04.14-The environment

The environment
Mapping the invisible scourge

A new study suggests that air pollution is even worse than thought
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Vocab
1. map v. 映现 *[with obj. and adverbial]* associate (a group of elements or qualities) with an equivalent group, according to a particular formula or model
    e.g. the transformational rules map deep structures into surface structures. 转换规则将深层结构映现为表层结构。
2. scourge n. 灾难;祸害 A **scourge** is something that causes a lot of trouble or suffering to a group of people.
    e.g. Drugs are a scourge that is devastating our society.毒品是破坏我们社会的一大祸害。

THE capital's "airpocalypse", the choking smog that descended on Beijing in the winter of 2012-13, galvanised public opinion and spooked the government. The strange thing is, though, that information about air pollution—how extensive it is, how much damage it does—has long been sketchy, based mostly on satellite data or computer models. Until now.

Vocab
1. apocalypse n. the destruction of the world 世界毁灭
    e.g. Civilization is on the brink of apocalypse. 文明已濒临毁灭的边缘。
    这里用 apocalypse 来指代空气的末日
2. choking adj. 令人窒息的；透不过气来的
3. descend v. =fall ~ (on/ upon sb/ sth) (*literary*) (of night, **darkness** , a mood, etc. 夜晚、黑暗、情绪等) to arrive and begin to affect sb/ sth 降临；来临
    e.g. Calm descended on the crowd. 人群平静下来。
4. galvanize v. ~ sb (**into sth/into doing sth**) to make sb take action by shocking them or by making them excited 使震惊；使振奋；激励；刺激
    e.g. The urgency of his voice **galvanized them into action**.他急迫的声音激励他们行动起来。
5. spook v. (*informal, especially NAmE*) to frighten a person or an animal; to become frightened 吓；惊吓；受惊 [VN] [usually passive]
    e.g. We were spooked by the strange noises and lights. 那奇怪的声音和亮光把我们吓坏了。
6. extensive adj. covering a large area; great in amount 广阔的；广大的；大量的
    e.g. The house has extensive grounds. 这栋房子有宽敞的庭院。
7. sketchy adj. =rough (sketch·ier, sketch·iest) not complete or detailed and therefore not very useful 粗略的；概略的；不完备的
    e.g. He gave us a very sketchy account of his visit. 他跟我们非常粗略地讲了他参观的情况。

Responding to the outcry, the government set up a national air-reporting system which now has almost 1,000 monitoring stations, pumping out hourly reports on six pollutants, including sulphur dioxide, ozone and (the main culprit) particulate matter less than 2.5 microns in diameter, or PM2.5. These are tiny particles which lodge in the lungs and cause respiratory disease. The six are the main cause of local pollution but have little to do with climate change, since they do not include carbon dioxide, the main greenhouse gas. Scientists from Berkeley Earth, a not-for-profit foundation in America, have trawled through this recent cloud of data for the four months to early August 2014, sieved out the bits that are manifestly wrong (readings where the dial seems to be stuck, for instance) and emerged with the most detailed and up-to-date picture of Chinese air pollution so far.

Vocab
1. outcry n. a reaction of anger or strong protest shown by people in public 呐喊；怒吼；强烈的抗议
   e.g. The new tax provoked a **public outcry**.新税项引起了公众的强烈抗议。
2. sulphur dioxide n. (*chemistry* 化) a poisonous gas with a strong smell, that is used in industry and causes air pollution 二氧化硫
3. ozone n. (*chemistry* 化) a poisonous gas with a strong smell that is a form of **oxygen** 臭氧
4. culprit n. a person who has done sth wrong or against the law 犯错的人；罪犯
   e.g. The police quickly identified the real culprits. 警方很快查出了真正的罪犯。
5. particulate n. （尤指燃料燃烧时产生的）颗粒，微粒 **Particulates** are very small particles of a substance, especially those that are produced when fuel is burned.
6. matter n. (*technical* 术语) physical substance in general that everything in the world consists of; not mind or spirit （统称）物质
   e.g. to study the properties of matter 研究物质的属性
7. particulate matter n. 微粒物质；悬浮微粒
8. micron n. 微米（等于百万分之一米）
9. lodge v. 卡住；搁住；嵌入 If an object **lodges** somewhere, it becomes stuck there.
   e.g. The bullet lodged in the sergeant's leg, shattering his thigh bone...子弹嵌进了中士的腿里，使其股骨碎裂。
10.lung n. 肺 Your **lungs** are the two organs inside your chest which fill with air when you breathe in.
11. respiratory disease n. [内科] 呼吸疾病
12. not-for-profit adj. adj. 非营利的；无利可图的
13. trawl v. ~ (**through sth**) (**for sth/ sb**) | ~ **sth** (**for sth/ sb**) to search through a large amount of information or a large number of people, places, etc. looking for a particular thing or person 查阅（资料）；搜集，搜罗，网罗（人或物）
   e.g. She trawled the shops for bargains. 她到各商店搜罗便宜货。
14. sieve v. 筛;过滤 When you **sieve** a substance, you put it through a sieve.
   e.g. Cream the margarine in a small bowl, then sieve the icing sugar into it.将人造黄油在小碗里搅成糊状，再将糖粉筛进去。
15. manifestly adv. 显然地；明白地
16. dial n. 钟面;表盘;（仪表等的）刻度盘，标度盘 A **dial** is the part of a machine or instrument such as a clock or watch which shows you the time or a measurement that has been recorded.
   e.g. The luminous dial on the clock showed five minutes to seven...夜光钟面显示时间为 6点 55分。

Pollution is sky-high everywhere in China. Some 83% of Chinese are exposed to air that, in America, would be deemed by the Environmental Protection Agency either to be unhealthy or unhealthy for sensitive groups. Almost half the population of China experiences levels of PM2.5 that are above America's highest threshold. That is even worse than the satellite data had suggested.

Vocab
1. sky-high adj. 价格)极高的，昂贵的;(信心)高昂的，十足的 If you say that prices or confidence are **sky-high**, you are emphasizing that they are at a very high level.
    e.g. Christie said: 'My confidence is sky high.'克丽丝蒂说：“我现在信心十足。”
2. threshold n. (某事发生或改变的)界限，阈，起始点 A **threshold** is an amount, level, or limit on a scale. When the **threshold** is reached, something else happens or changes.
    e.g. She has a low threshold of boredom and needs the constant stimulation of physical activity...她容易厌倦，需要时常进行活动来刺激一下。

Sentence
That is even worse than the satellite data had suggested.
这里的 that 是指前句说述的这件事情，suggested 是指 satellite data 所要表明的建议，即所要表明的值

Berkeley Earth's scientific director, Richard Muller, says breathing Beijing's air is the equivalent of smoking almost 40 cigarettes a day and calculates that air pollution causes 1.6m deaths a year in China, or 17% of the total. A previous estimate, based on a study of pollution in the Huai river basin (which lies between the Yellow and Yangzi rivers), put the toll at 1.2m deaths a year—still high.

Vocab
1. scientific adj. involving science; connected with science 科学（上）的；关于科学的
    e.g. a scientific discovery 科学发现
2. basin n. an area of land around a large river with streams running down into it 流域
    e.g. the Amazon Basin 亚马孙河流域

Sentence
A previous estimate, based on a study of pollution in the Huai river basin (which lies between the Yellow and Yangzi rivers), put the toll at 1.2m deaths a year—still high.
主干：A previous estimate put the toll at 1.2m deaths a year
所以这里中间的插入语把主谓间隔的很开
based on a study of pollution in the Huai river basin (which lies between the Yellow and Yangzi rivers) 这里作插入语成分
—still high 解释成分

The sliver of good news is that pollution levels are better in some places than in others. They are worst in the corridor between Beijing and Shanghai and least bad in the south (see map—the study covers China east of 95ºE, accounting for 97% of China's population), probably because that area was washed by monsoon rains during the period of the study. More importantly, levels of PM2.5 in large western cities such as Chongqing and Chengdu are about half the national average. Figuring out what they are doing right would be a first step towards reducing the smog elsewhere.

Vocab
1. sliver n. 小片;一点儿 A **sliver of** something is a small thin piece or amount of it.

e.g. There was only one sliver of light in the darkness.黑暗中只有一点零星的光亮。

2. corridor n. 走廊(通往他国或经由他国通向大海的狭长地带) A **corridor** is a strip of land that connects one country to another or gives it a route to the sea through another country.

e.g. East Prussia and the rest of Germany were separated, in 1919, by the Polish corridor.东普鲁士和德国的其他地区于1919年被波兰走廊分隔。

3. monsoon n. a period of heavy rain in summer in S Asia; the rain that falls during this period （南亚地区的）雨季，雨季的降雨

4. importantly adv. used to emphasize a significant point or matter重要的是

e.g. a non-drinking, non-smoking, and, importantly, non-political sportsman.一个不喝酒，不抽烟，重要的是，不问政治的运动员。

Sentence

Figuring out what they are doing right would be a first step towards reducing the smog elsewhere.

主干：主语：Figuring out what they are doing right 谓语： would be

所以主语比较长，主语里又有一个从句，会影响判断

a first step towards 做宾语

reducing the smog elsewhere 这里是做宾语补足语，用现在分词引导的，其实可以展开为：

which reduce the smog elsewhere. 这种成分，只是省略了which

From the print edition: China

The environment
Mapping the invisible scourge
环境：描绘无形杀手

A new study suggests that air pollution is even worse than thought.
一项新研究表明，空气污染现状比预想更加严重。

The capital's "airpocalypse", the choking smog that descended on Beijing in the winter of 2012-13, galvanised public opinion and spooked the government. The strange thing is, though, that information about air pollution—how extensive it is, how much damage it does—has long been sketchy, based mostly on satellite data or computer models. Until now.
在2012年与2013年的交际之冬，重度雾霾笼罩了北京。这场首都的"空气末日"使舆论哗然，也让政府为之一惊。令人诧异的是，以卫星数据和计算机为模型基础、采集到的关于污染的覆盖范围及其破坏力空气污染情报，一直都不具体。直到现在，情况才有所改变。

Responding to the outcry, the government set up a national air-reporting system which now has almost 1,000 monitoring stations, pumping out hourly reports on six pollutants, including sulphur dioxide, ozone and (the main culprit) particulate matter less than 2.5 microns in diameter, or PM2.5. These are tiny particles which lodge in the lungs and cause respiratory disease. The six are the main cause of local pollution but have little to do with climate change, since they do not include carbon dioxide, the main greenhouse gas. Scientists from Berkeley Earth, a not-for-profit foundation in America, have trawled through this recent cloud of data for the four months to early August 2014, sieved out the bits that are manifestly wrong (readings where the dial seems to be stuck, for instance) and emerged with the most detailed and up-to-date picture of Chinese air pollution so far.
应对民众的呼声，政府建立了一个全国性的空气质量报告系统。该系统现囊括逾1000座监测站，每小时报告二氧化硫、臭氧、以及罪魁祸首——直径小于等于 2.5 微米的颗粒物（或

称PM2.5）等六项污染物指标。这些小颗粒物会在肺中沉积并引发呼吸道疾病。虽然这六种污染物是当地空气污染的要犯，但它们并不会导致气候变化，因为其中不包含温室气体的主力军——二氧化碳。来自美国非营利组织"伯克利地球"的科学家们查阅了海量数据——涵盖至2014年8月初的前4个月，从中排除明显错误（例如像因测量计被卡住而产生的读数）并绘制出了迄今最新、最详细的中国空气污染现状图。

Pollution is sky-high everywhere in China. Some 83% of Chinese are exposed to air that, in America, would be deemed by the Environmental Protection Agency either to be unhealthy or unhealthy for sensitive groups. Almost half the population of China experiences levels of PM2.5 that are above America's highest threshold. That is even worse than the satellite data had suggested.

中国各地的污染情况都极为严重，约有83%的中国人生活在问题空气之中。在美国，这种质量的空气会被环保局认定为"对健康有害"或者"对敏感体质群体的健康有影响"。约半数中国人经历过超美国最高PM2.5浓度限度的重霾，这甚至比卫星数据表明的情况还要糟糕。

Berkeley Earth's scientific director, Richard Muller, says breathing Beijing's air is the equivalent of smoking almost 40 cigarettes a day and calculates that air pollution causes 1.6m deaths a year in China, or 17% of the total. A previous estimate, based on a study of pollution in the Huai river basin (which lies between the Yellow and Yangzi rivers) , put the toll at 1.2m deaths a year—still high.

按照"伯克利地球"科研总管查德·穆勒的说法，呼吸北京的空气就好比每天吸食40根烟。他同时预测，每年因空气污染死亡的人数将高达160万，或者说占总死亡人数的17%。在此之前，已有一个根据淮河流域（位于黄河和长江之间）污染研究做出的测算，预计每年导致的死亡人数约为120万——还是个不小的数字。

The sliver of good news is that pollution levels are better in some places than in others. They are worst in the corridor between Beijing and Shanghai and least bad in the south (the study covers China east of 95ºE, accounting for 97% of China's population), probably because that area was washed by monsoon rains during the period of the study. More importantly, levels of PM2.5 in large western cities such as Chongqing and Chengdu are about half the national average. Figuring out what they are doing right would be a first step towards reducing the smog elsewhere.

唯一值得庆幸的消息是，部分地区的污染等级比其余地区要低。研究显示，京沪走廊间的情况最为恶劣，而南方的空气质量勉强过得去（这项研究涵盖了东经95º以东的地区，涉及到了中国97%人口），或许是因为开展研究时，南方正值雨季洗礼。此外，重庆、成都等大型西部城市的PM2.5浓度约为国家平均浓度的一半。若想要迈出解决雾霾的第一步，我们首先要弄清这些城市哪里做对了。