China's coal-fuelled boom: the man who cried "stop"

From People & Nature, 30 April 2020. By Gabriel Levy

"We can no longer act on nature with impunity." The "classic" model of economic development "poses a threat to humanity's very existence". China needs a new development model, based on renewable resources used effectively and sustainably, that will be built on the old model's ruins.

Deng Yingtao, a high-profile Chinese economist, made this call to action thirty years ago in his book *A New Development Model and China's Future*.¹ Its message was ignored by the political leaders it was addressed to. In this review article, I will consider why.

In the 1990s, the Chinese Communist party leadership prioritised expansion of export-focused manufacturing industry. The industrial boom really took off in the 2000s, fuelled by mountains of coal – the classic unsustainable resource.

In every year since 2011, China has consumed more coal than the rest of the world put together; more coal than the entire world used annually in the early 1980s; and more than

 $A\ steel\ mill\ in\ China$

twice what all the rich countries together used annually in the mid 1960s, during their own coal-fired boom.²

The primary beneficiaries of this economic model are not China's 1.3 billion people. The big fuel users are in China's giant east-coast manufacturing belt – which produces, in the first place, energy-intensive goods for export to rich countries: steel bars, cement, chemical products, agricultural

¹ The book was translated and published in English, with a Foreword by Peter Nolan, in 2014: Deng Yingtao, *A New Development Model and China's Future* (London: Routledge). The statements quoted in the first paragraph are from pages 177-178

fertilisers and electronics products. Household fuel consumption remains extremely low.

This level of fossil fuel use can not go on, not in China and not anywhere else, without courting the most horrendous dangers brought about by global warming.

Deng Yingtao made a compelling argument against going down this road, BEFORE the decisions were made.

In the Introduction to his book, he pointed to the yawning gap between rich and poor countries; the multinational companies' rising power; and the damage done to the global south by capitalist boom-and-bust.

The "classic" development model had led to "a world economy dominated by the developed West and based on an inequitable international division of labour", which had proved a "major obstacle to modernisation" for developing countries. The solution, he argued, was not to adopt the "western theory of modernisation", based on large-scale consumption of non-renewable resources, but to combine

aims of economic development with a focus on renewable resources.

In A New Development Model, a sometimes dense economic text, Deng presented a scathing critique (chapter 6) of the "worthless cultural concepts" underlying the ideology of economic growth. He criticised the worth of Gross National Product as a measure of economic success.

Deng followed international economics debates, and referred to the work of western scholars on natural limits, including Elinor Ostrom and the authors of the *Limits to Growth* report. He skewered, at great length, the idea that market forces could allocate resources efficiently – an indication, I suppose, that such ideas were becoming fashionable in China in the 1980s.

In conclusion,³ Deng set out his proposals for a new development model, which "will be

based on renewable resources, and will protect these resources by means of effective and sustainable utilisation". Non-renewable resources such as oil, coal and other minerals have to be used "in the most economic, non-polluting way", in the context of a transition to renewable resources.

Changes in the resource base, he argued, "will significantly alter the way we live".

Material consumption will no longer be allowed inexorably to increase. We need to ensure that our

² China's coal consumption in the 2010s has been around 2800 million tonnes per year. See https://www.iea.org/reports/coal-2019>

³ Deng Yingtao, *A New Development Model*, chapter 11 "Desperate measures are called for"

people are physically strong, highly skilled, intelligent and wise, and that they engage in work that is beneficial to the community, to future generations and to the environment. [...]

The new development model will primarily be based on new-style flow technology (including technology for the recovery and recycling of resources), supplemented by the economical use of stocks technology. By contrast the "classic" development model relies on large-scale consumption of non-renewable resources and highly-polluting stocks technology.

Some key sections of Deng's book are reproduced below. And I have written a separate article [LINK] about his life as a Communist party member and scholar, and the group of reform economists of which he was one.

Reading Deng Yingtao's book thirty years after it was written, I think it can help us to reframe our ideas about many big questions: the ecological crisis, its relationship to capitalism and the class struggle, and the role of twentieth-century state socialism (or Stalinism, if you want to call it that).

Let's first extract ourselves from the close-up, political aspects of this. On climate change, just as (more obviously and immediately) on coronavirus, heaping blame on China is standard fare for Donald Trump and his near-fascist ilk.

Faced with their racist-tinged rhetoric, many people who try to think seriously about the ecological crisis (including me) respond by pointing out that China's coal-fired boom serves rich-country economies, above all.

Even though China is now the world's number one emitter of greenhouse gases, its emissions per person are way under half of those in the USA, that held the number one spot for more than a century before that.

About three-quarters of China's emissions are from industrial production (compared to, typically, one third in rich countries); Chinese per-capita household emissions are a small fraction of rich countries'. And then there's the historical responsibility of the rich countries, that their negotiators at international climate talks are so ready to deny.

All that is true. But still, we are left with the fact that in the 1990s, the Communist party leadership decided on policies that not only made the economy the prime supplier of energy-intensive goods to the rich world, but also turned the screw of non-renewable resource use in a way that imperils the whole of humanity.

It's important to understand why.

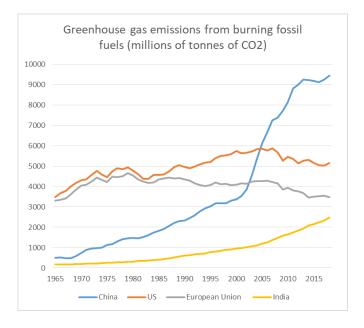
From Deng Yingtao's book we learn that, in adopting these policies, the Communist party not only brushed aside opposition from China's dissident environmentalists, but ignored stark warnings made at the heart of the elite intelligentsia.

Deng Yingtao cried "stop!", and they carried on.

Reading about Chinese government in the 1990s, it is clear that – despite signing the Rio treaty in 1992, and talking the talk about climate change – political leaders prioritised "economic growth" at all costs. Much like their counterparts in the rich countries.

The most powerful man in China, Deng Xiaoping, issued proclamations in 1990-92 about the urgency of increasing the rate of economic growth that mentioned neither environmental protection in general, nor the need to constrain greenhouse gas emissions in particular.

Jiang Zemin (Communist party general secretary 1989-2002), who made the political running in the mid 1990s,



stood for "neoconservatism and east coast developmentalism", the political scientist Joseph Fewsmith wrote. The industrial development centred on the east coast became the political priority; the market reforms that spurred it on resulted in rising property prices, regional inequalities, an explosion of private business and the emergence of the nouveau riche – which in turn provoked social tensions.⁴

China's gross domestic product (GDP) grew steadily through the 1990s, but so did the gap between rich and poor, Fewsmith concluded. And:

[G]rowing income inequality, corruption and worsening relations between cadres and peasants were generating growing numbers of social conflicts.⁵

Another western researcher of China, Peter Nolan, put it this way:

China's attempt to construct an industrial policy has occurred [in the 1990s] in the midst of the era of capitalist globalisation, which has produced unprecedented global industrial concentration of business power, far beyond that which faced Japan or Korea at a similar phase in their development. The industrial policies pursued by Japan and Korea could not easily be transferred to China.

After "initial cautious experiments" at market reforms in the 1980s, in the 1990s large state-owned enterprises were turned into corporate entities with diversified ownership, shares markets took root, and joint ventures were established with international companies.⁶

China's industrial policy, then, was shaped by the changes in world capitalism: globalisation, the internationalisation

⁴ Joseph Fewsmith, *China Since Tiananmen: the politics of transition* (Cambridge University Press, 2012), pp. 174-182

⁵ Fewsmith, *China Since Tiananmen*, p. 274

⁶ Peter Nolan, *Re-balancing China* (Cambridge University Press, 2014), pp. 78-80

and computerisation of financial markets, and the neoliberal obsession with privatisation and "liberalisation", as a way of disciplining and exploiting the countries of the global south.

When Chinese politicians put aside the declarations made about climate change at Rio, and pressed their feet down on the accelerators of industrialisation, they were acting in concert with the political leaders of the western powers – whatever war of words was going on between them.

These policies bore their most ecologically disastrous fruits after 2001, when Chinese accession to the World Trade Organisation (WTO) boosted the export boom. Between 2000 and 2007, China's output of steel and aluminium more than doubled; cement and fertiliser production went up by six and five times respectively. The primary fuel for all this was dirty, dangerous coal, shovelled – much less efficiently than in rich countries – into blast furnaces, power stations and factories.

Peter Nolan, at the end of his Foreword to the English edition of Deng Yingtao's book, wrote that, instead of the new development path that Deng pointed to,

China has essentially pursued the classical, energy-intensive development path that was followed by the high-income countries themselves. China's urban population mainly lives in vast mega-cities, where the urban skyline has been transformed from mainly Soviet-style, low-rise apartment blocks into a forest of high-rise apartment buildings festooned with air conditioning units on the outside and packed with consumer appliances inside.

Nolan quotes the environmentalist Rachel Carson, who wrote that the road travelled by western capitalism is forked, that it had taken the road to disaster, and that only the other fork – the one "less travelled by" – would assure the earth's future. Nolan concludes gloomily:

Deng Yingtao's book serves as a poignant reminder of the "road less travelled by" that China might have chosen, but did not take.

It's high time we all paid more attention to this reminder.

Deng Yingtao's prescient warnings about China's industrial juggernaut have been ignored as much by the world at large as they were by the Communist party leadership at the time. Since the carefully-edited English edition of his book appeared in 2014, it seems to have received no attention inside or outside universities. I couldn't find any previous reviews of it.

For socialists (including me), this story also says something about the relationship between twentieth-century state socialism and capitalism. In the Soviet Union as well as China, state socialism carried through the brutal task of industrialisation — with all the attendant human suffering — that capitalism had accomplished in Europe and north America in the nineteenth century.

State socialism not only failed to produce an economic model that worked as an effective alternative to capitalism, but also paved the way for the return of capitalist exploitation with a vengeance, in the 1990s, to eastern Europe, the former Soviet states and China – each in very different ways. China, with its vast reserve of cheap labour, preserved its authoritarian state structure – in contrast to the Soviet one, which fell apart – and so made the most "successful" transition.

Now we are counting the full cost of this "success". The Chinese leaders, like their western counterparts, closed their eyes to the ecological consequences of their actions, despite acknowledging at Rio the climate scientists' clear warnings.

In the twenty-first century, a de facto alliance between the overlords of world capitalism, and the authoritarian political descendants of Chinese Stalinism in Beijing, has brought humanity to the brink of disaster.

Hopes of undoing the work of this unholy alliance lie not in the international climate talks process – notwithstanding the obvious logic of the attacks made on the western powers there by the developed nations, with China foremost – but in radical social change. *GL*, 30 April 2020.

■ To learn more about all this, I strongly recommend a forthcoming book: Isabella Weber, *How China Escaped Shock Therapy: The Market Reform Debate* (Routledge, 2020). An interview with Isabella on these themes, by Pandora Rivista, is here. I thank Isabella for telling me about Deng Yingtao's book, and taking time to discuss it with me.

Deng Yingtao in his own words

The economy of waste

Developing countries should not be deluded into thinking that they can reach America's standard of living within decades. Americans, who make up less than 6% of the world's population, consume between one third and one half of mineral resources produced annually. Thus, even if there was a complete redistribution of global resources, the "classic" development model could not, objectively speaking, be universally applied. The reason is simple: the resources that are a prerequisite for this model simply do not exist for the great majority of developing countries. It is extremely doubtful whether these conditions are sustainable, even for small numbers of developing countries. Once non-renewable resources are exhausted, the situation can not be reversed, and the long-term problems engendered by recklessly wasteful growth will be plain for all to see.

Second, current systems of resource allocation, including market allocation mechanisms and private ownership, vastly underrate the value of resources formed on a geological timescale. The truth is that market mechanisms, which regulate supply and demand, free of interference, have greatly increased levels of scarcity of resources in the long term, leading to an entrenchment and acceleration of the many problems which the "classic" development model has brought with it and which we see today. In the very long term, the "invisible hand" is not only of very little use to humankind, its effects may actually be damaging, and it is only when matters reach crisis point that this damage suddenly becomes apparent. This will eventually have an irreversible adverse effect on the future of humankind, obliging us to pay a heavy price to counteract it.

A blueprint for reconstruction

As we choose a long-term development model, we should focus on using renewable resources, and the consumption of non-renewable resources should be reduced. As regards food consumption, we should adopt a diet of mixed meat-dairy and vegetable products, avoiding a largely meat-based diet. Our transport system should be made up of a combination of bicycle transport, public transport systems and taxis; and

⁷ Deng Yingtao, A New Development Model, p. xxviii

private car use should be discouraged. Agriculture should be labour-intensive and knowledge-based, and managed along ecological lines, avoiding a reliance on fossil fuels. We should put more efforts into restoring and protecting the environment, rather than waiting until the damage has reached intolerable levels before intervening. We must prioritise universal education, improving all-round skills in the whole workforce. Our health care should be based primarily on prevention and self-care, and we should reject a large-scale, high-tech health care system. We should employ a variety of economic, administrative and legal means to limit the consumption of resources on which there are currently severe constraints. We should adopt the use of new communication technologies to enhance social integration and reduce communication costs. All of these measures should take full advantage of advances in science and technology, enabling us to make great improvements to the existing infrastructure on which our long-term development will be based.

From: Deng Yingtao, A New Development Model (Routledge, 2014), p. 69, and pp. 173-174. Reproduced with kind permission from Routledge



Farmer with buffalo. Photo: Andy Siitonen / Creative commons

China's reform economists who sought the road not taken

Deng Yingtao, who in the 1990s called on China to reject the western-oriented industrial development model, was neither a dissident nor an environmentalist. As a senior economist at the Chinese Academy of Social Sciences, he first made his mark in the late 1970s, in debates about reforming agriculture.

Deng's father, Deng Liqun, was high up in the Chinese Communist party. He joined it in 1936, and served as a military leader, both before the revolution of 1949 and in the suppression of revolts in western China in the 1950s.

In the 1970s, during the cultural revolution, Deng senior, like many leading and middle-ranking Communists, was sent to the countryside. He worked in Henan province. There his son Deng Yingtao met Chen Yizi: their discussions about

how the collective farm system obstructed the development of agriculture started a long collaboration.

Mao Zedong's death in 1976, the purge of the Maoist "gang of four" that followed, and Deng Xiaoping's emergence as the undisputed party leader in 1978, marked a big political turning-point. The cultural revolution was repudiated.

A "Beijing spring" was declared, allowing open political discussion that had been impossible under Mao. The "four modernisations" (economy, agriculture, science and defence) reform policy was adopted; the use of market mechanisms and some opening-up to capitalism were key elements.

At the top of the party, Deng Xiaoping sidelined Hua Guofeng, Mao's obvious successor. In the ranks, intellectuals and officials who had been sent to the countryside returned to Beijing – including Deng Yingtao and Chen Yizi. Along with Wang Xiaoqiang, Deng and Chen became central figures in a group of reform economists who in 1979 began to meet on weekends in parks and empty offices in Beijing's universities – and then, as their numbers grew, moved into lecture theatres. In 1981 they would constitute themselves formally as the Rural Development Group, affiliated to the Chinese Academy of Social Sciences.

These young reformers began by discussing the move away from collectivisation in agriculture, but moved on to consider larger issues of strategy to guide China's economic development. Crucially, they had senior party members who encouraged and protected them – not only Deng Yingtao's father Deng Liqun, but also Hu Yaobang (who would become party general secretary in 1982-87), Zhao Ziyang (premier in 1982-87 and general secretary 1987-89) and Du Runsheng, a senior agricultural administrator.

"The young generation of intellectuals were sent up to the mountains and to the countryside during the cultural revolution", wrote Isabella Weber, a historian of Chinese economic debates. They "identified with China's peasant majority and their struggle for material well being" – and formed an "unusual alliance" with senior party leaders including Zhao. 9

The first big issue in the economic reform debates was about how to increase agricultural output. Against the collective farm model, the young reformers championed the "household responsibility system", which was pioneered from 1977 in the Anhui province. Land was contracted to households, who took responsibility for production; private plots were permitted.

In 1979, party officials from Anhui who arrived in Beijing to report on the results met with some of the young reformers, including Chen Yizi and Deng Yingtao.

The party leadership sanctioned the Anhui system and it was implemented nationally. In many areas, grain output doubled. Other reforms followed, including the the de facto end of grain rationing and evolution of grain markets.

Rural township and village enterprises were permitted, and given increasing freedom to allocate resources. In 1987, the Communist party congress clarified that the private sector should be "permitted to exist". ¹⁰ The upheaval in agriculture

⁸ This account of the young reformers' work is based on: Isabella Weber, China's Escape from the "Big Bang": The 1980s Price Reform Debate in Historical Perspective (PhD, University of Cambridge, 2017)

⁹ Weber, *China's Escape from the "Big Bang"*, p. 120

¹⁰ See: Peter Nolan, Transforming China: globalisation, transition and development (Anthem Press, 2004), chapter 1; Peter Nolan, China's Rise, Russia's Fall (Palgrave Macmillan, 1995); and Joseph Fewsmith, Dilemmas of Reform in China: political conflict and economic debate (Routledge, 1994), chapter 1.



Left to right:
Deng Liqun
(Deng Yingtao's
father); Chen
Yizi; Zhao
Ziyang (CCP
general
secretary 198789). I have not
found any
pictures of Deng
Yingtao

freed up labour in the villages, and by the late 1980s stimulated the flow of migrants from the countryside to China's coastal cities. Here was cheap labour for the industrial boom that would gather pace in the 1990s.

In the mid 1980s, the economic reform debates focused on whether, and how rapidly, to liberalise fixed prices, and on how to manage macroeconomic policy. Deng Yingtao and Wang Xiaoqiang were prominent in these discussions.

Wang, in particular, cautioned against the sort of "big bang" price reform that would be implemented so disastrously in post-Soviet Russia in 1992. An attempt at something similar in China, in 1988, ended with panic buying of goods and riots in some places; the policy was rapidly abandoned.¹¹

During these debates – and before the Tiananmen Square protests of 1989, and the repression that followed, which drastically narrowed space for public discussion – Deng Yingtao began to integrate an understanding of natural resources issues into his work as an economist.

Deng said in an interview, given shortly before his death in 2012, ¹² that he had started thinking about these issues in 1984. Wang Xiaoqing, who conducted the interview, said to Deng:

In China, we used to talk about "overtaking the UK and catching up with America" [in terms of economic growth]. But there you were, insisting that there is no "overtaking", no "catching up". [...] You were a very lonely voice amid all the hype of the reforms.

Deng responded that he started focusing on natural resources issues when thinking about the targets set by the Communist party, to eradicate absolute poverty by 2000 and "fully modernise" by 2050.

He realised that the USA, UK, France, Germany and Japan – whose total population added together was still less than China's – were "consuming 60-70% of the world's energy". If China, with its huge population, went the same way, "world energy consumption would more than double".

Neither could China follow the "Asian tigers" [South Korea, Hong Kong, Singapore and Taiwan]. "All of China can't be an export-processing zone", Deng told Wang (although, of course, much of it now is). And he continued:

At the time, everyone was very excited by the prospect of growth. all the local governments were hoping for quick technical fixes that would catapult them into modernity overnight. Perhaps in reaction to that, I became rather sceptical. [...]

I thought, developing a system for full modernisation is a long-term project. It will take years to work out a programme for modernising industry and lifestyles, so there's no rush.

Deng considered natural resources issues in an economics framework, which he set out in two of the opening chapters of *A New Development Model*. ¹³ He argued:

The tendency to over-exploitation [of non-renewable resources] is quite clear. The pollution of [renewable but limited] resources [...] such as air and fresh water, in the course of over-exploitation of non-renewable resources, is equally startling and happens by means of exactly the same mechanisms. Damage to the ozone layer caused by air pollution even means that the last plentiful resource we have – the sun – is being adversely affected.

The conclusion? "The crux of the problem with the 'classic' development model is over-exploitation" – that is, large-scale consumption of non-renewable resources, and great damage inflicted on renewable resources. The mechanism for over-exploitation is "a combination of private enterprise and the market". And further on:

Humankind may be said to face ten major environmental problems: desertification, deforestation, the crisis in water resources, species going extinct, pollution by acid rain, the greenhouse effect, damage to the ozone layer, soil erosion, pollution by toxic chemicals and a waste disposal crisis. Without exception, all these problems have been gifted to humankind by the "classic" development model. This really is a final settling of accounts by Mother Nature. 14

I do not know whether Deng Yingtao was influenced by China's environmentalist movement in the 1980s. But it is hard to believe that protests, such as those over construction of the Three Gorges Dam, deforestation, and air and water pollution, passed him by.

In 1988, shock waves went through the Chinese intelligentsia with the publication of *China On The Edge: the crisis of ecology and development* by He Bochuan, a philosophy lecturer from Guangdong. The book, which presented a grim, Malthusian view of China's mounting ecological crises, sold nearly half a million copies before printing was halted after the Tiananmen clampdown.¹⁵

¹¹ Weber, China's Escape from the "Big Bang", pp. 171-176

¹² See the Afterword in Deng Yingtao, *A New Development Model and China's Future* (Routledge, 2014), pp. 191-256

¹³ Deng Yingtao, *A New Development Model*, Chapter 3, "The breakdown of natural resources" and Chapter 4, "The economy of waste"

¹⁴ Deng Yingtao, A New Development Model, pp. 66-67

¹⁵ He Bochuan, *China on the Edge: the crisis of ecology and development* (China Books, 1991). See the sleeve notes

Deng Yingtao operated in a sphere far removed from those who organised the Three Gorges protests. Although he never sought a career in business or politics, he was part of an elite that included government ministers and powerful businessmen.

After Tiananmen, even these most privileged circles were affected by the clampdown.

Zhao Ziyang, who as Communist party general secretary had opened a dialogue with the students at Tiananmen, and refused to sanction the military attack on them, was removed. He spent the rest of his life under house arrest.

The reform economists, who had counted Zhao among their protectors, went their separate ways. Chen Yizi and Wang Xiaoqiang left China; Wang returned in the 1990s. Deng Yingtao remained.

Deng was perhaps the highest-profile member of the Chinese elite to state the case against western-style industrial development. But he was by no means the only one.

In the run-up to the Rio Earth Summit in 1992, where the first international agreement on climate change was signed, debate raged in Chinese government about the stance it should adopt.

The dominant position, which ultimately guided China's delegation at the Summit, was backed by the state planning commission, and the energy and foreign affairs ministries:

ROUTLEDGE STUDIES ON THE CHINESE ECONOMY 54

A NEW DEVELOPMENT MODEL AND CHINA'S FUTURE

The need for China to find a new, environmentally sustainable development path is widely accepted arrong Chinese scholars and policy makers. This book makes available for the first time to an English speaking audience Deng Yingtad's ground-breaking book A New Development Model and China's Future (第15年 // 1/20/11-16/16/14-16). Published in 1991, the book was far arhead of its time. Deng subjects the development model of the high-income countries to rigorous analysis and explores the environmental minglactics of China following this model. His clear conclusion is that the carrying capacity of the physical environmental minglactics of China following this model. His clear conclusion is that the carrying capacity of the physical environment and nature is limited, that economic and social development abroad not exceed the carrying capacity of resources, and that China should not adopt the Western development path. Based on ineights from scoromics, engineering and human psychology, the book analyses the environmental impact of the current Western development model, demonstrates the catastrophe impact this would have in terms of China's conditional continuation of China's and evelopment and and push in the continuation of the probund environmental and development trailerings the world currently falses.

Deng Yingtao was Director of the Economics and Cultural Descent Cerebra of the Chinese acceptor of the Chinese

China ought to make a contribution to fighting climate change, primarily because it might itself be adversely affected; no such action should restrict China's economic development; a big increase in China's energy consumption was inevitable; and proposals on issues such as

From the back cover of the English edition

reforestation and energy efficiency should be framed in terms of the advanced countries' debts to developing countries.¹⁶

Officials at the National Environmental Protection Agency, the State Science & Technology Commission and agriculture ministry saw things differently. They were influenced in part by some serious thinking at the Centre for Eco-Environmental Research of the Chinese Academy of Sciences.

One group of researchers called for China to reject both the "traditional", agricultural path of development taken by countries in the global south, and the "modernising way" taken by rich western countries. A new approach to

¹⁶ Elizabeth Economy, *Negotiating the terrain of global climate change policy in the Soviet Union and China: Linking international and domestic decision-making pathways* (PhD, University of Michigan, 1994), pp 166-173. This source gives an account of the policy discussions that led up to the Rio summit

development, "ecological construction", was needed, they wrote. 17

Two other academics argued that "China neither has the condition to follow the traditional path of high consumption of resources and high living expenses as in industrialised countries, nor should [it] follow the same old disastrous road of 'consider the control after forming pollution' as in industrialised countries."

Presciently, they advocated development of "resource-economising technologies", "control of the use of fossil fuels", and an increase in the proportion of "clean energy" used. ¹⁸

These arguments made as little impression on China's climate policy as Deng Yingtao's did on economic policy. Some officials interviewed by Elizabeth Economy, an American researcher of Chinese climate policy, "evinced amazement [...] that such views were being openly published". ¹⁹

By the time the Chinese delegation arrived at the Second World Climate Conference in Geneva in 1990 – a key meeting in the build-up to the Rio summit – the government's stance had been decided. Economic development, along the lines laid down by the big capitalist powers many decades before, would be the priority and the climate talks would be used as a forum to squeeze monetary compensation out of those powers.

As for Deng's work on the need for a new development model, most of it had already been published in articles, before Tiananmen. In 1991, two years after the students' protest was crushed, CITIC Press, a government-backed publisher, asked Deng to collect these articles together as a book, which was published with the title *A New Development Model and China's Future*. ²⁰ The English translation appeared in 2014. *GL*, 30 April 2020.

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¹⁸ Hu Angang and Wang Yi, "Current Status, Causes and Remedial Strategies of China's Ecology and Environment", *Chinese Geographical Science* 1:2 (1991), pp. 97-108

¹⁷ Wang Rusong, Ouyang Zhiyun and Zhao Qintao, "Ecological construction – an alternative developing way for developing countries", *Journal of Environmental Sciences* (China), 2:3 (1990), pp. 1-12

¹⁹ E. Economy, Negotiating the terrain of global climate change policy, p. 168

²⁰ See Deng Yingtao, A New Development Model, pp. 194-195