. e. either totally self managed business or operated with government subsidy, accounted for 68.5% of the total water management units.

In 2013, another 22 enterprises got Class-A qualification of supervisors for water and hydropower project construction, 59 got the Class-B qualification and 187 got the Class-C qualification. Another 9 enterprises got Class-A qualification of supervisors for soil and water conservation project construction, 8 got the Class-B qualification and 20 got the Class-C qualification. No enterprise obtained Class-A qualification of supervisors for electromechanical and metal equipment manufacture and 2 obtained Class-B qualification. A total of 8 enterprises got the qualification (no grading is defined) of supervisors for environment protection of water project construction. In 2013, another 17 enterprises became Class-A quality inspection organizations for geotechnical engineering approved; 15 got the Class-A quality inspection organizations for concrete structures; 3 got the Class-A quality inspection organizations for metal structures; 1 Class-A quality inspection organizations for mechanical and electronic equipment; and 5 got Class-A quality inspection organizations for measuring and gauging tools. In 2013, the approved national water scenery spots reached 588, including 296 reservoirs, 117 natural rivers and lakes, 94 lake or riverine cities, 35 wetlands, 24 irrigation districts and 22 areas for soil and water conservation.

Reform in rural water resources management. The total number of Water User Associations (WUAs) established in the whole country reached to more than 80,500, and about 262 million mu of irrigated areas were under the operation of these associations that amounted to 28% of the total irrigated areas in China. A total of 29,000 grass-root water service organizations were crated in the whole county, with an employment of 130,000 people. Reform of management system had been continuously implemented in the irrigation districts, with the objectives of consolidating collection of “two fees”, i. e. water resources fee and sewage treatment fee. The coverage rates of costs of basic personal expenses in public-good large irrigation districts or operation and maintenance of public waterworks reached to 60% and 41% respectively

Soil and water conservation. A total of 31,000 soil and water conservation plans of development and construction projects were examined and approved, of which 285 plans of national large and medium projects were approved by MWR, covering an area of 14,894 km². A total of 6,611 soil and water conservation projects completed check and acceptance. By the end of 2013, there were 12 provinces (autonomous regions or municipalities) promulgated the implementing provisions or regulations of Soil and Water Conservation Law. Soil and water conservation planning system has been popularized and extended to a larger scope.

Water pricing reform. In 2013, water supply for agricultural irrigation was at a cost of 0.2568 Yuan/m³, among which the estimated cost of water supplied by state-owned enterprises was 0.1726 Yuan/m³ and cost of water supply at the end-canal system was 0.0842 Yuan/m³. Agricultural water price was 0.0914 Yuan/m³, among which water price by state-owned enterprise was 0.0689 Yuan/m³, water price at the end canal system was 0.0225 Yuan/m³, which was about 35.59% of the actual cost. The collection rate of agricultural water charge was 86.48% in

average. The tariffs of water sources in these cities or counties ranged from 0.01 to 6.0 Yuan/m³, among which water resources fees of surface water ranged from 0.002 to 2.0 Yuan/m³ and water resources fees of groundwater resources ranged from 0.01 to 10.0 Yuan/m³.

Reform of hydropower management system. Transformation of water use right on parable basis has been implemented in 17 provinces (autonomous regions or municipalities). Administrative rules and regulations for water-power resource development and utilization were promulgated in 16 provinces (autonomous regions or municipalities). It was stipulated by 15 provinces that water resources department shall take whole responsibility for integrating water resources management. Safety production has been reinforced for electric generation in rural areas by means of introducing approaches of “specifying person-in-charge of production and supervision”, which had expanded the coverage of safety supervision to over 99%.

Production safety supervision. Generally speaking, safe production was realized in the water sector as no significant accident happened in 2013, except 15 production accidents and 24 people dead. There were 149 inspection teams that completed inspection of 429 construction projects. There were 2,229 problems identified and 301 notifications were released for correction of violating activities. Circulars were issued at national level to punish the severe violating activities of five projects in 5 provinces.

Re-inspection and supervision to 93 projects that have severe illegal activities were carried out by 31 inspection teams from river basin authorities. Moreover, a complete inspection and appraisal was conducted to 117 projects of 8 provinces

which under the inspection of MWR since 2011. Guidance and leadership were provided to the inspection work of provincial water resources departments, who had completed inspection of 1,308 projects and found 9,215 illegal cases. A total of 960 rectify documents were issued.

Reservoir resettlement. According to uncompleted statistics, there were 114 large and medium reservoirs under construction in 2013, which involved 19 provinces (autonomous regions or municipalities), with a resettled population of 117,000, relocation sites of 367 and relocated rural residents of 94,000. The newly-constructed houses for resettlement covered an area of 3.3 million m² that need to occupy 96,000 mu of land.

Water science and technology. A total of 420 million Yuan had been allocated to science and technology projects, including 3 National Key Technology R&D Program being listed, 66 public-interest scientific research projects of the water sector, and 60 projects in “948 Plans”, National Agricultural Science and Technology Achievements Transformation Fund Programs and MWR Key Technological Achievements Extension Plans. Four water technological project won the National Sci-Tech Advance Award. By the end of 2013, the numbers of national level or ministerial level labs were 12, and technical research centers were 13. Special funds for procurement and repairing of equipment of national scientific institutions amounted to 108.441 million Yuan. A total of 767 ministerial technical norms and standards are effective and 194 water-related technical standards are under review (revision). There were 81 technical norms and standards listed in the Table of Water-related Technical Standard System.

International cooperation. A total of 37 multilateral cooperation and exchange

activities were successfully conducted, with 1 bilateral cooperation agreement signed. Under the fixed mechanism for bilateral exchange of government agencies, seven meetings were organized and held. The project of Key Plain and Low-lying Land Harness in Huaihe River Basin was under smooth progress, with a World Bank loan of 200 million US dollars. There were 5 governmental cooperation projects under implementation, 3 special projects for international cooperation and science and technology at national level got approval, having a funding of 8.97 million Yuan. There were 7 special projects for international cooperation and science and technology at national level under implementation, with a funding of 19.27 million Yuan.

VII. Current Status of Water Sector

Employees and salaries. In 2013, the employees of water sector were totaled 1.04 million, a 2.9% decrease comparing to that the year before. Of which the employees with long-term post amounted to 1.005 million, a 2.8% decrease. In the employees with long-term post, the staff working in the agencies directly under the Ministry of Water Resources was 70,000, a 5.4% decrease over the year before; the staff working in local agencies was 0.935 million, a 2.6% decrease. The total salary for the employees with long-term post in the whole country was 41.53 billion Yuan, a 6.7% increase comparing to that of 2012. The average salary per employee with long-term post was 41,453 Yuan, a 10.0% increase over 2012.

Employees and Salaries

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
number of in service staff (10 ⁴ persons)	122.9	118.2	110.5	109.2	106.8	105.6	103.7	106.6	102.5	103.4	100.5
of which, staff of MWR and agencies under MWR (10 ⁴ persons)	6.4	6.4	6.6	6.8	7.2	7.2	7.2	7.4	7.5	7.4	7.0
Local agencies (10 ⁴ persons)	116.5	111.8	103.9	102.3	99.6	98.4	96.5	96.3	95.0	96.0	93.5
salary of in-service staff (10 ⁸ Yuan)	140.6	157.1	159.8	184.3	211.28	234.37	264.74	297.91	351.37	389.1	415.3
average salary (Yuan/ person)	11,443	13,054	13,969	16,776	19,573	22,143	25,633	28,816	34,283	37,692	41,453

Reconnaissance and design. In 2013, the number of reconnaissance and design institutions obtained Class-A qualification increased to 108, and institutions awarded class-B qualification increased to 361 and institutions awarded Class-C qualification added up to 1,141, with a total staff of nearly 80,000 people.

Water Construction. The total number of water and hydropower construction companies awarded Super General Construction Contractor remained as 10. A total of 204 companies were approved to be Class-A Professional Contractors. A total of 38,767 people registered as supervisor engineers for water project construction and 13,525 people received Class- I Registered Certificate of Constructor in specialty of water and hydropower project.

Notes:

1. The data in this bulletin do not include those of Hong Kong, Macao and Taiwan.
2. The main index of national water resources development in 2012 has integrated with the data of First National Census for Water, but the data of the water-saving irrigated area in 2013 has integrated with the data of First National Census for Water.
3. The number of irrigation districts at 10, 000 mu and its irrigated area is calculated based on the number of irrigation districts that have 10, 000 mu of effective irrigated area or above in 2011. However, the statistics in 2012 was based on designed irrigated area that reached or upper to 10, 000 mu.
4. Statistics of rural hydropower refers to the hydropower stations with an installed capacity of 50, 000 kW or lower than 50, 000 kW.

