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SCAN ME

Research Paper

CHINA'S IMPLEMENTATION GAP: ECONOMY AGAINST ECOLOGY

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INTRODUCTION

The environment of China has changed for the worse since the creation of its present Communism regime. The environmental disaster comprises both internalites for Chinese people and externalities for the population of the Earth. Pollution reduces the life expectancy in China and leads to global warming of the Earth. One source of pollution in China is the exceptionally rapid economic development from 1980 resulting in a transition from a poor country to a first world nation with th largest economy in the world - see Figure 1.

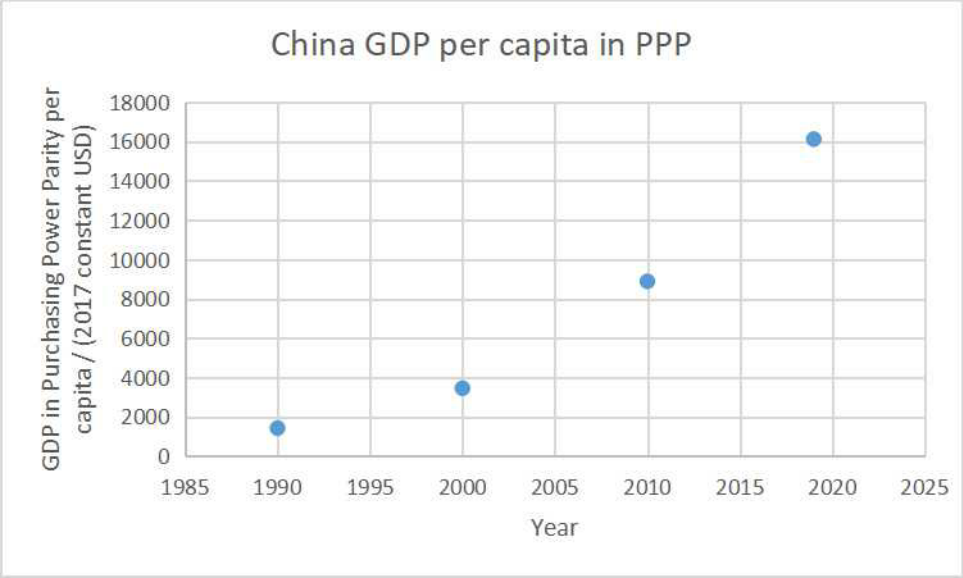


Figure 1. Economic Development 1990 to 2019. Data from (Eurostat, IDP, WDID)

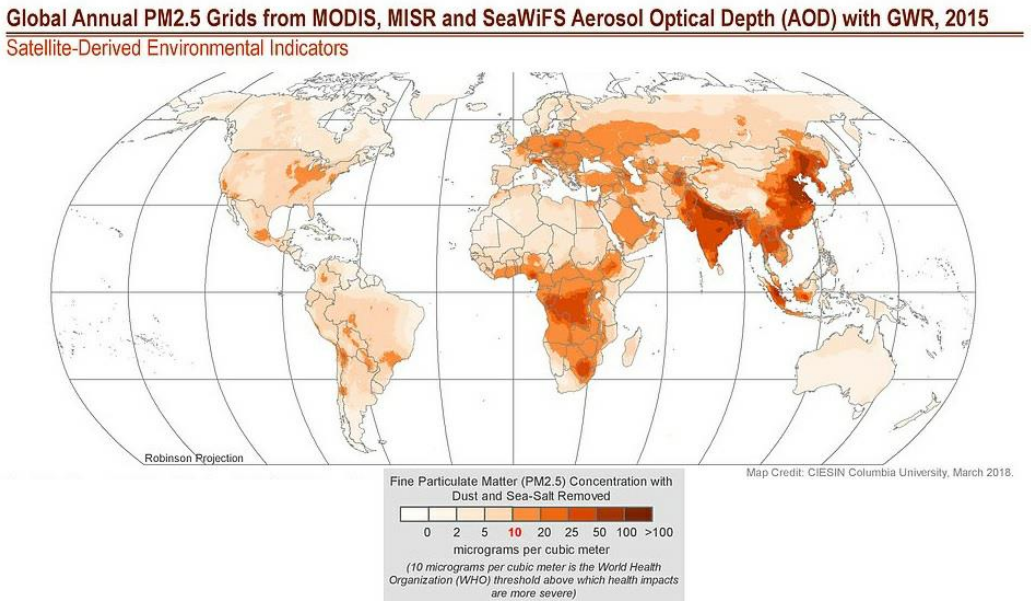
Most countries having industrialised quickly as well as urbanised rapidly have experienced grave pollution. But the environmental conditions are worse in China due to the prevailing ideology, which underestimates green values. This has been especially apparent when considering air pollution.

Environmental protection is a top down policy making process. Given the political centralization of China to Beijing, environmental policies are handed down in various legislation to be implemented locally. As local governments and actors are much

involved in economic development, the trade off between ecology and economic concerns tends to favour the latter. Here, we have a strong need for bottom up implementation in Swedish B.Hjerns theory (Hjern, 1990). Several attempts have been made to sharpen environmental restrictions on the use of environmental resources, but implementation is weak.

AIR

The bulk of Chinese population now lives in urban agglomeration, which means that they are very observant of the quality of the air. Figure 2 presents a comparative assessment of air quality.



[8]Figure 2. Estimated air particle matter concentrations around the world 2015 (SEDAC).

It can be seen in Figure 2 that many of Chinas cities exceeded by far the WHO recommended levels of 10 micogrammes / cubic metre. As the index above reaches 50, the pollution makes people very vulnerable to stress and disease. Many Chinese cities score above 50 that is conducive to respitatory illnesses inter alia. China has gone through a rapid process of urbanisation.

SOIL

A government survey in 2014 indicated that more than 16 % of the land is polluted by metals. The contribution from various substances can be seen in Table 1.

Table 1. Soil contaminating metals and their prevalence.

Element	**% of land contaminated**	**Recommended max tolerated monthly intake (microgrammes / kg body weight)**
Cadmium	7.0	25
Nickel	4.8	80
Arsenic	2.7	60
Mercury	1.6	10
Lead	1.5	100
Chromium	1.1	9000

The damage for farmland can also be tapped with particulate matter. They pollute to the very same extent the cities as the ruralitìes.

WATER

The untreated dumping of contaminated water from industries and households has severely degenerated the state of Chinese rivers and lakes. In 2014 it was estimated that 60 % of groundwater is polluted and 33 % of drinking water basins could no longer be used by households. Because of this, several regions in China have an extreme scarcity of clean drinkable water. In a mega project water is to pumped in a south-north canal involving rivers and dams. Water may also be taken from the Three Gorges Dam northeast where there are many cities.

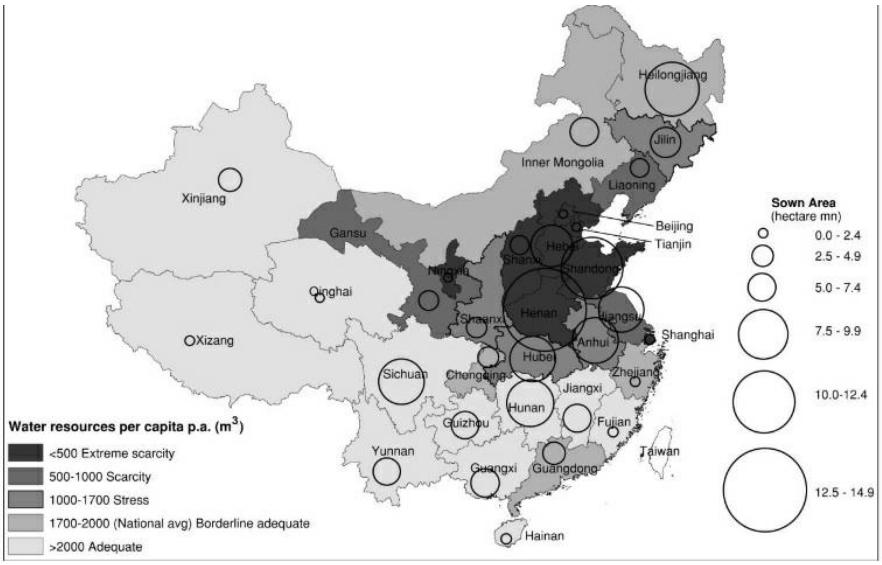


Figure 3. Water resources per capita in China (IGEM).

Improving water quality has been a priority in Chinese policy making in recent years. According to official figures, the fraction of unusable water reservoirs fell to 29 % in 2018, still a very high number compared to Western countries.

WASTE

No other country in the world generates a higher total volume of municipal waste than China. in 2018, a total of 228 million tonnes of solid waste was generated, projected to rise above 400 million by the end of this year.

Handling of waste is also severely lacking in quality and care. Figure 4 provides data on how waste was handled in 2017.

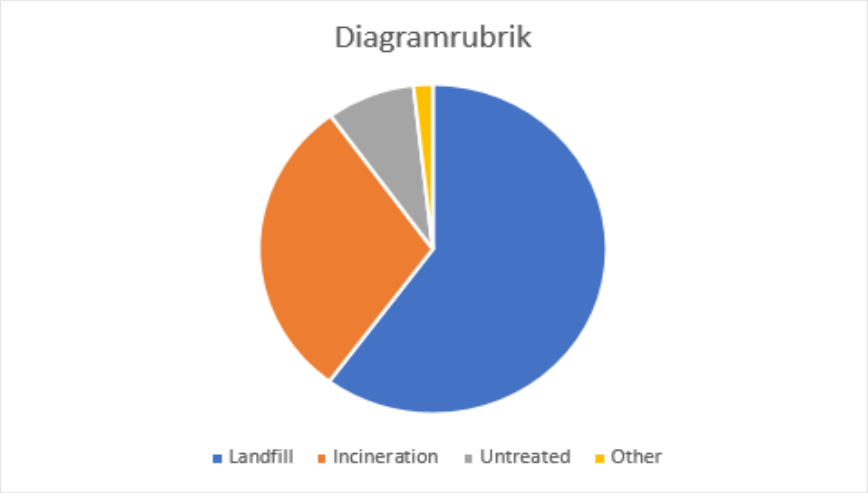


Figure 4. Waste handling by method 2017.

It should be observed that the obviously unsustainable usage of landfills was the dominant method, causing landfills to overfill in certain places. It was estimated that only a few % of waste was recycled, far behind Western Europe for example. Even though the regime has initiated an ambitious program to increase recycling rates, the enormous scale of the problems makes it difficult to catch up with other developed nations.

Sewage water is only treated to 60% in most cities. In ruralities it is much less.

Water scarcity occurs but also great inundations in the South with enormous rainfall and landslides. Several rivers have dried up and water tables are low.

CONCLUSION

Several articles on China China outline what it needs to do. But there is not a strong bottom-up implementation. China promises to spend billions on developing neighbouring countries. Maybe it should spend more on environmental internalities? First when local and regional actors have environmental priorities over economic goals can sustainable development be enhanced – bottom-up implementation. The danger is that China supports coal fired energy in its foreign projects like e.g. Pakistan.

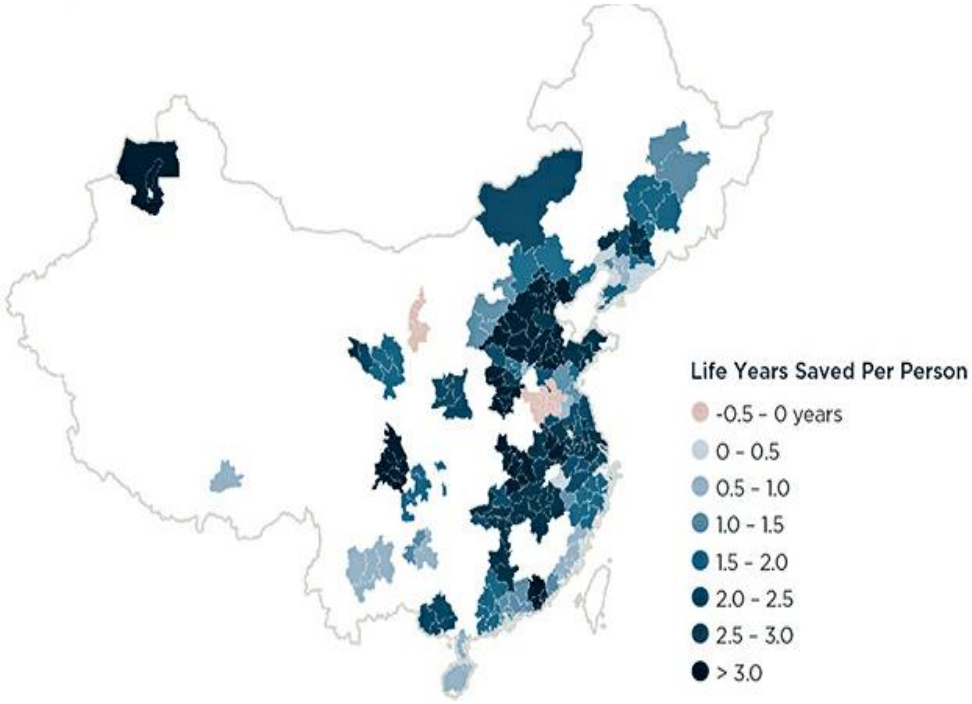


Figure 5 below is an estimate of the value of implementation of Greèn policy in China.

The value of longer life is of course appreciated by Chinese people. It can be achieved by a vibrant civil society or active bottom-up implementation.

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