# Newly Emergent Social Actors And Their Influence On Water Policy In China Since The Late 1970s

## Introduction

 This paper focusses on the maters regarding the conservation of the Chinese waters. It includes both the government policies as well as the non-governmental policies that are applied to ensure that the water, as well as the water resources, are managed appropriately. Such non-governmental organizations include the GONGOs which partake positively on the environmental conservation in which water is also included. Water is very crucial for the sustenance of the livelihood hence should be managed appropriately. In addition to that China is among the prominent nations whose policies on water conservation can be emulated by other nations worldwide[[1]](#footnote-0). The water crisis is also increasing in this nation at a higher rate hence it matter of concern that should be addressed. The best way in which the scarcity of water can be addressed is through the analysis of the past actions that lead to such problems. Hence the paper focused on whatever caused them dating back from the 1970s. However, there is a significant threat also to the increasing crisis of water in China. ''the GONGO". This means governmental organization nongovernmental Organization .this issue, however, poses an unanswered question to the citizens. As China becomes more industrialized, their worry now shifts to the water crisis.

## Literature Review

 Most of the written literature primarily focused on Chinese water resources, while very few of them have focused on the impacts of the policies internationally. The literature on the same was carried out to analyze the current water situation in the country. Academic articles were majorly used to due to their accuracy due to the availability of the figures that were provided by the publishers[[2]](#footnote-1). The publishers also provide an account of the events in the order in which they happened to bring about the scarcity of the portable water in China. Through the analysis of such past literature, future trends of the Chinese water can be predicted and acted upon appropriately to bring about the sustainable changes in the water conservation policies and their applications. Hence, the literature focused on the articles that dated back from 1970. This review will, however, deal with the effect of the water crisis on the economy of China as the country looms to boast of a super growing economic stability and is looking to be a superpower. The effects and risks are however categorized into five categories namely; physical, regulatory, economic, management and social.

 Foreign policy, as well as the international actors, were also used to add the weight of this paper. Now that China is one of the greatest nations in the world, its relationship with other powerful nations in the world such as the United States of America was also put into consideration. For the international actors, articles that dated back from the period of the Cold War times were used. Chinese relation with the other nations was also scrutinized with regards to the security of the environment, and its implications were also analyzed[[3]](#footnote-2).

 Chinese non-governmental organizations such as the (GONGOs) have also embraced the literature of the same by providing environmental film festivals that enables people to learn from the past experiences that have led to the current water scarcity in China. They are also using the festivals to teach people about the better ways to conserve the environment with the inclusion of the water issues. They also have their environmental library in which they provide they provide books, articles, magazines, leaflets among others that provide the past literature of the Chinese water as well as what should be done to improve on the same. Water Saving Guide for Beijing is one of their projects that lead to the production of more than five hundred copies to the citizens. These articles focused mainly on the eco-friendly actions of human beings in their daily life as well as the best waste management methods to reduce the water pollution as well as the environmental conservation in general. For it to carry out its actions efficiently, they have sub-units in every province that foster their actions at the grassroots level. They have also formed part of the important branch of the government too by taking part in the formation of the essential policies directed towards the environmental conservation.

 The literature also addresses the Chinese policies as well as the possible solutions to the problems. Apart from the GONGOs, South-North Water Diversion Project (SNWDP) also focuses on the same. History has it that China majorly focuses on the economic situation of the country, ignoring the most critical aspect of the human life that is the environment[[4]](#footnote-3). There are entirely some connections between the water bodies in China and the energy production. These have got both the positive as well as the negative impacts on the environment. Hence, the proposed diversion project caused both high prices at the end waters alongside the environmental destruction. Various policies of the water conservation have been implemented, including the imposition of the tariffs on the waters to earn the government income to improve on the water-conservation sector[[5]](#footnote-4). Through further analysis of these articles, the water policies have been addressed comprehensively, hence turning people’s focus towards the water conservation.

 The international actors have helped China to apply the policies laid down both internationally as well as domestically since China’s water destruction impacts also the bordering nations such as India. They have done so, pushing the nation because it has prioritized economic development over the environmental and water conservation. Otherwise, if it were not for the international and the domestic activities such as GONGOs intervening, no one could bother to act in the direction to try to solve the Chinese water issue that has broadly lead to scarcity or the portable in the nation. If the policies laid down both domestically as well as internationally are not adequately implemented, or weakly enforced, then they are still likely to cause minimal positive impacts on the Chinese water as well as its surrounding nations such as India. Nevertheless, the policies that had been introduced and enforced in the recent past proved to be working by fostering the by being a source of success in the manufacturing trade. Hence, proving that these policies may be similar and effective[[6]](#footnote-5).

 Entirely some literature indicates how Chinese water is related China as a nation that is export-oriented and economic growth. These have caused much damage to the environment, with China having very little focus on the water conservation[[7]](#footnote-6). Literature has it that there has been very minimal concentration on how China addresses the water issue about the international trade. The international actors have tried to help this nation solve the tension that is trans-boundary oriented due to the construction of a dam along Mekong River. They have also dwelt on the steps that China could take to engage the affected nations to solve this matter after and for all[[8]](#footnote-7). A good example is the one regarding the Irtysh River in which Kazakhstan was successful in negotiating with China to reduce its effects to both China and that nation. India could follow this approach to engage China in sorting out the issues of the Chinese water as well as in their nation. The Chinese export, as well as the import tax that was aimed at easing the environmental pressure, have been broadly examined by the international actors and it elaborate that it had a minimal impact on the environment and water conservation.

 Brahmaputra River is also likely to course a significant danger to India due to its decreased flow. According to the literature, the two nations are already developing much tension arising at their border as a result of the potentiality of India responding to the Chinese policies regarding the same issue. The Sino-Indian relationship also has tension arising that includes Tibet and Pakistan too[[9]](#footnote-8). Literature has it that Tibet played a significant role including the Sino-Indian border dispute analysis disputes[[10]](#footnote-9). The water issue between the India and China has gone further to influence their security, as an additional tension to the nation. Uneven economic trade has also been experienced between the two nations due to the tension between them. Many analysts claim that India may end up winning globally due to its democratic nature (. However, some of them argue that China’s economic, military strength cannot allow them to lose this battle[[11]](#footnote-10).

 Literature has it that the international actors have also played other significant roles in collaboration with other bodies to come up with findings that may be useful in the future. They have stated that industries are also a significant threat to the water source. The encroachment of the water reservoir also poses threats to the water in China. The increasing population leads to land degradation and thus increases land use which after that affects these water sources.

Physical dangers are the essential water shortage and contamination. Different regions also bring on water demand and supply. The environmental regulatory landscape in China also has a significant impact on the sustainability of the resource. This ranges from excessive bureaucracy and local government corruption which also hurts the water. The economic risk too plays a significant role and calls for significant investors to come in and help subdue the condition. Management quality risk is very vital in this category since. This calls for both the government and private sectors to help curb such crisis. Social risks are also increased since the Chinese subjects are more illuminated on the natural issues because of mindfulness battles and the non-administrative associations. Risks to earning summarize all the risks since the affected individual due to the pollution would need to be compensated. This also affects the establishment of industries since the local officials would require higher pay to approve of such construction of plants.

## Physical risks

The physical risks that help curb the water supply in China may include; Surface water shortage and overutilization of the groundwater, inefficiencies in water usage, an imbalance in regional population and water scarcity and variability in regional water usage. Others include waste water production and management, variability in regional water quality and pollution as well as weak quality lake ecosystem.

Managing water usage varies in order of priorities in specific economic sectors than others. For instance, an agricultural sector which takes a massive pie in the usage of water. Industries in another hand, has realized the impact of water and now shifts its focus to the protection and conserving water reservoirs.

Broad analysis of the above-stated issues

The international actors, though their analysis of various historical articles realized that 81% of Chinese water emanates from the surface water and an extra 18% from the groundwater. The 1% comes from other sources. Overutilization of groundwater leads to the lowering of water tables and eventually to depletion of the groundwater reservoirs. Relying on this water may be challenging since its rate of replenishment is much slower compared to the surface water.

China’s usage of water stands at three times more than the global average. This also is culminated with the deficit amount of water the country receives annually. There is an increase in water scarcity which may lead to conflict between the companies and the communities they operate in as they fight for common resource: water. There might also be a disruption in water supplies to companies situated in water deficit areas and will lead to stress in supply chain management.

From the figure below, there is a significant difference in population and water distribution in the country. For instance, in the north, which contributes an approximate 45% of the total population has only 40% of the country’s water resource. Furthermore, there is massive exploitation of groundwater which makes up about 57% of the total usage. This uneven distribution and population and resources creates extremely low alter availability which may run for many years.

There is the vital territorial contrast in water supply and utilization by part. This type of information should allow investors to comprehend water use by part and area. Significantly, there is variation in usage of water in various sectors, that is, household usage accounts for 10% of the total water used whereas agriculture occupies the significant sector averagely 75% and industry taking only 13% of the total. This information, notwithstanding, demonstrates water utilized as dispersed to the clients and furthermore incorporates misfortune acquired in the transportation which can likewise be exceptionally critical if there should be an occurrence of slippages or spillages. Agriculture use may include, irrigation, forestry and fishing and this may lead to wrong analysis.

In spite of the water-related ailments, for example, cholera, typhoid, dengue, intestinal sickness and ringworm, the insights demonstrates that water contamination measures are making strides. The stressing pattern includes the mechanical related maladies, for example, arsenic sister, cyanobacteria poisons, lead harming and fluorosis which are being distinguished all the more every now and again. China's water contamination measured by compound oxygen request and smelling salts nitrogen levels is inclining down.

Increasing concentration of areas of highly polluted water

Water quality is graded from 1 to 5+ in china. Grades 1 -3 are described as good as grades 4-5+ are poor hence cannot sustenance either consumption. These measurements are taken from water stations and which divide the water sources into regions. The quantity of these water stations detailing low quality readings is checked. From the table, the trend shows that there is a substantial improvement in measurements. This is as result of some industries slowdown and closure.

| Name of lake  | grade |  |
| --- | --- | --- |
| Dalai lake | Grade 5+ | Ph, phosphorus, permanganate index |
| Bai yangdian | Grade 5+ | Nitrogen, phosphorus |
| Hongze lake  | Grade 5+  | Nitrogen phosphorus |
| Nansi lake  | Grade 4 | Nitrogen, phosphorus |
| Bositeng lake  | Grade 3 |  - |
| Poyang lake  | Grade 4 | Nitrogen phosphorus |
| Dongting lake | Grade 5 | Nitrogen phosphorus |
| Jingbo lake  | Grade 4 | Permanganate index |
| Erhai lake  | Grade 2 |  - |
| Xingkai lake  | Grade 2 |  - |
| Taihu lake  | Grade 5+ | Nitrogen phosphorus |
| Dian lake  | Grade 5 | Nitrogen, phosphorus, ammonia nitrogen |
| Cao lake  | Grade 5 | Nitrogen phosphorus |

Around 85% records for good water in Yangtze Rivers contrasted with 30% of Hai River. The measurements expresses that the ecological issues in provincial zones were progressively noticeable. Since there is an expansion in comprehension of contamination dangers, water quality issues have had a tendency to move from urban are to rustic regions as hurtful enterprises move far from regions of high populace thickness[[12]](#footnote-11).

## Regulatory risk

There are developments as suggested by the regulatory authority which aims at converting Beijing from worlds-factory to a global clean-tech hub. This comes in the wake of understanding that the nation has passed tipping point and further unchecked financial improvement will come to the detriment of nature. A few administrative have been recognized and incorporates; Rapid changes to natural enactment, activities of the focal government being disregarded as the nearby level, neighborhood civil servants and technocrats, debasement at nearby level, fines and new classes of punishments.

The legislation brings about a framework that aims at curbing the menace. This framework was however passed but for several years were dormant till few years ago when it was revived to take its course. This has seen china to have a potential change on the crisis[[13]](#footnote-12). However it puts companies, lawyers, investors at risk to keep truck of promulgated and pending legislation. The legislation aims at controlling industrial pollution and water treatment. There is also the concept of river basin management which is more logical on geographical rather than administrative regions. This ensures a system for checking as well as monitoring water bodies for precise contaminants. These risks discussed above have generally affected the establishment of factories and industries in china. Since Chinese population is affected majorly its population and the lesser water supply they have as a country.

Chinese water issues have been mostly debated on. This issue however ranges from social to political, physical to demographic. The population of the country forms 205 of the world's total population, in the contrary, the amount of water bodies within this country is less than 7%. This poses a threat to the whole country as a critical crisis may exist on the usage of the resource. This limited resource is also affected by the increasing population which as a result interferes with freshness, that is, pollution of the same water. Quantitatively 33% of china's lakes and waterways are unfit for human utilize which means three quarter of water provided in Chinese quickly developing urban areas to confront medium to high contamination levels.

Nonetheless, the Chinese government has presented strategies particularly tending to water issues to keep nourishing its populace and develop its economy in a manageable way to ease the most exceedingly awful potential results. These issues at last come down to water accessibility. China's financial development can't proceed without an adequate supply of water and China can't develop products to encourage itself without water for water system.

In conclusion, the international bodies such as the GONGOs have pushed China to come up with policies that can enable her to feed her population efficiently and to foster the economic growth and stability. These policies have water issues also incorporated in them since the people cannot be fed with unavailability of consumable water as well as the irrigation water. In addition to that, SNWDP seems to be the best possible solution to this crisis. This is due to the fact that historically, from the 1970s, China has been known to divert the rivers that flow to the neighboring nations in order to curb the water deficit. According to the above research, that has caused great tension between the country and its neighboring nations. Hence, SNWDP is a good replacement of this crisis. These policies have also been developed with the incorporation of the historical analysis of the past experiences dating back to the 1970s that brought all these problems. Hence, they can effectively curb this issues and ensure that the Chinese water issue has been dealt with comprehensively. Thus, the international actors such as the GONGOs have played a crucial role in addressing those issues.

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