News digest

The big environmental stories in the Chinese media (19-25 March)

Shenzhen unveils Gross Ecosystem Product system

Tuesday saw the unveiling in Shenzhen of China's first comprehensive system for accounting through Gross Ecosystem Product (GEP).

The system measures ecosystems' contribution to the economy as well as to human wellbeing. A local official present at the launch event said the introduction of GEP is a concrete step toward realising President Xi's slogan that "lucid waters and lush mountains are invaluable assets". It will make up for GDP's failure to measure the value of nature and the cost of damage to it, he added.

The GEP system has four parts: an implementation plan (setting out basic principles and rules), a technical specification, a reporting system, and a platform for online reporting and automatic calculation. Shenzhen's tech spec doc has a two-tier system for measuring the monetary value of nature. At the top level are three indicators:

1) material products (such as water and timber)
2) eco-services (such as carbon sequestration)
3) cultural and touristic services

Secondary indicators under these are then measured according to the existing market price for producing them. For example, the value of "coastline defence" is based on the cost of building artificial coastlines.

Shenzhen is the first jurisdiction in China to establish a comprehensive system

for GEP accounting, and possibly the first city in the world to do so, according to a leading scientist who spoke at the news conference. But last September, Gaochun district in Nanjing claimed it published the first standard for district/county-level GEP accounting. Days later, Zhejiang province published the first provincial standard for GEP accounting for terrestrial ecosystems.

GEP is also used as part of the Ant Forest campaign to plant hundreds of millions of trees in northwest China, which is funded by green purchase choices users make through the AliPay smartphone app.

The newly published outline for China's 14th Five Year Plan makes no direct mention of GEP, but proposes establishing a system for "realising the value of ecological products" and perfecting mechanisms of ecological compensation.

At the press conference, Ouyang Zhiyun, an author of the PNAS paper and a leading developer of Shenzhen's GEP experiment, said the experiment "played an important role" in setting the stage for the UN Statistics Division to include GEP in their new ecosystem accounting system, which was passed early this month.

Read China Dialogue's editorial series on finance for biodiversity.

The earlier the carbon transition, the cheaper, finds think-tank

Numerous Chinese think-tanks are busy fleshing out the policy roadmaps to the country's 2030 peak carbon and 2060 carbon neutrality.

This week, research by GEIDCO (the Global Energy Interconnection Development and Cooperation Organisation) outlined the critical importance of the power sector and the need for China to begin decarbonising it as early as

possible.

In an interview with China Energy News, Zhou Yuanbing, head of GEIDCO, commented that if China continues to add coal power capacity, as permitted under the targets of the 13th Five Year Plan for the energy sector, the costs of peaking carbon would increase by 3.7 trillion yuan (US$566 billion). Instead, China ought to control total consumption of fossil fuels and continue the rapid roll out of wind, solar and other clean energy generation capacity at a rate of at least 120 GW per year, he said.

“Our report suggests that... China should peak carbon emissions as early as possible. From 2030 to 2050, it should rapidly reduce emissions. And from 2050 up to 2060, achieve total carbon neutrality. Within this, peaking carbon emissions by 2028 is technologically feasible.”

A critical part of achieving carbon neutrality will be the electrification of sectors of the economy previously powered by fossil fuels, including transport and industry. As GEIDCO is closely linked to China’s State Grid, it’s unsurprising that its roadmap prominently features high-voltage transmission lines and a more developed smart grid. These would allow China to better utilise clean electricity from the western provinces or even from Southeast Asia, Zhou said.

Decarbonisation of the energy sector is also readily achievable with expectations that it could reach net zero emissions by 2050 and account for 80% of emissions reductions on the path to 2060 carbon neutrality.

Zhou stresses that the rapid deployment of renewables will not be enough on its own. Firstly, powerful new energy technologies such as hydrogen production and battery storage will have to be developed to supplement wind and solar. Secondly, where fossil fuels must be used, they will have to be accompanied with – expensive – carbon capture and storage (CCS) techniques. As a result, CCS should be limited to only “essential purposes”, he said, while methods of

CO2 removal such as natural carbon sinks should remain the focus of the negative emission push.