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# Ministry Reform: 9 Dragons To 2

By Yuanchao Xu, Woody Chan

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***We review the roles & impacts of the new Ministry of Ecological Environment & Ministry of Natural Resources***



The MEE is a 'toothless tiger' no more & is set to address air, soil & water holistically as one whole ecological system

Meanwhile MNR integrates sustainable resource planning & economic growth; expect ecological red lines & quotas

Together they can streamline environ policies & support China's ecological civilization; there is no turning back now

President Xi stated in his closing speech at [China's recent "Two Sessions"](#) (两会, lianghui) that there is a need to "*discard the old and introduce the new (for the) pursuit of progress*". The long-awaited reform of the Ministry of Environment (MEP) puts his words in action. Back in 2014, such a reform "[from the Mountaintop Down to the Ocean](#)" had been already proposed to help fight the "[war on pollution](#)" and it is finally being realised 4 years on.

***The new MEE & MNR will absorb duties from three now-defunct ministries***

Essentially, the MEP is now supersized into the Ministry of Ecological Environment (MEE), while a new Ministry of Natural Resources (MNR) will manage China's natural resources, from water to soil to minerals. They will absorb duties from three now-defunct ministries and two administrations.

Initial thoughts on the new envisaged roles of the MEE and MNR from pre-eminent sources in China are set out below.

### From nine dragons to two

There have been many write-ups detailing the reform, but [one of the most reliable reviews](#) comes from "[Environmental Protection](#)" – the guiding Chinese academic journal for the MEE. In particular, the review provides an analogy of a frog which illustrates the fragmented roles and overlapped responsibilities of previous efforts to manage the environment.

***The mismanagement of a frog...  
...no more fragmented roles & overlapped responsibilities***

When a frog is swimming in the river, it was managed by the Ministry of Water Resources (MWR). When it jumps onto the riverbank, it was managed by the MLR and the State Forestry Administration (SFA). When it jumps to a farm, it was managed by the Ministry of Agriculture (MoA). Just like the frog, water and the environment do

not function in silos and too many ministries with unclear responsibilities have muddied their management. For water, this problem has been termed as "[nine dragons managing water](#)" (九龙治水).

There have been previous reforms aimed at fixing this before, including [five attempts to upgrade the MEP since 1982](#). However, the issues persisted and the management of the environment and water was still split between six



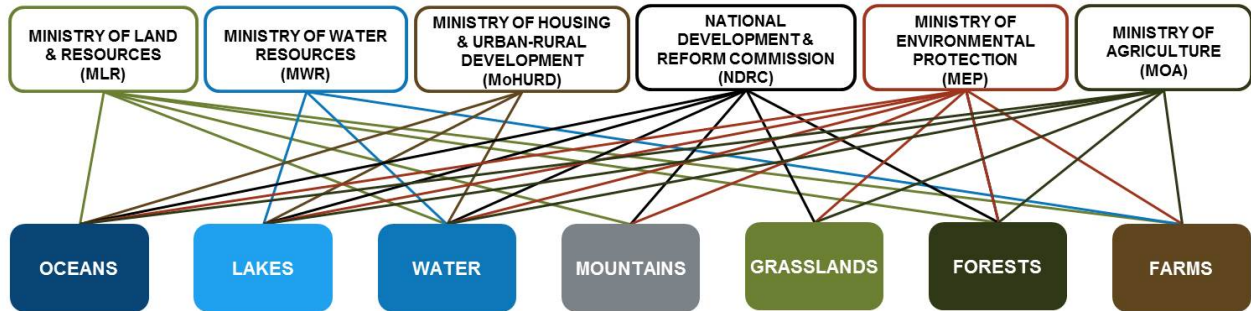
ministries. With the reform, overlapping responsibilities across all elements of the environment will be reassigned to two ministries, as seen below.



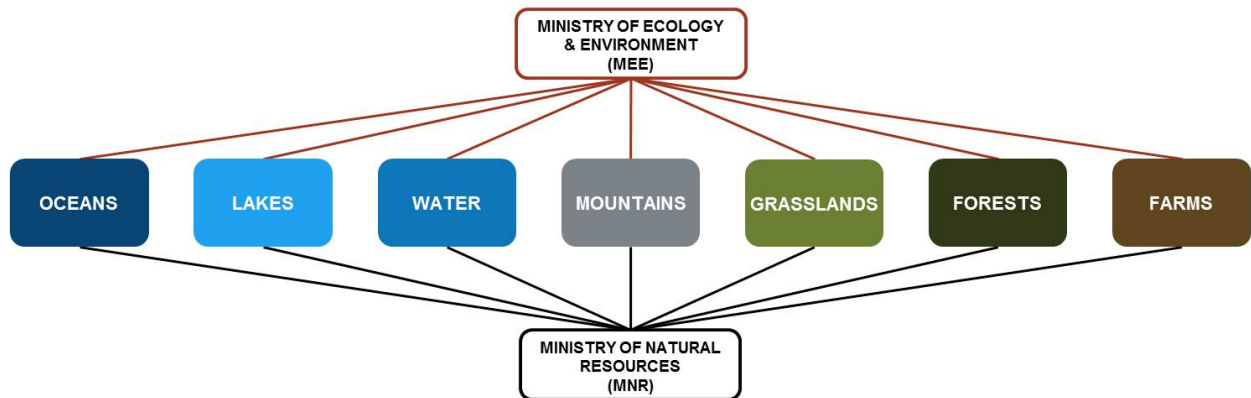
**MINISTRY REFORM TO ACHIEVE A “BEAUTIFUL CHINA”**

*“where the sky is blue, the land is green and the water runs clear”*

Before...



And after...



Source: China Water Risk based on People's Daily

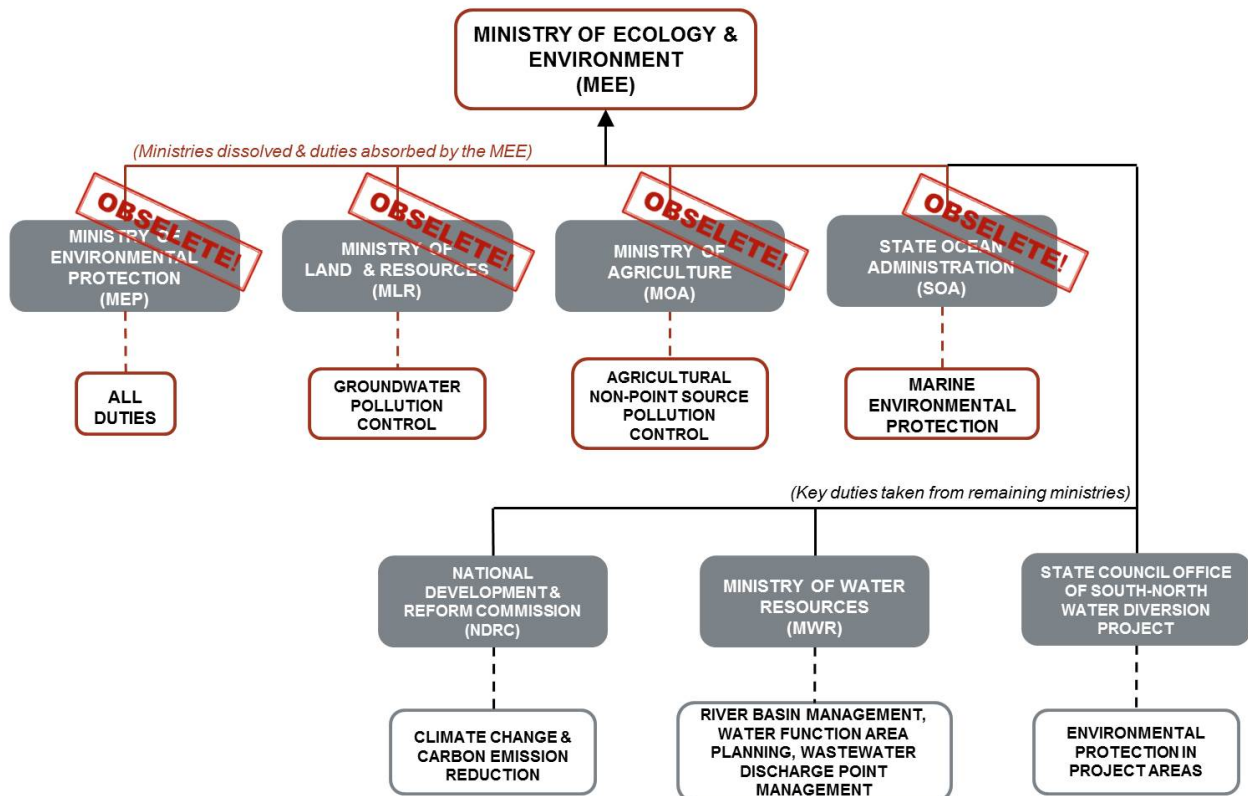
The [journal review](#) believes that this establishment of the MEE will solve the tangled web of responsibilities once and for all while the MNR integrates long-term resource planning with economic development. We now deep dive into the specific roles of these two new ministries.

**Ministry of Ecology & Environment – the “Super MEP”**

The below graphic summarises the duties of the MEE, which subsume and far exceed those of the now defunct MEP. We believe this re-organisation signals more comprehensive and cohesive supervision of the environment.



## KEY DUTIES ASSUMED BY THE MEE



Source: China Water Risk based on article from Environmental Protection (Chinese journal)

*Instead of managing air, water & soil pollution separately, the MEE is set to address them together... ..just one of many unsilo-ing actions*

According to Li Ganjie, the head of the MEE, **the change in name itself is significant**. Previously, the work of the MEP was based mostly upon pollution prevention and control. Including “ecology” into the ministry’s name signals a widening of the ministry’s focus to consider all the linkages which relate to an “ecological civilization”, including the well-being of the Chinese people.

Instead of managing air, water and soil pollution separately, the MEE is set to address them together as one whole ecological system. There are many others, but here are **five key unsilo-ing breakthroughs** as identified by Li Ganjie:

- 1. Unsilo-ing climate change and air pollution:** Climate change and carbon emission reduction responsibilities have now shifted from the NDRC to the MEE as well. Now, for the first time, carbon monoxide and carbon dioxide emission i.e. atmospheric pollution and climate change will be managed by one ministry.
- 2. Unsilo-ing above-ground and underground water:** Groundwater pollution control used to come under the MLR, but no longer. Surface and groundwater will be managed under one umbrella now.
- 3. Unsilo-ing bank and river:** It’s not just about surface and groundwater. By taking over agricultural non-point source pollution control from the MoA and wastewater discharge outlets from the MWR, the MEE is reaching beyond water bodies to ensure river water quality.



4. **Unsilo-ing urban and rural pollution control:** Plus, the MEE is now responsible for managing pollution in both urban and rural areas, instead of simply the former.
5. **Unsilo-ing coastal and marine protection:** The whole State Ocean Administration (SOA) is being absorbed by the MEE. Marine protection therefore will no longer function in isolation and can be managed along with the coastal and on-land ecologies such as forests and wetlands.

The MEE is also unlikely to be the “toothless tiger” that the MEP had been labelled as. The mega-ministry is even moving to [a new larger building and increasing its staff from 300 to 500](#), having taken on so many more duties. Less than a month after its establishment, the MEE is already flexing its muscles:

- At the end of March, the MEE announced that it is [investigating two major environmental cases](#), one of which involves illegal production of electrical equipment in Shandong province;
- In the same week, it also [released results of the papermaking industry’s progress towards adhering to the Water Ten plan](#), noting that 249 out of 250 enterprises successfully upgraded and retrofitted with clean production tech. Results of other industries will soon follow; and
- The [results of the second round of environmental inspections](#) have just been announced, with 1048 officials reprimanded across 7 provinces.

While there has been understandable focus on the MEE for the execution of the air ten, [soil ten](#) and [water ten](#) plans, the real excitement lies in the MNR, which will bring more long-term impacts.

### Ministry of Natural Resources: long-term resource planning from mountains to oceans

All of China’s natural resources belong to the people, but there has never been a representative to manage them. As such, economic development has always been prioritised with little to no regard to the ecological environment, leading to pollution and over-exploitation. In order to balance the economy and the environment as per “[Xi’s Thought](#)“, this will no longer be the case. All natural resources, from minerals to forests to lakes, will be given equal weighting.

*Now there is the MNR which will give all natural resources, from minerals to forests to lakes, equal weighting & manage them holistically*

Here [the review](#) uses the proposed development of a brownfield site as an example. On the one hand, the National Development & Reform Commission (NDRC) and the Ministry of Housing & Urban Development (MoHURD) would support its development due to economic benefits. On the other hand, the SFA and MWR may be in opposition if forests need to be removed and if water pollution occurred. Now there is the MNR

which will give all natural resources, from minerals to forests to lakes, equal weighting and manage them holistically. It not only absorbs the MLR’s duties

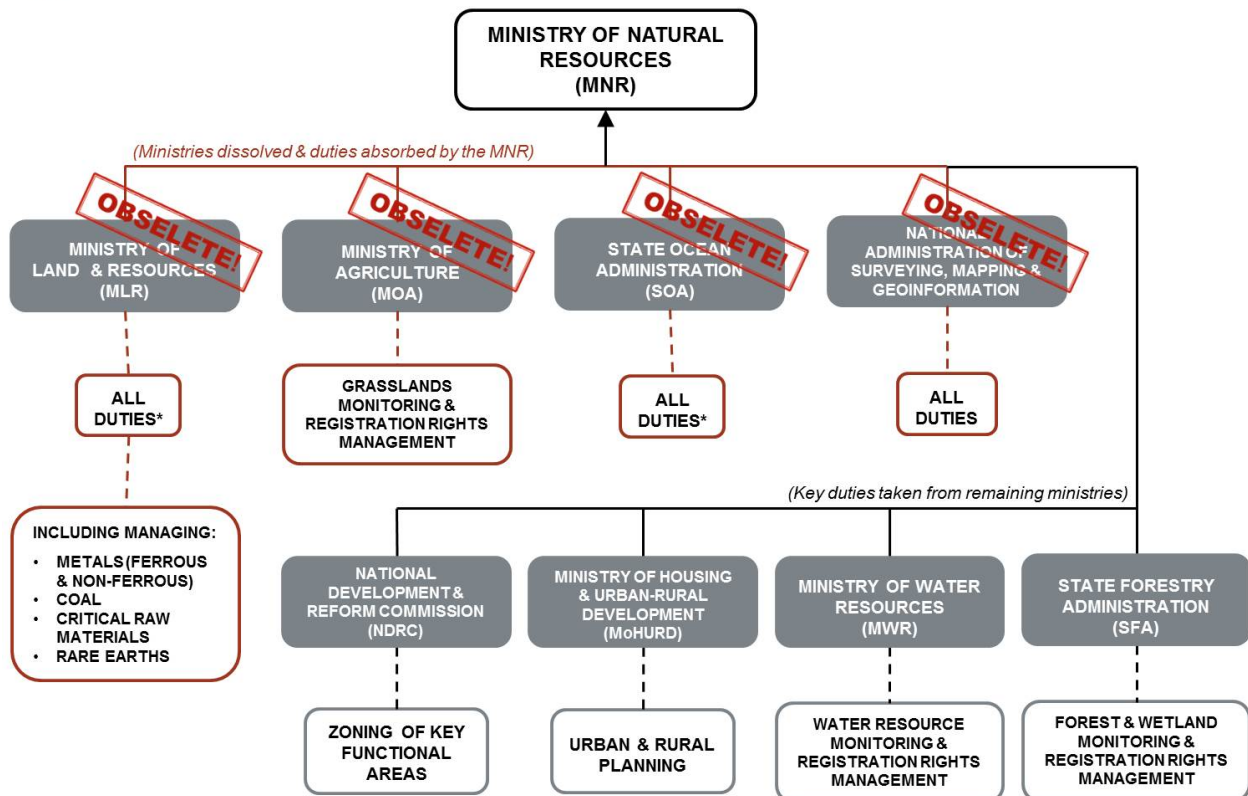




but it also takes over monitoring and rights registration duties from various ministries. The MNR's duties are shown below.



## KEY DUTIES ASSUMED BY THE MNR



\* MEE in charge of groundwater pollution control from MLR and marine environmental protection from SOA

Source: China Water Risk based on article from Environmental Protection (Chinese journal)

**Two main things can be expected from the MNR...**

**...mapped ecological red lines & resource consumption quotas based on environmental carrying capacities**

According to [the review](#), two main things can be expected from the MNR. One is “**ecological red lines**” mapped across the nation. From national parks to freshwater sources, to lakes, to wetlands, red lines to delineate or forbid various resource developments may be forthcoming.

The second is resource consumption quotas – red lines which are not visible based on environmental carrying capacities. We know caps already exist for key strategic resources such as water and rare earths, but with the establishment of the MNR, they may become even more restricted as resource protection is integrated into economic development.

### Working together & streamlining existing regulations

Together, these two new ministries eliminate muddled responsibilities and signals centralised, efficient management of the environment and natural resources.

[Another review](#) (also by “*Environmental Protection*”) notes that the MNR can be seen as the “accountant”, which prevents the over-exploitation of natural resources, while the MEE can be seen as the “auditor”, which keeps an eye on



the ecological carrying capacity to evaluate the viability of all activities involving the environment and its resources.

***This reform could help streamline other recent environmental reforms & regulations***

Plus, this ministry reform comes at a timely moment and could even help streamline other recent environmental reforms and regulations. A reformed MEE would be better equipped to work with the Ministry of Finance (MoF), NDRC, People's Bank of China (PBoC) and others to strengthen policies such as the environmental protection tax, green finance and environmental damage compensation.

Overall, the reform will disrupt industries and have material impacts on industries but whilst attention is needed for the MEE, there may be deeper impact from the MNR in the longer term.

However, there will be challenges ahead. For one, there will inevitably be overlaps between the MEE and MNR's duties and the two will have to work together. Another challenge is how to extend this reform from the ministry level to the local level to maximise on-ground impacts. Lastly, it is also not clear how much responsibility on tackling climate change will be shifted from the NDRC to the MEE.

***Prioritising the environment is here to stay & there is no turning back***

Nevertheless, we see this long-awaited reform as a momentous step towards un-silo-ed, holistic management of China's "ecological environment" and its natural resources. This type of vertical integration of ministries has already been proven successful in Sweden and Canada and can lay a foundation for China's coming "ecological civilization". These reforms herald a structural shift in China – prioritising the environment is here to stay and there is no turning back.

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### **Further Reading**

- [Barclays-Tsinghua China Water Summit: Key Takeaways](#) – The Barclays-Tsinghua University China Water Summit brought together industry leaders, corporations, investors and academics to discuss water solutions for China and Asia. Barclays analyst Zachary Sadow recaps key views from the summit
- [Rising To The Water Challenge](#) – Barclays analyst Zachary Sadow shares key findings from their report with the Columbia Water Center on how US energy companies and public utilities can help alleviate water shortages through new tech and practices
- [Eight Million: China & The Global Plastic Challenge](#) – Sustainable Asia's Marcy Trent Long & Sam Bekemans share their new podcast series "Eight



Million”, which looks into the plastic waste pollution issue globally & in China and what is being done. China Water Risk is featured in episode 2

- [Connecting A New Generation Of Businesses To Water Stewardship](#) – The CEO Water Mandate updated its Water Stewardship Toolbox. Their Peter Schulte shares how it now better connects companies to useful water stewardship resources, including tailored filters based on individual risks & needs
- [Water Stewardship: The Bright Dairy & Food Case](#) – Chinese dairy mega company, Bright Dairy & Food, successfully used water footprint assessments to better water stewardship. Tongji University’s Hongtao Wang and Jin Xu along with WWF China’s Aihui Yang guide us through the case study
- [The War on Water Pollution](#) – Premier Li has just declared war on pollution. Tan expands on the government’s stratagems & offensives and fundamental changes required to shore up the MEP’s arsenal in order to wage a successful war
- [MEP Reform: From Mountaintop to Ocean?](#) – The MEP is currently regarded as too weak to punish polluters due to dispersed authority & overlapping functions. Given the ‘war on pollution’, is reform to make a Super MEP necessary to improve China’s ‘mountains, water, forest, farmland & lakes’?
- [Two Sessions, Five Highlights For Water](#) – An ‘ecological civilisation’ is now embedded in China’s constitution and ministerial reform has been tabled. Find out what these mean for water in our review of this year’s Two Sessions. Pay attention or risk being blindsided
- [Key Water Policies 2017 – 2018](#) – Missed out on key water and water-related policies in China this past year? Catch up with China Water Risk Woody Chan’s review, including the latest on the new Water Ten Law and environmental tax law
- [What ‘Xi’s Thought’ Means For Water](#) – One key message from Xi Jinping at the 19th National Congress was harmony between environment & economic growth, surely this bodes well for water? China Water Risk’s Feng Hu reviews







### **AUTHOR: YUANCHAO XU**

Yuanchao uses his analytical proficiencies towards the assessment and visualization of water risks for China Water Risk. Prior to joining, Yuanchao was based in Europe completing the Erasmus Mundus Master Program where he specialised in hydro-informatics and water management. He applied his skills in climate forecasting and water resource modelling to the EUPORIAS project with DHI (Danish Hydraulic Institute) which resulted in a conference paper on seasonal climate forecasting. Building on this work, he went on to develop hyfo, an open-source R programme for climate scientists and modellers to analyse and visualize data. Yuanchao's bachelor degree was from the China Agricultural University where he specialized in heat energy and power engineering. During his time there, he also patented a testing instrument for hydraulic machinery. He has studied and worked in Beijing, Nice, Newcastle and Copenhagen. Read more from [Yuanchao Xu](#) →



### **AUTHOR: WOODY CHAN**

Woody conducts research on the water-energy-climate nexus and related hidden risks including rare earths and other critical raw materials essential to the clean tech and high tech industries. His analysis can be found in the 2017 CLSAU Blue Book on "Toxic Phones: China controls the core" which examines pollution driven regulatory risks of minerals behind the mobile interface from the touchscreen to vibrations & sound. Working on this nexus also led him to explore trade-offs with food security and agriculture in the region. Besides research, Woody also coordinates and manages CWR's flagship monthly newsletter including the management of our extensive network of contributors and has interviewed many water luminaries on CWR's behalf. Moreover, he oversees all content updates in CWR's website. Born in Hong Kong, Woody graduated from the University of Cambridge in 2016 with a BA in Geography. Concerned with the extent and effects of wastewater discharge in China, the topic of his dissertation, he joined CWR upon graduation. Furthermore, Woody also leads education outreach for CWR. To date, he has given TEDx talks at Hong Kong Baptist University and Diocesan Boys School on water and climate risks. Additionally, he has been invited to be a keynote speaker at the KGV (ESF School) Alliance. In the longer term, he wants to help improve education in Hong Kong & Asia to account for water and environmental risks.

Read more from [Woody Chan](#) →

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