

## 04.04-Water

### Water

#### All dried up

Northern China is running out of water, but the government's **remedies** are potentially **disastrous**

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#### Vocab

1. **remedy** n. =**solution** a way of dealing with or improving an unpleasant or difficult situation 处理方法；改进措施；补偿

e.g. There is no simple remedy for unemployment. 失业问题没有简单的解决办法。

2. **disastrous** adj. =**catastrophic, devastating** very bad, harmful or unsuccessful 极糟糕的；灾难性的；完全失败的

e.g. a disastrous harvest/ fire/ result 严重歉收/火灾；灾难性的结果

CHINA **endures choking** smog, mass destruction of habitats and food poisoned with heavy metals. But ask an environmentalist what is the country's biggest problem, and the answer is always the same. "Water is the worst," says Wang Tao, of the Carnegie-Tsinghua Centre in Beijing, "because of its **scarcity**, and because of its pollution." "Water," agrees Pan Jiahua, of the Chinese Academy of Social Sciences. "People can't survive in a desert." Wang Shucheng, a former water minister, once said: "To fight for every drop of water or die: that is the challenge facing China."

#### Vocab

1. **endure** v. =**bear** to experience and deal with sth that is painful or unpleasant, especially without complaining 忍耐；忍受

e.g. They had to endure a long wait before the case came to trial. 在此案审理前他们只得忍受长时间的等待。

2. **choke** v. ~ (on sth) to be unable to breathe because the passage to your lungs is blocked or you cannot get enough air; to make sb unable to breathe 窒息；哽噎

e.g. She almost **choked to death** in the thick fumes. 她几乎被浓烟呛死。

3. **scarcity** n. if there is a **scarcity of sth**, there is not enough of it and it is difficult to obtain it 缺乏；不足；稀少

e.g. a time of scarcity 物资短缺时期

He was not **exaggerating**. A stock image of China is a fisherman and his **cormorant** on a **placid** lake. The reality is different. The country uses 600 billion cubic metres (21,200 billion cubic feet) of water a year, or about 400 cubic metres a person—one-quarter of what the average American uses and less than half the international definition of water stress.

#### Vocab

1. **exaggerate** v. to make sth seem larger, better, worse or more important than it really

is 夸张；夸大；言过其实

e.g. The hotel was really filthy and I'm not exaggerating. 我不是夸张，这旅店真的很脏。

2. cormorant n. a large black bird with a long neck that lives near the sea 鸬鹚

3. placid adj. =tranquil calm and peaceful, with very little movement 平静的；宁静的；安静的

e.g. the placid waters of the lake 平静的湖水

### Sentence

The country uses 600 billion cubic metres (21,200 billion cubic feet) of water a year, or about 400 cubic metres a person—one-quarter of what the average American uses and less than half the international definition of water stress.

主干：The country uses 600 billion cubic metres (21,200 billion cubic feet) of water a year or about 400 cubic metres a person 前面的同位语，解释

—one-quarter of what the average American uses and less than half the international definition of water stress. 接着解释，是美国人均用水量的四分之一，and...

The national average hides an even more alarming regional **disparity**. Four-fifths of China's water is in the south, notably the Yangzi river **basin**. Half the people and two-thirds of the farmland are in the north, including the Yellow River basin. Beijing has the sort of water scarcity usually associated with **Saudi Arabia**: just 100 cubic metres per person a year. The water table under the capital has dropped by 300 metres (nearly 1,000 feet) since the 1970s.

### Vocab

1. **disparity** n. 不同；不等；差异；悬殊 If there is a **disparity between** two or more things, there is a noticeable difference between them.

e.g. ...the great **disparity** of wealth between rich and poor countries. 贫富国家间的财富鸿沟

2. **basin** n. an area of land around a large river with streams running down into it 流域

e.g. the Amazon Basin 亚马孙河流域

3. **Saudi Arabia** 沙特阿拉伯

China is **using up** water at an **unsustainable** rate. Thanks to overuse, rivers simply disappear. The number of rivers with significant **catchment** areas has fallen from more than 50,000 in the 1950s to 23,000 now. As if that were not bad enough, China is polluting what little water it has left. The Yellow River is often called the **cradle** of Chinese civilisation. In 2007 the Yellow River **Conservancy Commission**, a government agency, surveyed 13,000 kilometres (8,000 miles) of the river and its **tributaries** and **concluded** that a third of the water is unfit even for agriculture. Four thousand **petrochemical plants** are built on its banks.

### Vocab

1. **use up** **Use up** means the same as **use** . **use up**同**use**

e.g. It isn't them who **use** up the world's resources...并不是他们把全球的资源耗尽的。

e.g. We were breathing really fast, and using the air up quickly. 当时我们呼吸非常急促，很快就要把空气用完了。

2. **unsustainable** adj. **opp=sustainable** that cannot be continued at the same level, rate, etc. 不能持续的；无法维持的

e.g. unsustainable growth 难以持续的增长

3. **catchment** n. (地理学上) 汇流，径流，集水；汇流的水 In geography, **catchment** is the

process of collecting water, in particular the process of water flowing from the ground and collecting in a river. **Catchment** is also the water that is collected in this way.

4. as if 好像

5. **cradle** n. ~ of sth the place where sth important began 策源地；发源地；发祥地  
e.g. Greece, the cradle of Western civilization 希腊，西方文明的摇篮

6. **conservancy** n. a group of officials who control the use of a port, a river, an area of land, etc. (港口、河流、地区等的)管理机构

e.g. the Thames Conservancy 泰晤士河管理委员会

7. **commission** n. an official group of people who have been given responsibility to control sth, or to find out about sth, usually for the government (通常为政府管控或调查某事的)委员会

8. **tributary** n. 支流 A **tributary** is a stream or river that flows into a larger one.

e.g. ...the Napo river, a **tributary** of the Amazon. 纳波河，亚马孙河的一条支流

9. **conclude** v. ~ sth (from sth) | ~ (from sth) that... to decide or believe sth as a result of what you have heard or seen 断定；推断出；作出结论

e.g. What do you conclude from that? 你从这件事中得出了什么结论？

10. **petrochemical** n. 石油化学产品 **Petrochemicals** are chemicals that are obtained from petroleum or natural gas.

11. **plant** n. a factory or place where power is produced or an industrial process takes place 发电厂；工厂

e.g. a nuclear reprocessing plant 核物质再处理厂

### Sentence

As if that were not bad enough, China is polluting what little water it has left.

as if 在这里应该是起到连接上文的作用，这似乎看起来有更严重的是：....

it has left 这里 it 指代 China, left 表示剩下的，中国正在污染剩下的那一点点水(即指23000条河流)

The water available for use is thus **atrocious**. Song Lanhe, chief engineer for urban water-quality monitoring at the housing ministry, says only half the water sources in cities are safe to drink. More than half the groundwater in the north China plain, according to the land ministry, cannot be used for industry, while seven-tenths is unfit for human contact, ie, even for washing. In late 2012 the Chinese media claimed that 300 **corpses** were found floating in the Yellow River near Lanzhou, the latest of roughly 10,000 victims—most of them (according to the local police) suicides—whose bodies have been washing downstream since the 1960s.

### Vocab

1. **atrocious** adj. 糟透的；恶劣的 If you describe something as **atrocious**, you are emphasizing that its quality is very bad.

e.g. I remain to this day fluent in Hebrew, while my Arabic is **atrocious**...时至今日，我的希伯来语仍很流利，但阿拉伯语却糟透了。

2. **corpse** n. (尤指人的)尸体 A **corpse** is a dead body, especially the body of a human being.

### Sentence

More than half the groundwater in the north China plain, according to the land ministry, cannot be used for industry, while seven-tenths is unfit for human contact, ie, even for washing.

主干：More than half the groundwater cannot be used for industry.

插入语：according to the land ministry

while seven-tenths is unfit for human contact 这里 while 的意思是 at the same time as sth else is happening 与...同时

In 2009 the World Bank put the overall cost of China's water crisis at 2.3% of GDP, mostly reflecting damage to health. Water shortages also **imperil** plans to expand energy production, threatening economic growth. China is hoping to follow America into a shale-gas revolution. But each shale-gas **well** needs 15,000 tonnes of water a year to run. China is also planning to build around 450 new coal-fired power stations, burning 1.2 billion tonnes of coal a year. The stations have to be cooled by water and the coal has to be washed. The grand total is 9 billion tonnes of water. China does not have that much available. According to the World Resources Institute, a think-tank in Washington, DC, half the new coal-fired plants are to be built in areas of high or extremely high water stress.

### Vocab

1. **imperil** v. 使陷于危险;危及 Something that **imperils** you puts you in danger.
2. **well** n. 井;水井 A **well** is a hole in the ground from which a supply of water is extracted.

### Sentence

描述的很形象: China is hoping to...but.... China is also planning to.... China does not have that much available. 希望去做, 但是需要什么什么条件. 还希望去做....但是没有这样的能力做

Every drop is precious

The best answer would be to improve the efficiency with which water is used. Only about 40% of water used in industry is recycled, half as much as in Europe. The rest is **dumped** in rivers and lakes. Wang Zhansheng of Tsinghua University argues that China is **neglecting** its urban water infrastructure (**sewerage**, pipes and water-treatment plants), leading to more waste. Water prices in most cities are only about a tenth of the level in big European cities, yet the government is **reluctant** to raise them, for fear of a popular **backlash**.

### Vocab

1. **dump** v. to get rid of sth you do not want, especially in a place which is not suitable (尤指在不合适的地方) 丢弃, 扔掉, 倾倒  
e.g. Too much toxic waste is being dumped at sea. 太多的有毒废料在向大海里倾倒。
2. **neglect** v. to not give enough attention to sth 忽略; 忽视; 不予重视  
e.g. Dance has been neglected by television. 电视节目一向不重视舞蹈。
3. **sewerage** n. 排水系统; 下水道系统; 污水处理系统 **Sewerage** is the system by which waste matter is carried away in sewers and made harmless.
4. **reluctant** adj. ~ (to do sth) hesitating before doing sth because you do not want to do it or because you are not sure that it is the right thing to do 不情愿的; 勉强的  
e.g. She was reluctant to admit she was wrong. 她不愿承认自己有错。
5. **backlash** n. 强烈反应; 强烈抵制; 激烈反对 A **backlash against** a tendency or recent development in society or politics, is a sudden, strong reaction against it.  
e.g. ...the male **backlash against feminism**. 男性对女权运动的强烈抵制

### Sentence

Water prices in most cities are only about a tenth of the level in big European cities, yet the government is reluctant to raise them, for fear of a popular backlash.

主干: Water prices are only about a tenth of the level

**yet** 在这里作连词: =**nevertheless** despite what has just been said 但是; 然而

**for** 在这里表原因: **used to show a reason or cause** 因为; 由于 e.g. The town is famous for

its cathedral. 这个城镇以大教堂著名。

The result is that China's "water **productivity**" is low. For each cubic metre of water used, China gets \$8-worth of output. The average for European countries is \$58 per cubic metre. Of course, these countries are richer—but they are not seven times richer.

### Vocab

1. **productivity** n. 生产力; 生产率; 生产能力 **Productivity** is the rate at which goods are produced.

e.g. His method of obtaining a high level of **productivity** is demanding. 他那种提高生产率的方法实施起来非常困难。

Rather than making sensible and **eminently doable** reforms in pricing and water conservation, China is focusing on increasing supplies. For decades the country has been ruled by engineers, many of them **hydraulic** engineers (including the previous president, Hu Jintao). Partly as a result, Communist leaders have reacted to water problems by building engineering projects on a **mind-boggling** scale.

### Vocab

1. **eminently** adv. very; extremely 非常; 特别; 极其

e.g. She seems eminently suitable for the job. 她看来非常适合这个工作。

2. **doable** adj. 可做的; 切实可行的 If something is **doable**, it is possible to do it.

e.g. Is this project something that you think is **doable**? 你认为这个项目可行吗?

3. **hydraulic** adj. of or relating to the science of hydraulics (与) 水力学 (有关) 的

4. **mind-boggling** adj. very difficult to imagine or to understand; extremely surprising 难以想像的; 难以理解的; 令人惊愕的

### Sentence

Rather than making sensible and eminently doable reforms in pricing and water conservation, China is focusing on increasing supplies.

主干: China is focusing on increasing supplies

making sensible 这里指合理使用

eminently doable reforms in pricing 在水价上极其可行的改革

water conservation 水资源保护

The best known such project is the Three Gorges dam on the Yangzi. But this year an even vaster project is due to start. Called the South-North Water **Diversion** Project, it will link the Yangzi with the Yellow River, taking water from the humid south to the **parched** north. When finished, 3,000km of tunnels and canals will have been **drilled** through mountains, across plains and under rivers. Its **hydrologic and environmental consequences** could be enormously harmful.

### Vocab

1. **parched** adj. very dry, especially because the weather is hot 焦干的; 晒焦的

e.g. dry parched land 焦干的土地

2. **drill** v. 钻(孔); 打(眼) When you **drill into** something or **drill** a hole in something, you make a hole in it using a drill.

e.g. He **drilled into** the wall of Lili's bedroom...他在莉莉卧室的墙上钻了个孔。

3. hydrologic adj. 水文的

4. diversion n. 转向;转移;偏离 **The diversion of** something involves changing its course or destination.

5. South-North Water Diversion Project 南水北调工程

### Sentence

Its hydrologic and environmental consequences could be enormously harmful.

its 是指代前面这项“南水北调”工程

The project links China's two great rivers through three new channels. The eastern, or downstream one is due to open by the end of this year (see map). It would pump 14.8 billion cubic metres along 1,160km of canals, using in part a 1,500-year-old waterway, the Grand Canal. The water pumped so far has been so polluted that a third of the cost has gone on water treatment. A midstream link, with 1,300km of new canals, is supposed to open by October 2014. That is also when work on the most ambitious and **controversial** link, the upstream one across the **fragile** Himalayan plateau, is due to begin. Eventually the South-North project is intended to deliver 45 billion cubic metres of water a year and to cost a total of 486 billion yuan (\$79.4 billion). It would be cheaper to **desalinate** the equivalent amount of seawater.

### Vocab

1. **controversial** adj. causing a lot of angry public discussion and disagreement 引起争论的; 有争议的

e.g. a **highly controversial** topic 颇有争议的话题

2. **fragile** adj. weak and uncertain; easily destroyed or spoiled 不牢固的; 脆弱的

e.g. a **fragile alliance/ ceasefire/ relationship** 不牢固的联盟; 不确定的停火/关系

3. **desalinate** vt. 除去.....中的盐分; 使.....脱盐 [ 过去式 desalinated 过去分词 desalinated 现在分词 desalinating ]

### Sentence

The water pumped so far has been so polluted that a third of the cost has gone on water treatment.

so far 迄今为止 这种副词在句子中的应用要学会。和下文的 that the project **so far** has reduced the quantity of plankton 一样的道理

a third of the cost has gone 钱花在某个方面不说 spend on sth. 而说 the cost has gone on sth. 钱花费在某方面花没了的感觉

The environmental damage could be **immense**. The Yangzi river is already seriously polluted. Chen Jiyu of the Chinese Academy of Engineering told South Weekly, a magazine, in 2012 that the project so far has reduced the quantity of plankton in the Yangzi by over two-thirds and the number of benthic organisms (those living on the river bottom) by half. And that was before it even opened. Ma Jun, China's best known environmental **activist**, says the government's **predilection** for giant engineering projects only makes matters worse, "causing us to hit the limits of our water resources".

### Vocab

1. **immense** adj. =**enormous** extremely large or great 极大的; 巨大的

e.g. There is still an immense amount of work to be done. 还有非常非常多的工作没有

做。

2. **plankton** n. the very small forms of plant and animal life that live in water 浮游生物

3. **benthic** adj. 水底的；深海底的

4. **activist** n. 积极分子；活跃分子 An **activist** is a person who works to bring about political or social changes by campaigning in public or working for an organization.

e.g. The police say they suspect the attack was carried out by animal rights **activists**. 警方说他们怀疑袭击是由动物权益保护的积极分子们发动的。

5. **predilection** n. 爱好；偏爱；偏好 If you have a **predilection for** something, you have a strong liking for it.

e.g. ...his **predilection** for fast cars and fast horses. 他对跑车和骏马的偏爱

### Sentence

Chen Jiyu of the Chinese Academy of Engineering told South Weekly, a magazine, in 2012 that the project so far has reduced the quantity of plankton in the Yangzi by over two-thirds and the number of benthic organisms (those living on the river bottom) by half.

主干：Chen Jiyu of the Chinese Academy of Engineering told South Weekly a magazine 是对南方周末的解释，

in 2012 时间副词置前，即 A told B that ... 现在写成了 A told B in 2012 that ... 副词可以修饰好多词...

表示减少一定的量级可以写成文中表达：A has reduced B by over two-thirds and C by half. 其中可以穿插各种介词副词等如：so far, in the Yangzi (those living on the river bottom)

But the biggest damage could be **political**. Proposed dams on the upper reaches of the Brahmaputra, Mekong and other rivers are **bound to** have an impact on downstream countries, including India, Bangladesh and Vietnam. The Chinese say they would take only 1% of the **run-off** from the giant Brahmaputra. But if all these projects were **operational**—and the engineering challenges of one or two of them are so **daunting** that even the Chinese might **balk at** them—they would affect the flow of rivers on which a billion people depend. Hence the worries for regional stability. And all this would increase China's water supplies by a mere 7%. The water crisis is driving China to desperate but **ultimately** unhelpful measures.

### Vocab

1. **political** adj. connected with the state, government or public affairs 政治的；政府的；政权的

e.g. He was a **political prisoner** (= one who was put in prison because he was thought to be harmful to the state). 他曾是个政治犯。

2. **bound** adj. ~ to do/ be sth certain or likely to happen, or to do or be sth 一定会；很可能会

e.g. It's bound to be sunny again tomorrow. 明天肯定又是阳光灿烂。

3. **run-off** n. 径流，溢流（指流入河流中的雨水） **Run-off** is rainwater that forms a stream rather than being absorbed by the ground.

e.g. The sewers collected sewage and storm runoff and discharged it, untreated, into the harbour. 污水和暴雨径流汇入下水道后被直接排入海港。

4. **operational** adj. connected with the way in which a business, machine, system, etc. works 操作的；运转的；运营的；业务的

e.g. operational activities/ costs/ difficulties 营运上的活动/成本/困难

5. **daunting** adj. 使人畏惧的；令人胆怯的；让人气馁的 Something that is **daunting** makes you feel slightly afraid or worried about dealing with it.

e.g. The move to Prague was a daunting prospect for the bishop...对于主教来说，要迁往布拉格有点儿令人发憊。

6. **balk at** v. 畏缩；回避 If you **balk at** something, you definitely do not want to do it or to let it happen.

e.g. Even biology undergraduates may balk at animal experiments...面对动物实验，哪怕是生物专业的大学生也会畏缩。

7. **ultimately adv. in the end; finally** 最终；最后；终归

e.g. A poor diet will ultimately lead to illness. 不均衡的饮食终将导致疾病。

### Sentence

But if all these projects were operational—and the engineering challenges of one or two of them are so daunting that even the Chinese might balk at them—they would affect the flow of rivers on which a billion people depend.

主干： if all these projects were operational

—and the engineering challenges of one or two of them are so daunting that even the Chinese might balk at them 即说明这一两个项目工程是如此的 daunting，甚至连中国都可能会回避，从后文来看，应该是说这一两个工程并不是得人心的。

—they would affect the flow of rivers on which a billion people depend. 即这些工程会影响 a billion 沿河而生的 people

From the print edition: China

## Water All dried up 水资源：全面干涸

Northern China is running out of water, but the government's remedies are potentially disastrous.

中国北方水资源短缺，政府举措存风险。

CHINA endures choking smog, mass destruction of habitats and food poisoned with heavy metals. But ask an environmentalist what is the country's biggest problem, and the answer is always the same. "Water is the worst," says Wang Tao, of the Carnegie Tsinghua Centre in Beijing, "because of its scarcity, and because of its pollution." "Water," agrees Pan Jiahua, of the Chinese Academy of Social Sciences. "People can not survive in a desert." Wang Shucheng, a former water minister, once said: "To fight for every drop of water or die: that is the challenge facing China."

中国正遭受着持续雾霾、栖息地大规模破坏以及食品重金属中毒等问题。然而，当问起环境专家“什么是中国最大的问题”时，得到的回答通常如出一辙。位于北京的清华卡耐基中心的王涛答道：“水资源问题最为严重，一则由于短缺，二则由于污染。”“水资源，”中国社科院潘家华表示认同，“人们不能在沙漠中生存。”前水利部部长汪恕诚曾说：“中国面临的挑战就是要珍惜每一滴水，否则就是灭亡。”

He was not exaggerating. A stock image of China is a fisherman and his cormorant on a placid lake. The reality is different. The country uses 600 billion cubic metres (21,200 billion cubic feet) of water a year, or about 400 cubic metres a person—one quarter of what the average American uses and less than half the international definition of water stress.

他并非夸大其词。人们印象中的中国，是平静湖面上的渔民和他的鸬鹚。现实却大相径庭。



中国水资源的年消耗量达6000亿立方米（约合212,000亿立方英尺），即约人均400立方米——为美国人平均使用量的四分之一，不到国际公认的用水紧张线的一半。

The national average hides an even more alarming regional disparity. Four fifths of China's water is in the south, notably the Yangzi river basin. Half the people and two thirds of the farmland are in the north, including the Yellow River basin. Beijing has the sort of water scarcity usually associated with Saudi Arabia: just 100 cubic metres per person a year. The water table under the capital has dropped by 300 metres( nearly 1,000 feet) since the 1970s.

全国平均用水量背后的地区差异更为令人担忧。中国五分之四的水资源位于南方，尤其是长江流域。一半人口以及三分之二的耕地则位于北方，其中包括黄河流域。北京的水荒常被拿来与沙特阿拉伯相比：人均年用水量仅为100立方米。自从20世纪70年代以来，首都的地下水位已下降约300米（1,000英尺左右）。

China is using up water at an unsustainable rate. Thanks to overuse, rivers simply disappear. The number of rivers with significant catchment areas has fallen from more than 50,000 in the 1950s to 23,000 now. As if that were not bad enough, China is polluting what little water it has left. The Yellow River is often called the cradle of Chinese civilization. In 2007 the Yellow River Conservancy Commission, a government agency, surveyed 13,000 kilometres( 8,000 miles) of the river and its tributaries and concluded that a third of the water is unfit even for agriculture. Four thousand petrochemical plants are built on its banks.

中国正以一种不可持续的速度消耗水资源。过度使用使河流几近干涸，重要集水区的河流数量已从50年代的50,000条，减少至如今的23,000条。更严重的是，中国仅存的河流也正遭受污染。黄河常被称为中华文明的摇篮。2007年，政府组织黄河保护委员会调查了13,000公里（8,000英里）的黄河及其支流，结论是三分之一的水域不甚健康，甚至无法用于农业生产。4000家石油化工厂矗立黄河两岸。

The water available for use is thus atrocious. Song Lanhe, chief engineer for urban water quality monitoring at the housing ministry, says only half the water sources in cities are safe to drink. More than half the groundwater in the north China plain, according to the land ministry, can not be used for industry, while seven tenths is unfit for human contact, ie, even for washing. In late 2012 the Chinese media claimed that 300 corpses were found floating in the Yellow River near Lanzhou, the latest of roughly 10,000 victims--most of them( according to the local police) suicides--whose bodies have been washing downstream since the 1960s.

可用水如此匮乏。建设部城市水质监测中心总工程师宋兰合说，城市水资源中仅有一半能供人安全饮用。据土地管理局称，超过半数中国北部平原的地下水不能用于工业，同时，七成的水不适于与人体接触，也就是说，这些水甚至无法用于洗涤。2012年下半年，中国媒体曝出在黄河兰州段附近发现300具浮尸。自60年代以来约10,000名新受害者（据当地警方称，其中多为自杀）的尸体顺流而下。

In 2009 the World Bank put the overall cost of China's water crisis at 2.3% of GDP, mostly reflecting damage to health. Water shortages also imperil plans to expand energy production, threatening economic growth. China is hoping to follow America into a shale gas revolution. But each shale gas well needs 15,000 tonnes of water a year to run. China is also planning to build around 450 new coal fired power stations, burning 1.2 billion tonnes of coal a year. The stations have to be cooled by water and the coal has to be

washed. The grand total is 9 billion tonnes of water. China does not have that much available. According to the World Resources Institute, a think tank in Washington, DC, half the new coal fired plants are to be built in areas of high or extremely high water stress.

2009年，世界银行认为中国在水危机上的总支出占GDP的2.3%，这在很大程度上反映出水资源状况对健康之危害。水资源短缺同样危及扩大能源生产，对经济增长造成威胁。中国希望能跟随美国进入天然气时代。然而，一个天然气井需一年15,000吨水来运转。中国也正在计划建造约450座新的燃煤发电站，一年燃烧12亿吨煤炭。发电站需要用水冷却，而煤炭需要用水清洗。总需水量达90亿吨。供不应求。据位于华盛顿的智囊组织世界资源协会称，一半的新燃煤发电站建造于水资源紧缺或极度紧缺的地区。

The best answer would be to improve the efficiency with which water is used. Only about 40% of water used in industry is recycled, half as much as in Europe. The rest is dumped in rivers and lakes. Wang Zhansheng of Tsinghua University argues that China is neglecting its urban water infrastructure( sewerage, pipes and water treatment plants), leading to more waste. Water prices in most cities are only about a tenth of the level in big European cities, yet the government is reluctant to raise them, for fear of a popular backlash.

最好的办法是提升水的利用效率。只有约4成工业用水循环使用，该比例仅为欧洲的一半。而余下的则被弃于江河之中。清华大学王占生认为中国忽视城市水利基建（污水、管道和污水净化厂）导致更多浪费。大部分城市的水费仅为欧洲大城市的十分之一，而政府由于担心民众反对，则不愿涨价。

The result is that China's" water productivity" is low. For each cubic metre of water used, China gets \$8-worth of output. The average for European countries is \$58 per cubic metre. Of course, these countries are richer, but they are not seven times richer.

造成的结果是中国的“水分生产率”低下。每立方米水产出值为8美元。而欧洲国家平均产出值为58美元。当然，这些国家更为富有——但不至于富裕七倍。

Rather than making sensible and eminently doable reforms in pricing and water conservation, China is focusing on increasing supplies. For decades the country has been ruled by engineers, many of them hydraulic engineers (including the previous president, Hu Jintao). Partly as a result, Communist leaders have reacted to water problems by building engineering projects on a mind boggling scale.

相比合理使用、价格显著调整以及水资源保护，中国采取的主要方法则是增加供应量。几十年来，中国的领导人多为工程师，他们中有不少是水利工程师（包括前国家主席胡锦涛）。部分由于上述原因，共产党领导对水资源问题的反应乃是在令人难以置信的范围内建立工程项目。

The best known such project is the Three Gorges dam on the Yangzi. But this year an even vaster project is due to start. Called the South North Water Diversion Project, it will link the Yangzi with the Yellow River, taking water from the humid south to the parched north. When finished, 3,000km of tunnels and canals will have been drilled through mountains, across plains and under rivers. Its hydrologic and environmental consequences could be enormously harmful.

此类工程中最著名的就是位于长江的三峡大坝。今年一个更大的项目即将启动。南水北调工程将长江与黄河接通，将水从湿润的南方调运至干旱的北方。项目完成后，将有3,000公里

的隧道与运河贯通山脉，穿越平原与地下河。它将在水文与环境上造成严重后果。

The project links China's two great rivers through three new channels. The eastern, or downstream one is due to open by the end of this year. It would pump 14.8 billion cubic metres along 1,160km of canals, using in part a 1,500-year old waterway, the Grand Canal. The water pumped so far has been so polluted that a third of the cost has gone on water treatment. A midstream link, with 1,300km of new canals, is supposed to open by October 2014. That is also when work on the most ambitious and controversial link, the upstream one across the fragile Himalayan plateau, is due to begin. Eventually the South North project is intended to deliver 45 billion cubic metres of water a year and to cost a total of 486 billion yuan( \$79.4 billion). It would be cheaper to desalinate the equivalent amount of seawater.

该项目通过三条新水道接通中国两大河流。东部，即下游调水线将于年底贯通。它将沿1,160公里的运河（部分利用拥有1500年历史的水道——大运河）输水148亿立方米。迄今输送的水已被污染，以至于三分之一的开支被用于水污染治理。长达1,300千米的中游调水线预计于2014年十月贯通。而最为雄心勃勃和最具争议的上游调水线也预备动工，它贯穿了脆弱的喜马拉雅高原。最终，南水北调工程计划每年调水450亿立方米，总花费4,860亿元人民币（794亿美元）。这比除去等量海水中的盐分的成本来得更低。

The environmental damage could be immense. The Yangzi river is already seriously polluted. Chen Jiyu of the Chinese Academy of Engineering told South Weekly, a magazine, in 2012, that the project so far has reduced the quantity of plankton in the Yangzi by over two thirds and the number of benthic organisms( those living on the river bottom) by half. And that was before it even opened. Ma Jun, China's best known environmental activist, says the government's predilection for giant engineering projects only makes matters worse, " causing us to hit the limits of our water resources".

这可能造成巨大的环境破坏。长江已被严重污染。2012年，中国工程院院士陈吉余告诉南方周末记者项目迄今造成长江浮游生物数量减少超过三分之二，底栖生物（生活在水底的生物）减少一半。这还是没有贯通之前所发生的。中国著名环保斗士马军说，政府对大型工程项目的偏好只会让事情变得更糟，“导致我们冲击水资源的使用极限”。

But the biggest damage could be political. Proposed dams on the upper reaches of the Brahmaputra, Mekong and other rivers are bound to have an impact on downstream countries, including India, Bangladesh and Vietnam. The Chinese say they would take only 1% of the run off from the giant Brahmaputra. But if all these projects were operational - and the engineering challenges of one or two of them are so daunting that even the Chinese might balk at them -they would affect the flow of rivers on which a billion people depend. Hence the worries for regional stability. And all this would increase China's water supplies by a mere 7%. The water crisis is driving China to desperate but ultimately unhelpful measures.

不过，最大的危害可能是政治上的。计划在雅鲁藏布江、湄公河以及其他河流上游建造的大坝必定会对下游国家产生影响，包括印度、孟加拉国和越南。中国方面说他们仅从广阔的雅鲁藏布江中调取1%的水量。但是如果所有的项目都开始运转——其中一两个工程上的挑战就会令人沮丧，届时中国可能予以回避——这将影响傍河而生的10亿人口。从而导致地区稳定上的隐忧。而所有这些工程仅增加中国供水量的7%。水资源危机迫使中国孤注一掷，而终究未必治本。

