The Chinese government has the financial means to carry out these reforms, but does it have the courage to implement them?

Simple solutions for reducing inequalities in China do therefore exist. All they require, according to Gan Li, is a small increase in public expenditure and taxation.

China today has the financial resources to implement effective measures to reduce income inequality. The writer states that the 2011 gross public income was in the vicinity of 10,000 billion *yuan*, 2,000 billion of which could easily be released to finance these reforms. This windfall corresponds roughly to the profit level of public enterprises, which pay only 2% of their revenue to the state.

According to Gan Li, a "reasonable" policy would already have spectacular results. By redistributing – directly or indirectly – to 60% of the poorest families, the government could bring the Gini coefficient down from 0.6 to 0.4 according to the CHFS's figures.

However, as the editorial in the *Diyi caijing ribao* reminds us, this reform will be difficult to implement, as it requires "lifting the bottom (*tidi* 提低), broadening the middle (*kuozhong* 扩中), and putting a cap on the top (*konggao* 控高)" of the social pyramid. In order to reduce inequality in China, what will be required therefore is a complete overhaul of the country's economic structure by questioning the privileges of the well-to-do and sharing their "cake" with the middle classes and the disadvantaged.

This same editorial stresses that reducing disparity would need a change of "system" (*xitong* 系统), implying that income reform is one component in the general reform of China's economic system. If implemented, this reform will challenge a number of vested interests. In the past, such reforms were often embarked upon and then encountered resistance from interest groups. Often too, such plans "ended up being left by the wayside" (*zuihou zhihao buliaoliaozhi* 最后只好不了了之). In the view of these editorial writers, the government will therefore have to show not only "courage and political wisdom" (*zhengzhi yongqi he zhihui* 政治勇气和智慧), but above all "determination" (*juexin* 决心).

Translated by Peter Brown.

No Administrative Solution in Sight for Urban "Air-pocalypse"

Analysis by Giulia C. Romano based on the following sources:

– Yi Peng, [1] "雾霾对城镇化的影响" (The influence of haze on urban development), *Caixin*, 19 February 2013.
– He Chunlu, [2] "'毒空气'凸显中国式低碳治理困境" ('Poisoned air' underlines the difficulties in the Chinese approach to low carbon management), *Zhongguo kexue bao*, 16 January 2013.

Urbanisation and pollution

"Haze" has recently become one of the most popular words in China. What immediately springs to mind is the exceptionally high levels of pollution recorded in Beijing, which, at the height of the phenomenon (at the time of the articles cited), was an unprecedented 886 micrograms per cubic meter, [3] according to the US Embassy's observation stations for air quality.

Yi Peng sees several causes for the recent blanket haze over the Beijing-Tianjin-Hebei region. First, in the worst days of this "air-pocalypse" (*kongqi mori* 空气末日, to quote the expression used by the press), an absence of cold air currents and wind was a very important factor. The lack of natural ventilation caused a strong concentration of pollutants in the atmosphere, at a relatively stable level, and did not allow for their dispersal. He also points to other factors, particularly pollution from motor vehicles, industrial output, and high-density population, as well as the energy needs of buildings. These ancillary factors, which are also of major importance, are all more or less connected to urbanisation. This leads our writers to rethink China's current urban planning models. For Yi Peng, Beijing has to become the symbol of a new way of thinking about urban development.

What solutions?

The Chinese capital has, according to Yi Peng, the highest level of public services in the country. Due to this abundance of administrative resources, the city is host to a population approaching 20 million and, according to the writer, could one day be home to nearly 50 million residents. Although Beijing is probably in a position to accommodate a population of that size in terms of services, financial means, or on account of its size, the appearance of intense haze over the past few months is an important signal that raises the question of whether Beijing can really sustain such a level of urbanisation and whether the city can really continue to grow.

These questions concern all major Chinese cities and make us wonder about their potential for future growth and whether they will be capable of resisting the enormous environmental pressures related to urbanisation.

In the words of Yi Peng, in order to avoid having mega-cities like Shanghai or Beijing "hit the wall" (*qu chu bi* 去触壁), a planned approach will be re-

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2. Journalist for *Zhongguo kexue bao*.
3. Average hourly concentration is PM 2.5 in the atmosphere.

quired, involving both economic and institutional reform, that aims to lighten the burden that these cities have to bear. For Yi Peng, that could mean a slow-down in the registering of permanent residents in these cities, or a partial administrative withdrawal, so that the market can play a basic role in the allocation of resources for urban development.

Yi Peng also advocates encouraging a balanced development of "agglomerations" in the process of urbanisation, which requires taking a broader view of the phenomenon. As the writer points out, haze is not confined to one city. On the contrary, it has a regional impact. That is why it is not only the main cities that must adopt good environmental practices, but also the neighbouring regions that will have to limit their emissions as far as possible, particularly in the industrial sector. In this context, Yi Peng wishes to see greater emphasis on "the concept of urban agglomeration" (*chengshi qun guannian* 城市群概念), which goes beyond the present administrative divisions. That would enable a more reasonable redistribution of industry and population by taking account of the satellite cities around the major urban centres. This would encourage better coordination and a higher quality of urban planning.

The concepts of "smart" (*zhihui* 智慧), "green" (*lüse* 绿色), and "low-carbon" (*ditan* 低碳) should also have an important place in the future. For Yi Peng, haze is a manifestation of the "non scientific" approach to the development of Chinese cities, unsustainable and based on major resource consumption. To be rid of the problem of atmospheric pollution, however, what is needed is to accelerate the readjustment of urban development, the industrial restructuring of cities and their modernisation. This would also mean having market mechanisms play an important role, providing for an optimisation of the structure of industry and its distribution, and a "revolution" in the production and consumption of energy. This could in turn involve a "new system with a double control mechanism" (*shuang kongshi de xin jizhi* 双控制的新机制) for the intensity of energy consumption. In the face of these imperatives, the construction of green cities that are smart and low carbon users becomes an absolute priority.

This "greening" of cities also requires the latter to make an effort toward de-industrialisation – particularly of their heavy industry, which currently has an over-capacity of production. Whilst in the past cities like Shanghai attracted sectors such as the petro-chemical industry thanks to their dynamism and to generous fiscal enticements, they must henceforth put the development of the services sector first and move into post-industrial mode.

An improvement in atmospheric conditions will also ultimately involve a diversification in the energy choices of the cities, and throughout the country more generally. The serious problem of pollution affecting the city of Beijing is largely due to the consumption of coal for heating, as the country has abundant supplies of this. Yi Peng proposes that cities begin to make much greater use of natural gas, which does not have the same negative impact on air quality. However, whilst natural gas is a worthwhile alternative, the availability of this resource is not uniform throughout the country, and the southern regions in particular have little access to it. Yi Peng proposes adopting a "scientific distribution grid" (*kexue buju de fangshi* 科学布局的方式) in this new cycle of urban development by promoting a convergence towards areas rich in resources, including clean air and water, which have now become fundamental resources the development of cities.

According to Yi Peng, some cities will emerge winners and others losers from this new cycle of urbanisation. The winners will be those that are naturally rich in basic resources for the social and economic development of their territory (water and natural gas, for example). The writer cites the example of Urumqi, which in his estimation has achieved very promising results in terms of pollution reduction together with a change of consumption model to cleaner energy resources (natural gas). By comparing the capital of Xinjiang to Beijing, which relies on coal and has no gas resources, we can understand that cities with significant resources of natural gas will achieve the best performances in terms of the environment in the near future.

A big gap remains between desire and reality

In parallel with this, the "explosion" (*baofa* 爆发) in the phenomena of urban atmospheric pollution has shown the close connection between industries that are heavy consumers of energy and environmental degradation. In this context, the government's room for manoeuvre in implementing polices for energy saving, emission reductions, and low-carbon development is a decisive factor for the future of the environment in China. Professor Qu Ye, an expert in China's climate policies at Tsinghua University, responded to questions on these subjects by pointing out that China already possesses, and has done so since the 11th Five-Year Plan, a system of responsibility for energy saving. However, on account of difficulties encountered in the implementation of these policies, the results obtained do not meet the government's desired outcome.

In spite of the fact that a series of environmental policies have been introduced over the past few years, the "greening" process in China has given "an impression of complexity and even disorder" (*fenfan shenzhi za luan zhi gan* 纷繁甚至杂乱之感). For example, the application measures for policies benchmarking energy saving are very different for cars and buildings. The standards for economising fuel can be applied in the design and production phases so that cars of the same model present the same energy characteristics. In the construction of buildings, however, the energy saving benchmarks apply only to the phases of construction and implementation, resulting in a tremendous waste of resources.

Despite the introduction of systems for assigning responsibility and repeated calls by the State Council, certain Chinese regions have not recorded any noticeable drop in the intensity of their energy consumption. Indeed, consumption has even increased in localities where the local government makes economic growth its top priority.

The difficulty in implementing policies does not only lie in the lack of political will by local governments. A lack of experience leads on occasion to the use of "extreme" methods. Qu Ye gives the example of some local governments that have quite simply turned off the electricity or stopped the production in their area in order to attain the goals of energy efficiency outlined in the 11th Five-Year Plan. This situation clearly reflects difficulties in the implementation of the policies and the impotence of certain operators.

The inadequacies of the top-down approach

Low-carbon governance in China is based mainly on the system of responsibility for energy savings, which can be characterised as "high-level promotion" (*gaowei tuidong* 高位推动), "multi-level governance" (*cengji zhili* 层级治理), and "integration of several attributes" (*duoshuxing zhenghe* 多属性整合). Thanks to this system, emissions per unit of GDP were reduced by 1.46 billion tonnes during the 11th Plan. However, this system of governance could give way to negative incentives, invalidating these important advances.

According to the expert, this system of top-down administrative contracts goes against the "principle of optimising several goals" (*duo mubiao youhua yuanze* 多目标优化原则) by neglecting the differences in energy efficiency and potential for achieving energy savings between the various Chinese local areas. Indeed, according to Qi Ye, whilst the application of the system of responsibility for the conservation of energy lays down specific objectives for local areas and links them to a performance assessment of civil servants, it does not lead to the active application of energy conservation policies. For that matter, by imposing one standard on all regions – notwithstanding the fact that they have different energy policies – the government does not optimise the potential benefits of this policy. It would be more worthwhile to link these set criteria to a measure of flexibility, as well as the possibility to use other instruments – market mechanisms, for instance – to achieve more ambitious results.

Furthermore, in the current promotion system for functionaries, economic growth remains the priority, which often contradicts the goals of energy regulation and emission reduction. By way of illustration, Qi Ye refers to the example of the city of Baoji in Shaanxi Province. In this city, the index for responsibility and assessment of local performance is made up of several factors. The maximum score given to economic development is 32 points, whereas the score for emission reduction is only 3 points. Thus, functionaries have to juggle between the imperative of reducing energy consumption and that of promoting the development of industries that are heavy consumers of energy. This reality has become one of the routine contradictions in the development of certain parts of the country.

Lastly, the asymmetries in information, the general lack of trust in the available information – the concept of "low carbon" still being at an experimental phase in China as elsewhere – and a fiscal system that does not encourage the adoption of low-carbon solutions are added difficulties. These factors limit the real reduction of Chinese emissions and continue to pose challenges for the country's transition towards a lower carbon footprint. For Qi Ye, a rational choice would be to promote a gradual adjustment of institutional practices and mechanisms in order to limit the effects of blockage. This could, in particular, involve improving the system for the performance assessment of functionaries and introducing new indicators as well as optimising the system of administrative contracts and providing greater cooperation between local government, civil society, and NGOs.

Feng Fei, the Head of the Research Department on Industrial Development in the Research Centre for Development at the State Council, who is quoted in the same *Kexue ribao* article, is also critical of the current state of affairs. He points out that administrative measures alone are not enough to reach the stated objectives for emission reduction, and that economic incentives – such as the reform of energy prices and a resource tax – will clearly be needed, and are in fact currently under study.

Translated by Peter Brown.