

Michael P. Walsh
 3105 N. Dinwiddie Street
 Arlington, Virginia 22207
 USA
 Phone: (703) 241 1297 Fax: (703) 241 1418
 E-Mail mpwalsh@igc.org
 Michael[@theicct.org](mailto:Michael@theicct.org)
<http://walshcarlines.com>



CAR LINES

ISSUE 2015 2

APRIL 2015

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EUROPE

1. EU Panel Formally Backs Requirement for Ships to Report Emissions in 2018

On March 26th, the European Parliament's environment committee signed off on a European Union draft regulation that would require ships docking in EU ports as of January 2018 to calculate and report their greenhouse gas emissions. The obligation would apply to emissions from journeys made to and from EU ports by vessels of 5,000 gross tons or more, whatever their country of origin. The regulation does not include any requirement for emission cuts from shipping, but is seen as a first step to possible inclusion of ships in emission-reduction mechanisms.

The regulation includes a provision under which it would be reviewed in the event the International Maritime Organization adopted measures to cut shipping emissions.

The environment committee's approval, by a 58–0 vote with three abstentions, was a formality. EU member states already ratified the draft regulation last December.

José Inácio Faria, a Portuguese liberal lawmaker who was responsible for overseeing the progress of the draft legislation through the European Parliament, said the requirement for ships to monitor their emissions would “encourage the adoption of new technologies and operating measures to improve ships' fuel efficiency.”

The regulation is expected to be finalized when a full session of the European Parliament votes on it during an April 27–30 session.

2. EU Formalizes Climate Pledge to UN, Postpones Decision on Carbon Sinks

On March 6th, the European Union submitted its Intended Nationally Determined Contribution (INDC), or greenhouse gas emissions reduction pledge through 2030, to the United Nations Framework Convention on Climate Change. The INDC confirmed an undertaking EU leaders made at an October 2014 summit that the 28-country bloc will cut its emissions by “at least” 40 percent by 2030 compared to 1990, and that the target will be legally binding.

The INDC was unclear, however, on the extent to which land-use, land-use change and forestry (LULUCF) would be included in the EU's 40 percent target, saying only that “policy on how to include LULUCF ... will be established as soon as technical conditions allow and in any case before 2020.” The inclusion of LULUCF could have an impact on the overall emissions cuts that heavy industry, power generators and other economic sectors have to make to reach the 40 percent goal.

Land-use, land-use change and forestry is not included in the EU's current binding target of a 20 percent emissions reduction by 2020 compared to 1990, though under laws agreed in 2013, EU member states are required to collect information on emissions and withdrawals of greenhouse gas emissions from LULUCF.

The EU's top climate official, Climate and Energy Commissioner Miguel Arias Canete, speaking after a meeting of member state environment ministers March 6, said for the post-2020 period, “we shouldn't prejudge how the accounting for this sector should be done” ahead of the Paris conference. The EU was being “transparent” by noting in its Intended Nationally Determined Contribution that it would include LULUCF, Canete said.

The EU is the second economy to submit its INDC. Switzerland was the first, filing its pledge Feb. 27th. Canete said, “We expect China, the U.S. and other G20 [Group of 20] countries in particular to follow the EU and submit their contributions by the end of March.”

Countries agreed at the UN climate summit in Lima late last year to propose their emissions pledges in early 2015. The UN will compile the pledges by November 1st into an assessment of how close the world is to an emissions reduction strategy in line with limiting global warming to no more than 2 degrees Celsius above pre-industrial levels.

Laurence Tubiana, France's ambassador for climate change negotiations, told reporters in Washington March 6 that the EU's pledge submission has built anticipation for the yet-to-be unveiled submissions from the world's two largest emitters, the U.S. and China. The more than 190 nations negotiating the global greenhouse gas deal agreed at the 2013 climate summit in Warsaw that those countries able to do so should put forth their pledges in the first quarter of 2015 to give the parties ample time to review them ahead of the December Paris talks.

Tubiana said negotiators do not expect to see India unveil its pledge in the coming weeks but rather in the months ahead, and they expect Japan to put forth its pledge around June.

3. As Sea Ice Melts, Germany, Netherlands Push for Sustainable Arctic Development

Germany and the Netherlands will advocate responsible environmental stewardship and the rule of the law while pursuing business and shipping interests in the changing Arctic, the countries' ambassadors to Finland told the Arctic Business Forum in Rovaniemi, Finland on March 11th. Both nations support adding the European Union as an observer to the Arctic Council, German Ambassador Dorothee Janetzke-Wenzel and Netherlands' Ambassador Hen Swarttouw told delegates.

The Arctic Council consists of the eight Arctic States: Canada, Denmark (including Greenland and the Faroe Islands), Finland, Iceland, Norway, Russia, Sweden and the U.S.

Six international organizations representing Arctic Indigenous Peoples have permanent participant status. Twelve non-Arctic countries have been admitted as observers while nine intergovernmental and interparliamentary organizations have been given observer status.

Janetzke-Wenzel said German policy advocates the free passage of shipping in both the Northern Sea Route in the Russian Arctic and the Northwest Passage in the Canadian Arctic. She said Germany is committed to recognizing International Convention of the Law of the Sea in the region and is committed to sustainable management of Arctic ecosystems.

Opening Arctic shipping routes because of melting sea ice and climate change would reduce shipping times, decrease fuel use and help cut shipping costs, she added. “What happens next in the Arctic has implications far beyond the Arctic,” Janetzke-Wenzel told delegates.

Germany is one of the non-Arctic countries that is a permanent observer to the Arctic Council and has special interest because of its role as a major international shipper. Six years ago, a pair of German merchant ships became the first from outside Russia to cross the Northern Sea Route in a single season.

Use of the Russian Northern Sea Route has been more active than that of the North American Northwest Passage, statistics indicate. Thirty-one ships transited between Asia and Europe via the Northern Sea Route in 2014, while another 22 used part of the route, Northern Sea Route Information Office (NSRIO) statistics said. Most were under Russian flags. In 2013, 71 vessels used the Northern Sea Route, NSRIO statistics said.

According to data from Transport Canada, 13 ships fully transited the Northwest Passage in 2014 compared to 22, 30, 20 and 17 respectively in the previous four years.

Janetzke-Wenzel said the Arctic is a fragile environment of global significance and the retreat of sea ice is not yet well understood. But she said the changing nature of the Arctic could have implications for geopolitics, the environment, mineral extraction, tourism and fishing. "Government is a key factor for sustainable and responsible development in the region," she said.

Germany published its Arctic Policy Guidelines in 2013 which said that Germany is committed to ensuring the Arctic is used for peaceful purposes only. In addition, Germany remains committed to international and regional conventions—in particular the United Nations Convention on the Law of the Sea, the MARPOL Convention, the conventions for the protection of the marine environment and on biological diversity, and the Spitsbergen Treaty—which form the legally binding framework for states' rights and obligations with respect to the Arctic.

Janetzke-Wenzel said rules in the UN's International Maritime Organization's Polar Code should be mandatory. This code (formally The International Code for Ships Operating in Polar Waters) could enter into force by Jan. 1, 2017, following approval of certain environmental provisions by the Marine Environmental Protection Committee of IMO. The Polar Code would create legally binding rules under international law for a range of shipping operations in waters surrounding the poles.

The Netherlands has keen interest in melting Arctic sea ice and corresponding rise of the oceans, given that most of the nation is below sea level, Swarttouw said. "Economic activity in the Arctic needs to be managed in a sustainable way," he said. "All scientific research that is being done there will have our absolute and full support." Swarttouw said the Netherlands is committed to protecting and preserving Arctic biodiversity and supports the transnational protection of Arctic natural areas.

4. Report Says EU's 2050 Green Goals Will Need Radical Policy Shifts

The European Union will need radical new policies to reach goals for safeguarding the environment by 2050 after limited progress in curbing pollution and climate change, the European Environment Agency (EEA) said recently. "We need to start now," Hans Bruyninckx, head of the EEA, told reporters of a five-yearly environmental report that said "profound changes" in technologies, policies and lifestyles were necessary to achieve long-term green targets.

EEA said Europe -- backed by some of the toughest environmental legislation in the world -- had improved air and water quality, cut greenhouse gas emissions and raised waste recycling in recent years. "Despite these gains, Europe still faces a range of persistent and growing environmental challenges," including global warming, chemical pollution and extinctions of species of animals and plants, the report said.

Europe is not on track to realize by 2050 its vision of "living well, within the limits of our planet", as agreed in 2013, it added. The report indicated that most Europeans were using more than four

hectares (10 acres) of the planet's resources each year -- more than double what it rated a sustainable ecological footprint.

Seas are suffering from pollution and over-exploitation, it said. Over-fishing has declined in the Atlantic and Baltic but 91 percent of Mediterranean stocks were over-fished in 2014.

The European Commission has estimated that a shift to a greener, low-carbon economy by 2050 will require investments of an extra 270 billion euros (\$303 billion) a year, or 1.5 percent of EU gross domestic product (GDP) in coming decades.

The EEA said Europe could benefit economically from greener cities, industry, transport and agriculture. "This is not a threat to well-being ... For Europe this is a major opportunity," Bruyninckx said.

Illustrating a needed leap in thinking, he said transport policy now focused on ever tougher fuel efficiency standards for gasoline-powered cars. For 2050, the world would need zero-emissions vehicles run on hydrogen or green electricity.

Among areas of progress, the EU has cut greenhouse gas emissions by 19 percent since 1990 while achieving a 45 percent increase in economic output, the report said. The EU plans an emissions cut of 40 percent by 2030.

Bruyninckx said 2050 green goals were not about some remote future, noting that Europeans born today will be 35 in 2050 with more than half their expected lifetimes before them.

5. European Parliament Approves Changes to Truck Design Rule to Boost Fuel Efficiency

On March 10th, the European Parliament approved a directive that updates European Union rules on truck design, including allowing more aerodynamic cab shapes that should lead to cuts in fuel consumption and reduced greenhouse gas emissions. The directive, approved by European Parliament lawmakers at a sitting in Strasbourg, France, amends a 1996 EU directive on maximum authorized dimensions and weights of heavy goods vehicles (96/53/EC).

The amending directive will permit rounded truck cab shapes as an alternative to the current square cabs allowed on EU roads, and will authorize additions of fairings to reduce wind resistance.

Under the amending directive, the European Commission, the EU's executive arm, will be required to adopt updated safety regulations for new truck designs, after which there will be a three-year period before new designs are approved. Consequently, more aerodynamic trucks should appear in the EU in 2021 or 2022.

The commission said in a statement March 10 that current EU square truck cab designs are the "least aerodynamic," and that rounded shapes could result in truck fuel savings of 7 to 10 percent, with associated greenhouse gas reductions from reduced burning of fuel per mile traveled.

The amending directive has already been backed informally by the European Parliament and member states represented in the Council of the European Union. It will be finalized when formally approved by the council and published in the EU Official Journal.

6. Spain Updates Subsidy Program to Replace Gas Guzzlers with Electric, Hybrid Cars

Spain's Ministry of Industry, Energy and Tourism has approved a vehicle subsidy program to replace older model cars with electric, hybrid or more fuel-efficient vehicles with reduced carbon dioxide emissions. Royal Decree 124/2015, which regulates the direct concession of subsidies under Spain's Efficient Vehicle Incentives Program (PIVE-7), went into force March 1.

This seventh version of the government subsidy program reserves 175 million euros (\$196 million) for vehicle purchases by individuals and some companies. Subsidies are for at least 2,000 euros (\$2,215) per vehicle, with half of that coming from the government and the rest from participating manufacturers and dealerships.

Subsidies are available for new vehicles replacing a car more than 10 years old or a light commercial vehicle or truck more than seven years old. Subsidies are only available for those who owned the older car for at least a year, and only if the older car is still driveable.

ANFAC, which represents major global vehicle manufacturers like General Motors Corp., Toyota Motor Corp, and Volkswagen AG, said the median age of cars on Spanish roads is 11.3 years.

7. Italy Moves to Tighten Environmental Crime Law

The government of Italian Prime Minister Matteo Renzi is pushing a plan that for the first time would criminalize an array of environmental abuses.

A version of the proposal was passed a year ago by the lower house of Italy's Parliament and then changed—environmental groups said it was toughened overall—by the upper house, and that version was passed March 5. The bill now has been sent back for approval to the lower house, where the government has put its weight behind passage.

The proposal would criminalize environmental abuses that fall into four major categories: illegal pollution that causes measurable harm, environmental destruction, blocking environmental monitoring and the trafficking of radioactive waste.

The measure would allow for criminal penalties, as well as leniency for companies without a history of environmental abuse.

Under current law, only two environmental abuses are considered criminal in Italy: organizing the illicit trafficking of environmental waste, which has been a crime since 2001, and unapproved trafficking in combustible substances, which has been classified as criminal since 2014.

Renzi's spokesman said the new measures would provide tools for law enforcement to confront companies guilty of repeated abuses and to curb activities of the "eco-mafia," the name given to environmentally harmful activities of organized crime organizations.

Environmental and anti-crime groups also support the measure, with an association of 26 such organizations calling for quick passage.

But Giorgio Squinzi, president of the industrial lobby group Confindustria, said the rules would be a "drag" on Italian businesses and the measures should be modified to differentiate between systematic abuses and accidents that might result in temporary environmental problems.

8. Poland Agrees to Adopt Anti-Air Pollution; Program Aimed at Assuaging European Union

Poland's Ministry of the Environment said the country will adopt a national air pollution-prevention program aimed at bringing the country in line with European Union air quality standards. Poland needs to take fast action to improve air quality if it does not want to be brought before the European Tribunal of Justice for lacking adequate regulations on air quality, Environment Minister Maciej Grabowski said on March 11th.

The urgency of the matter—and pressure from the European Commission—prompted his ministry to work out a Domestic Plan for Air Protection, released March 9. The plan includes broad outlines for bringing Poland into compliance with EU standards, but few specifics.

The EU's directive sets out a series of measures for assessing ambient air quality in member states to prevent or reduce harmful effects of pollution on human health and the environment.

Poland's air protection plan is a strategic document for achieving those measures and “it will be discussed for about one month by various ministries and then approved by the government,” said Environment Ministry spokesperson Joanna Jozefiak.

“The document lacks concrete proposals and clear goals on how to improve air quality in Poland,” Katarzyna Guzek, spokeswoman for Greenpeace, told reporters. “We hope that the environment ministry will include critical remarks about the document, which undoubtedly will come.”

Grabowski said local governments in the rural areas and cities, in particular, should focus on reducing the emission of fine particulate matters such as PM-2.5 and PM-10. According to the ministry, the coal furnace heating systems in many Polish households generates more than 88 percent of PM-10 size emissions.

The nation, which has some of the most polluted air in Europe, is heavily dependent on coal-powered energy. Poland produces about 77 million metric tons of coal annually and 24 million metric tons out of the total is used by households. Most homes still use coal for heating.

The European Commission, the European Union's executive arm, sent the environment ministry a notice in February urging Poland to take action to combat poor air quality. The commission warned that if Poland failed to comply with Air Quality Directive 2008/50/EC, it would bring the country before the European Court of Justice, which could impose fines on Poland.

Jozefiak said the European Commission has backed off since the publication of the document. “We are in constant touch with the European Commission on the subject of the improvement of air quality in Poland,” she said. “At present, such the threat of a fine has been eliminated.”

9. OECD Says Poland Should End Coal, Diesel Incentives for Environmental Reasons

Poland should eliminate tax and other incentives for diesel fuel and coal in a wider effort to reduce its reliance on dirty fossil fuels, according to an Organization for Economic Cooperation and Development report. The 204-page environmental performance review said since joining the European Union in 2004, Poland has reduced its economy's growth in carbon dioxide emissions. From 2001 to 2012, it had a 56 percent jump in gross domestic product, with just a 1 percent

increase in carbon dioxide emissions. But fossil fuels still make up 91 percent of Poland's energy supply compared to the European Union average of 73 percent.

Poland has the OECD's fourth most carbon-intensive economy, with carbon dioxide emissions of 0.42 metric tons a unit of GDP in 2012 compared an average of 0.31 tons a unit for OECD's 34 member countries.

Poland, a big diesel user, had Europe's highest level of air pollution from fine particulate matter in 2012. Outdoor air pollution causes thousands of deaths annually in Poland, from respiratory and circulatory disorders, while indoor pollution from inefficient coal heaters also creates serious health risks, the organization said.

Poland, the EU's top coal producer and consumer, offers tax breaks on coal, particularly for electricity generation, households and public administrations, and heating by energy-intensive industries. These reduce incentives to save energy and switch to cleaner burning fuels.

As in many EU countries, diesel still accounts for the majority of energy use in Poland's transport sector; the OECD recommended increasing excise tax rates on diesel.

Poland is one of the few European countries without explicit vehicle taxes linked to carbon emissions, promoting large imports of older, secondhand vehicles. Since 2000, the country's emissions from road transport has expanded nearly 70 percent. "While theoretically less efficient than taxes on fuel or emissions from an environmental point of view, taxes [on vehicle emissions] can nevertheless play a large role in affecting the level and composition of a national fleet," the OECD said.

The report also recommended shifting investment incentives toward cleaner energy sources and forms of transport. For example, Poland has invested most of the EU structural funds it has received since 2007 in road transport. It also should make rail infrastructure investment a priority, the report said.

10. New Car CO2 Continues To Fall

New car emissions fell by 2.6% last year to beat the 2015 EU target early and by a significant margin, the European Environment Agency (EEA) has reported. New cars emitted on average 123.4g of CO₂/km last year according to the EEA's provisional data. This beats the interim goal of 130g for 2015. Average new car CO₂ must fall to 95g by 2021 under EU law.

Emissions fell less than in 2013 when a 4% drop was recorded.

The efficiency gap between petrol and diesel cars, which made up 53% of sales, narrowed to below 3g CO₂/km, about one seventh of the gap in 2000.

The most efficient cars were sold in older member states. The Netherlands, Greece and Portugal saw the most efficient vehicle sales with 107g, 108g and 109g CO₂/km respectively. The least efficient cars were bought in Estonia, Latvia and Bulgaria.

The number of new cars sold in the EU increased in 2014 for the first time since 2007. Electric vehicles continued to constitute a small proportion of sales at 0.3%.

The EEA noted that the current testing procedure “does not necessarily represent real-world driving conditions”. It will publish a report later this year giving the reasons for the growing differences between official figures and real world driving conditions. A new testing procedure for vehicle CO2 emissions is likely to come into operation in 2017, pending a change in the law.

Overall, cars sold in 2014 were 12% more efficient than in 2010, when monitoring started under current legislation.

The EEA data did not indicate if car manufacturers have met individual targets for CO2 emissions. Figures on manufacturers’ performances will be published in the autumn.

11. Vatican: Papal Encyclical on Environment ‘Mostly Complete,’ to Be Released in June

On April 24th, Vatican officials said that the papal encyclical on the environment is “mostly complete” and will be released in June. The environment encyclical, according to Vatican officials, will focus on the central message of “human ecology” and the notion that inequality and waste are linked to climate change and other environmental woes.

Federico Lombardi, the Vatican's spokesman, said that Pope Francis hopes the document will serve as a “moral barometer” and help “shape the discussion” at the year-end climate summit in Paris, which aims to produce the world's first global agreement to confront climate change.

Environmentalists are pleased that the pope is getting involved in the debate over climate change, but many conservative and religious groups aren't. The Chicago-based Heartland Institute, for example, a leading libertarian think tank, is holding a series of briefings on April 27 and 28 to “inform” the pontiff about their skepticism about climate science.

The April 24 Vatican briefing was called to set the stage for the April 28 Protect the Earth; Dignify Humanity workshop hosted by the Pontifical Academy of Sciences. United Nations Secretary-General Ban Ki-moon, a strong advocate for international cooperation to confront environmental issues like climate change, will be a keynote speaker.

12. Road Pollution at Pram Height Studied In Glasgow

The initial findings of a six-month study of pollution levels at both average adult and child pram or buggy height on Glasgow city center roads were presented at the annual Air Quality and Emissions Show 2015 in Telford on April 23. Ricardo-AEA's Stephen Stratton, who led the study, presented the initial findings.

Commissioned by the Scottish Government, the aim of the study was to determine the relationship between height from the pavement and roadside air quality, as well as looking at seasonal variances and possible differences between mobile air quality monitoring and fixed, static sampling methods.

According to Ricardo-AEA, which carried out the study, while most vehicle emissions occur less than one meter above ground, current sampling and monitoring strategies do not take account of the possible variations in air quality with height above the ground and therefore may not adequately reflect these variations. As a result, Ricardo-AEA developed a mobile air quality station with a range of equipment capable of measuring a number of pollutants at the average

height of a child pram or buggy (0.8 meters) as well as the average height of an adult (1.68 meters) simultaneously.

The mobile station measured particulate matter PM2.5, black carbon, ultrafine particles, nitrogen dioxide, sulfur dioxide, carbon monoxide, carbon dioxide, ozone and benzene, as well as meteorological conditions and temperature.

Stratton said that such a study combining mobile monitoring with monitoring at more than one height has not been carried out before: "This is the first time that this type of study has been carried out. The results confirm what was seen in the literature review."

According to Mr. Stratton, while the full results are "due to be published soon", initial analysis indicates that there are different pollution concentrations at different heights. However, he emphasized that this is heavily dependent on the pollutant, source of the pollutant, meteorological conditions and also the microenvironment, adding that there is "quite a lot of variation" in the findings between different pollutants.

For instance, at the 0.8m pram/buggy height, results appeared to generally show higher concentrations of the likes of PM10, PM5.0, PM2.5 and black carbon. At 1.68m, meanwhile, there were higher concentrations of sulfur dioxide, carbon dioxide and nitrogen dioxide

And, regarding the differences found between mobile and static sampling, he said: "We saw much higher concentrations of PM2.5 and PM10 while walking around than at the monitoring site."

However, Mr. Stratton said that the study did not look into whether there were significant variances in pollution levels at difference distances from roadsides. And, as it was a relatively small study only looking heights below three meters, he said: "Further work could be done to see whether there is a difference [in pollution levels] at different heights."

Method

A predetermined route along Glasgow city center roads was used to carry out the sampling with the mobile monitor on two days each week between February and August 2014. Eight mobile sampling exercises took place along the route, with data collected for each day of the week during the six month period. In addition, six co-location sampling exercises were simultaneously undertaken at a fixed automatic monitoring site in the city for comparison.

Glasgow was chosen as the location for the study due to it being a large, busy urban area, as well as its convenience, with Ricardo-AEA's Scotland office being located on nearby Blythswood Square in the city.

13. Lufthansa Fights ETS Rules in Court

Lufthansa-owned Swiss International Air Lines has received the green light to challenge the 2013 emissions trading system (ETS) 'stop the clock' law in the EU court. The EU court will have to decide whether the Swiss flag carrier can claim damages against the European Parliament and Council for losses it suffered as a result of having to surrender extra emission allowances. The court will also be asked to decide what compensatory action should be taken by the UK, where the airline is ETS-registered, if the airline is found to have been discriminated against.

The EU excluded Switzerland from the 'stop the clock' derogation from 2012 in spite of strong opposition from the Swiss government, which argued that the country should be exempt along with every other non-member of the European Economic Area, such as the US and China.*

The EU decision means carriers including Swiss International Air Lines must submit ETS allowances for CO2 from flights between Switzerland and EU destinations in 2012.* EU data indicates that the airline was liable for 1.2 million tons of CO2 under the ETS in 2012 but received only around 600,000 allowances free, meaning it had to buy around 620,000 allowances.

Swiss International Air Lines, a wholly owned subsidiary of German air giant Lufthansa, is challenging the validity of Switzerland's exclusion from the derogation, arguing that the EU legal principle of equal treatment has been breached.

It took an initial case in the UK high court, which rejected its arguments. But the UK appeal court agreed this month to refer the case to the EU court. The first UK ruling argued that the EU is not obliged to extend equal treatment to all non-EU countries as part of its foreign policy, and the EU was entitled to exclude one country from the 'stop the clock' derogation.

The EU implemented the derogation to defuse tension in the International Civil Aviation Organization (ICAO) negotiations on a global climate deal for aviation. The UK court said the EU was "well within its margin of political discretion" in implementing the derogation in its current form.

But in the appeal ruling, the judge said the question of the EU's political discretion "was not free from doubt". "I regard it as at least arguable that, if the principle of equal treatment applies in this situation, the EU exceeded the bounds of its discretion by singling out Switzerland for special treatment," the judge said.

14. EU Audit Slams Waterway Freight Schemes

EU auditors have branded as ineffective the bloc's billion-euro attempt to clean up freight transport by shifting traffic from roads to inland waterways. The EU has failed in its repeatedly stated policy aim of shifting freight to rivers and canals, with scarcely any change identified between 2001 and 2012, the European Court of Auditors said.

The criticism comes just three weeks after research for the European Parliament found the EU's attempt to stimulate short-sea shipping as an alternative to road freight had also had a limited impact.

Inland water transport is more energy efficient, quieter and less greenhouse gas-intensive than road transport. The EU's 2011 transport strategy calls for a shift to waterborne transport and the European Commission proposed policies with the same aim in 2013.

Both the 2011 and 2013 plans noted that navigability of rivers and canals is the major barrier to boosting inland waterway freight. But in spite of a policy objective of reducing barriers such as bridges that are too low or stretches of water that are too narrow, EU-funded projects have done little to address this problem, the auditors said. In many cases, even when barriers were eliminated, surrounding barriers remained meaning overall navigability was not improved, they said.

The EU allocated over €1.2bn to inland waterways over 2007-13 from its Trans-European Network for Transport (TEN-T) and Structural funds, although some of this money was spent on research rather than infrastructure projects.

The Commission rejected many of the auditors' criticisms, including that the share of waterway transport had not increased. If 2006 were used as a base year rather than 2001 a 1% increase would be found, the Commission said, adding that 2006 was when substantial EU finance to waterway transport began.

Neither did it accept the auditors' claim that EU inland waterways strategies were not underpinned by appropriate analysis, including of the potential benefits of waterway transport.

Projects implemented to date will have a greater impact over time as more improvements to waterways take place, the Commission said. EU finance was used "in line with the priorities of the respective financing programs", it added.

The audit covered EU policy and strategy from 2001 on, and involved on-the-spot checks of 12 EU-funded projects in Belgium, the Czech Republic, Germany and Hungary.

15. Supreme Court Urged To Force UK Government to Act Over Air Pollution

The UK's Supreme Court has been urged to force the government to adhere to EU rules on air pollution, which campaigners say is responsible for nearly 30,000 deaths a year. ClientEarth, a member of the Healthy Air Campaign, appeared before the court in the latest chapter of a long-running case against the government, reported the Guardian.

The group, which describes itself as "activist lawyers committed to securing a healthy planet," originally brought its case in the High Court in 2011, challenging the government's proposals to address harmful levels of nitrogen dioxide emissions.

When the case originally went to the Supreme Court in 2013, judges agreed that the country was in breach of the EU's air quality directive. Now, ClientEarth's Ben Jaffrey told the Supreme Court that he also wanted to secure "a mandatory order requiring preparation of a new air quality plan that complies with the law." The group says initiatives to combat the problem such as congestion and road charging as well as low emissions zones should be implemented as soon as possible and ideally inside the next three months.

According to the Department for Environment, Food and Rural Affairs (Defra), the government's case is that due to the general election, it cannot meet such a deadline, and that its own proposals are "game-changing."

Representing Defra, Kassie Smith QC said: "Reducing nitrogen dioxide levels is neither easy nor quick and so plans will be focused and detailed. These are issues that take a great deal of time to address because of the nature of the pollutant and the nature of the sources of the pollutant."

ClientEarth lawyer Alan Andrews told the Guardian: "We can't just take Defra's word for it. The court needs to step in and force Defra to come up with a new plan that complies with EU law in the shortest timespan possible. We can't rely on vague assurances given by the government."

EU member states had until 2015 to comply with regulations, a deadline the UK missed, and the government says the country is unlikely to meet those criteria until 2030 at the earliest, hence the presentation of its own plans.

One problem is the belated discovery that diesel vehicles, previously treated with a favorable tax regime than petrol-fuelled cars because they were seen to be friendlier in terms of emissions, are in fact more harmful to the environment.

It is anticipated that the Supreme Court's decision will be rendered before the end of the year, and ClientLaw says: "The government's plans should then be overturned as unlawful, so that would require a new plan anyway, but we don't think that would be good enough. "A mandatory order is urgently needed," Andrews insisted.

Earlier this month, the government issued a "very high" air pollution warning for parts of south east England due to anticipated record levels of smog. At the time, Keith Taylor, Green Party MEP for the region affected, told the Guardian: "Whoever forms the next government, one of the first things they must do is to urgently address this public health crisis that currently only seems to be getting worse."

While the British government has been criticized by many campaigners for its approach to the issue, initiatives elsewhere such as a license plate ban in Paris, which permits vehicles with even- or odd-numbered plates to circulate on alternate days, have been highlighted as examples to follow.

Simon Birkett, director of Clean Air in London, said: "This is the biggest, most serious air pollution or particle episode since the so-called Sahara dust episode a year ago. "If there is one lesson this week, it's that we must follow the lead of cities like Paris that are issuing public health warnings, restricting traffic and putting forward ambitious plans to triple cycling rates within five years," he added.

While much of the focus on air pollution in the UK is on London – last month, it was revealed that the 50 worst locations monitored are all in the capital, each double the EU threshold – the problem is a national one.

Last week, Philip Insall, Director of Health for Sustrans said: "The poor state of air pollution in Britain is both criminal and a national embarrassment. "We know that local air pollution is causing at least 29,000 premature deaths a year and we know that it is primarily due to emissions from motor traffic. It's clear that we can only address this by reducing reliance on motor vehicles.

"The next government will need to get a grip on air pollution. That will mean serious, dedicated investment and an effective program of action to help more people out of their cars and choosing walking and cycling for short journeys."

The EU directive at the center of the case set limits to the level of various pollutants - the deadline for compliance with the limits for nitrogen dioxide was January 1 2010. Each member state was required by the directive to define "zones" and "agglomerations" to which the pollutant limits would apply - Article 13 imposed an absolute obligation to ensure that limits and margins of tolerance for nitrogen dioxide were not exceeded in any zone or agglomeration after the deadline.

The limits imposed by the directive are based on scientific assessments of the risks to human health associated with exposure to nitrogen dioxide. In the UK, road traffic and domestic heating are the main sources of nitrogen dioxide in most urban areas.

ClientEarth said air pollution caused 29,000 early deaths a year in the UK - more than obesity and alcohol combined.

The UK breached EU limits for nitrogen dioxide in 40 of 43 areas of the country in 2010.

Under plans drawn up by the UK to meet the Air Quality Directive rules, 16 areas including Greater London, Greater Manchester, Glasgow and the West Midlands would not even meet the pollution limits by a potential extended deadline of the start of this year.

The ruling by the European court found that the UK was in breach of EU law and should have created plans to tackle air pollution in those areas by January 1 this year at the latest. It said the UK courts should order the Government to establish plans to cut nitrogen dioxide pollution as soon as possible.

ClientEarth has said under existing plans, some areas such as London, Birmingham and Leeds would not meet the pollution limits until 2030, 20 years after the original deadline of 2010.

Keith Taylor, Green MEP for South East England, said: "In the same week that the UK has experienced severe levels of air pollution it comes as no surprise that the Government are being taken to court because of a failure to act.

"The Green Party has been warning everyone for years about the serious health problems that are associated with air pollution.

"How many court cases will it take before the Government takes the issue seriously?"

He added: "We need bold measures to tackle this public health crisis such as making public transport free in cities and towns on days of high air pollution".

The issue the Supreme Court is to decide is whether, in areas where compliance with nitrogen dioxide limits could not be achieved by 1 January 2010, the directive required the Government to have prepared an air quality plan which demonstrates compliance by January 1 this year - and if so "what remedies must the court provide" where an air quality plan showing such compliance has not been prepared.

16. Shipping NOx Cuts to Offer 'Limited' Flexibility

The shipping sector could make only a limited contribution to many EU countries' NOx emission reduction targets for 2030, a Dutch-Finnish study has found.

The mooted introduction of NOx emission control areas (NECAs) in the North Sea and Baltic Sea by 2016 would have the biggest impact in Estonia, Denmark, Sweden and the Netherlands, which could meet between 4% and 9% of their targets through emission cuts in the shipping sector, according to the Dutch Environmental Assessment Agency and the Finnish Meteorological Institute. But the sector's contributions would be below 1% in Belgium, Lithuania, Germany, France and Poland. Latvia, Finland and the UK would fall somewhere in the middle, the researchers said.

Postponing the introduction of the NECA until 2021, which looks likely given the current state of the negotiations, could cut its contribution to the targets by nearly half, the research suggested.

The European Commission's proposal for a revised National Emission Ceilings (NEC) Directive offers member states the possibility to offset up to 20% of cuts to NO_x, SO_x and PM_{2.5} levels achieved in the shipping sector against emissions of the same pollutants from land-based sources.

The countries with the highest potential for offsetting generally had a relatively small target for NO_x emission reductions under the NEC proposal, while a NECA is expected to yield a relatively large reduction in their exclusive economic zone, according to the study.

MEPs have indicated that they would like to remove the proposed flexibility.

17. MEPs Indicate Support for 2025 Air Pollution Goals

MEPs across the political spectrum voiced their support for binding 2025 air pollution targets, but methane goals look set to prove divisive. A debate in the European Parliament's environment committee indicated broad support for binding mid-term targets as proposed by MEP Julie Girling of the right-wing ECR group for the revision of the National Emission Ceilings Directive.

"Anything that produces a much more linear reduction is welcome," said Seb Dance of the S&D group, arguing in favor of early action.

MEP Peter Liese of the center-right EPP group dismissed binding intermediate targets, but his colleague Karl-Heinz Florenz argued that they are needed to ensure that member states do not leave the necessary reductions until it is too late to meet their 2030 targets.

MEPs disagreed on whether methane should be targeted under the air pollution rules. Mr. Liese said his group does not support methane targets, which could amount to double regulation, as the greenhouse gas is already addressed under the EU's climate law. But Mr. Dance said it is important to include the pollutant due to its role in contributing to air pollution as an ozone precursor. "Reducing emissions overall should be the spirit here," he argued.

A high-level Commission official pointed out that the reduction commitments on methane will take place under the 2030 climate and energy package, avoiding double regulation.

Ammonia targets also generated some debate with several speakers expressing sympathy with concerns raised in the agriculture committee. EPP group MEP Annie Schreijer-Pierik argued that the targets would hit the agriculture sector disproportionately. But Mr. Dance said ammonia is a key carrier of particles and therefore needs to be addressed. Ms. Girling has proposed to exempt ammonia from 2025 targets.

There were also calls from the S&D and from ALDE to increase the ambition level of the emission reductions in line with a 7% additional potential highlighted in an impact assessment commissioned by the Parliament. But Ms. Girling argued that the Commission would need to study the work before it can be translated into legislation.

MEPs also largely agreed on removing the possibility to offset cuts to NOx, SOx and PM2.5 levels achieved in the shipping sector against emissions of the same pollutants from land-based sources. (See above story.)

MEPs have until 21 April to table amendments to the draft position with a view to voting on 15 July.

18. MEP Wants To Exclude Methane from Vehicle Pollution Law

New rules on reducing pollution from road vehicles should not include methane when calculating a vehicle's CO2 emissions, according to the MEP leading work on the law. Methane's inclusion would be a burden on the nascent market for natural gas vehicles, which currently represent a small share of car use, said EPP group MEP Albert Dess. Mr. Dess said he "would prefer not to penalize from the start this small category of vehicles which contribute to lowering greenhouse gas emissions" and over which there is uncertainty as to its market share in the future.

The European Commission's proposed changes to 2007 and 2009 vehicle regulations said the effect of methane discharges should be taken into account because it is a "strong greenhouse gas" which should be measured as a CO2 equivalent for "regulatory and consumer information purposes".

If methane emissions become a problem, the Commission should be empowered to propose new legislation, the MEP said.

The draft position would also extend the coverage of the regulations to vehicles weighing up to 7,500kg. The Commission suggested a range of 2,610kg to 5,000kg. The weight extension would avoid "still more double approval procedures and other avoidable administrative steps", he said.

The draft also seeks to curb the Commission's powers to adopt detailed rules on a range of technical issues such as type approval requirements and specific emission limit values. It proposes an initial cut-off date in 2019 for the Commission's power to adopt such delegated acts, rather than the "indeterminate period of time" included in the proposal.

MEPs in the Parliament's environment committee, which leads on the work, have until 19 May to table amendments to the draft position.

NORTH AMERICA

19. Truck Makers Seek Complete-Vehicle GHG Rule

A Notice of Proposed Rulemaking for Phase 2 of the federal GHG/MPG rules has been forwarded to the Office of Management and Budget for formal review. At the moment, the NPRM is slated to be published in the Federal Register sometime in June. With that notice, a period for public comment on the rule will be announced.

Formally entitled "Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles — Phase 2," the new rule is being promulgated by the Environmental Protection Agency and the Department of Transportation's National Highway Transportation Safety Administration and will impact new medium- and heavy-duty vehicles of "model years beyond 2018."

Despite the new rule not taking effect for close to five years from now, Phase 2 was a hot topic for industry suppliers during media briefings at the recent Mid-America Trucking Show in Louisville, KY.

Phase 2 will impose stricter GHG limits and MPG standards than did the Phase 1 rule, which was issued in 2011 and applies to trucks manufactured for model years 2014 through 2018. Phase 1 focused on boosting fuel efficiency, and thus reducing GHG, by refining tractors and their engines.

According to EPA, the rationale for Phase 2 is clear: “GHG emissions from this sector are forecast to continue increasing rapidly; reflecting the anticipated impact of factors such as economic growth and increased movement of freight by trucks. This rulemaking would significantly reduce GHG emissions from future medium- and heavy-duty vehicles by setting GHG standards that will lead to the introduction of GHG reducing vehicle and engine technologies.”

In its current “proposal” state, the rule is vaguely worded. EPA has indicated merely that it “will include an evaluation of regulatory alternatives.” However, it has previously been reported that under Phase 2, EPA and NHTSA will assess trailer aerodynamics as well as engine and powertrain improvements, weight reduction, tires, automatic engine shutdown systems, water pumps, fans and other accessories, and even consider hybrid technologies.

On the other hand, EPA has also stated that “the proposal is expected to include flexibility tools such as averaging, banking, and trading of emissions credits as an alternative approach for compliance with the proposed program.”

For truck builders and engine makers as well as suppliers of any component or device that can help cut GHG and boost MPG, the sooner the final Phase 2 rule is issued, the better. Only when they can read the specifics, can they determine what combination of solutions they will deploy to meet the requirements for the specific vehicle types covered by the tighter rule.

Indeed, Environmental Protection Agency Administrator Gina McCarthy pointed out on March 30, when interviewed live by Politico, that the Phase 2 wording will communicate “long-term market signals” on the technologies that EPA and NHTSA expect will come into play to meet the rule.

For their part, during the Mid-America Trucking Show, truck builders signaled their strong preference for the Phase 2 rule to require a “complete vehicle standard” instead of the engine-only standard put forth by the Phase 1 rule. Taking the entire vehicle’s impact into account would allow truck builder to leverage the increasing contribution being made to aerodynamics and weight reduction by various trailer-specific technologies.

Referring to the Phase I rule, Martin Daum, president and CEO of Daimler Trucks North America, noted during a MATS media briefing that DTNA aims to be the first OEM to attain certification to the GHG2017 standards. Turning to Phase 2, he said that a complete vehicle standard was preferred and that it should incorporate a “test cycle that mimics the real world.” Daum said that total cost of ownership should be addressed by incorporating “mature and feasible technologies [that] meet customer expectations of an 18- to 24-month payback “We need smart regulations that should support and foster free markets, and fuel efficiency is something where I want a lot of variables we can optimize,” he explained.

Olof Persson, president and CEO of Volvo Group, parent of Volvo Trucks North America and Mack Trucks, also endorsed Phase 2 being based solely on a complete vehicle standard during his address at MATS. “First of all,” he said, “a separate engine standard would be redundant,

since the engine would be accounted for in the complete vehicle assessment. And the last time I looked, there were no loose engines pulling freight down American highways. “But more important than redundancy,” he continued, “an engine standard— particularly if it’s stringent — could force the use of technologies that could bring seriously negative consequences for our customers, in terms of cost, weight, space, cooling, and so on.” Persson cautioned that “If reason does not prevail [with Phase 2], the industry could be faced with a mandate for increased engine efficiency that actually reduces total vehicle efficiency in real-world conditions. That would obviously be a loss not just for truck customers, but for society and the environment.”

Also at MATS, Preston Feight, general manager of Kenworth Truck Co. and vice president of Paccar, told HDT that he expects the Phase 2 rule “will kick in for the 2020 model year” and that the OEM “views the rule as an opportunity. GHG reduction [from trucks] will pay a benefit for our customers as it will increase miles per gallon. “What’s still up in the air,” Feight added, “is whether this time there will be a comprehensive vehicle regulation, which would include the trailer’s contribution” to fuel efficiency.

20. Senators Want Black Carbon Considered In Updates to Air Rules for Arctic Drillers

Sens. Brian Schatz (D-Hawaii), Sheldon Whitehouse (D-R.I.), Elizabeth Warren (D-Mass.) and four others are asking the Interior Department to take the climate change impact of black carbon, or soot, into account when it proposes updated air permitting regulations for offshore drilling in the Alaskan Arctic.

“Current DOI regulations for air emissions from outer continental shelf operations become less stringent the farther the source is from the shore,” they wrote in an April 1 letter to Interior Secretary Sally Jewell. “Yet this approach does not take into account the harmful effects of black carbon on snow and sea ice in the Arctic far from shore.”

The Arctic, which is warming twice as fast as the rest of the planet, is especially sensitive to black carbon—an air pollutant harmful to human health and a potent driver of climate change—because it covers white snow and ice with heat-absorbing black particles that accelerate melting.

This rapid warming is driving more interest in oil and gas drilling in the Arctic from companies such as Royal Dutch Shell Plc and ConocoPhillips Co., which on March 31 got one step closer to drilling in Alaska’s Chukchi Sea when Interior upheld a supplemental environmental impact statement for 2008 lease sales.

The senators said “introducing new sources of black carbon pollution in the Arctic from ships and heavy equipment used to drill for oil and gas would add a new threat to the fragile Arctic.”

Responsibility for regulating air emissions from offshore energy facilities is split between the Environmental Protection Agency and the Interior Department’s Bureau of Ocean Energy Management, depending on location. BOEM regulates air emissions off the coast of Alaska, although so far there has been limited drilling activity subject to permitting requirements, according to a recent Government Accountability Office report.

As the region receives more attention from the oil and gas industry, the bureau is now working on revisions to its air quality regulations, which have not been substantively updated since 1988. When Interior proposes those updates, which are expected “soon,” the department should seek feedback from the public on “whether our current understanding of the Arctic warrants a

requirement that black carbon pollution be controlled due to its effects on ice, snow, and sea ice,” the senators said in their letter. They also urged the department to seek comment on technologies to control black carbon pollution from the ships and equipment associated with oil and gas drilling.

Sens. Bernard Sanders (I-Vt.), Barbara Boxer (D-Calif.), Edward Markey (D.-Mass.) and Angus King (I-Maine) also signed the letter.

21. Featured DENR Report Recommends Changes to Auto Emissions Testing Program

Emissions tests for cars and trucks are no longer necessary to protect air quality in more than half the counties where state testing is currently required. That was the conclusion of a study the North Carolina Department of Environment and Natural Resources provided the General Assembly.

Legislators in 2013 directed DENR to conduct a study on whether all of the counties covered under the motor vehicle emissions testing program are needed to meet and maintain current and proposed federal ozone standards in North Carolina. Cars and trucks collectively are the largest source of emissions that lead to ozone formation in the state.

“North Carolina’s air quality has improved significantly since emissions testing requirements were expanded for motor vehicles in the early 2000s,” said Donald R. van der Vaart, secretary of DENR. “We studied the air quality improvements for this report and concluded that we could eliminate emissions testing for motor vehicles in numerous counties without harming air quality or violating federal standards.”

The elimination of emissions tests would save car owners \$16.40 per vehicle each year in counties where tests are currently required after the first three model years, state officials estimate. Safety inspections are still required in all 100 counties, costing owners \$13.60 per vehicle each year.

The state currently requires emissions testing in 48 of its 100 counties. The DENR study determined that North Carolina could eliminate testing in 27-to-31 of those counties by Jan. 1, 2016, depending on the level at which the Environmental Protection Agency revises the current national ozone standard.

The EPA proposed a more revised ozone standard in December 2014, and plans to adopt a new standard by Oct. 1, 2015. The current ozone standard is 75 parts per billion (ppb) measured over 8 hours, and the EPA has proposed lowering (or strengthening) the standard to a level in the 65-70 ppb range.

If the EPA sets the standard at 65 ppb, DENR recommends eliminating testing in 27 counties: Brunswick, Burke, Caldwell, Carteret, Catawba, Chatham, Cleveland, Craven, Edgecombe, Franklin, Harnett, Haywood, Henderson, Lee, Lenoir, Moore, Nash, New Hanover, Onslow, Robeson, Rutherford, Stanly, Stokes, Surry, Wayne, Wilkes and Wilson. If the standard is set at 70 ppb, the recommendation includes four additional counties: Granville, Orange, Pitt and Rockingham.

Changes to the counties covered by the program would require legislative approval. The report recommends further analyses during the coming year to determine whether additional counties could be removed from the program after 2016.

22. Slashing GHG Emissions ... Via Traffic Lights?

Researchers with the Massachusetts Institute of Technology (MIT) believe that wholesale reprogramming of city traffic signals could play a critical role in cutting greenhouse gas [GHG] emissions from motor vehicles, while also improving transportation efficiency in the bargain. That's the conclusion reached in a pair of papers by assistant professor of civil and environmental engineering Carolina Osorio and MIT alumna Kanchana Nanduri, published recently in *Transportation Science and Transportation Research: Part B*.

In those papers, MIT said the authors theorize that combining vehicle-level data with less precise — but more comprehensive — city-level data on traffic patterns can produce better information than current systems provide.

Osorio believes taking that “more comprehensive” data and then plugging into new algorithms can allow major transportation agencies to use higher-resolution models of traffic to better “optimize” roadway usage, thus reducing traffic bottlenecks and emission levels simultaneously. “Typically, traffic signal timing determinations are set to optimize travel times along selected major arteries, but are not sophisticated enough to take into account the complex interactions among all streets in a city,” Osorio added. “In addition, current models do not assess the mix of vehicles operating on a road at a given time, so they can't predict how changes in traffic flow may affect overall fuel use and emissions,” she stressed.

For their test case, Osorio and Nanduri crafted traffic simulations based on Swiss city of Lausanne, simulating the behavior of thousands of vehicles per day, each with specific characteristics and activities.

Their model even accounts for how driving behavior may change from day to day; for example, noting how changes in traffic signal patterns can make a given route slower, thus causing people to choose alternative routes on subsequent days.

While existing programs can simulate both city-scale and driver-scale traffic behavior, integrating the two has been a problem. That's why the MIT researchers think that reducing the amount of detail sufficiently to make the computations practical, while still retaining enough specifics to make useful predictions and recommendations, is the way to go. “With such complicated models, we had been lacking algorithms to show how to use the models to decide how to change patterns of traffic lights,” Osorio noted. “We came up with a solution that would lead to improved travel times across the entire city.”

In the case of Lausanne, their model involved 17 key intersections and 12,000 vehicles, while incorporating specific information about fuel consumption and emissions for vehicles from motorcycles to buses, reflecting the actual mix seen in the city's traffic. “The data needs to be very detailed, not just about the vehicle fleet in general, but the fleet at a given time,” Osorio pointed out. “Based on that detailed information, we can come up with traffic plans that produce greater efficiency at the city scale in a way that's practical for city agencies to use.”

In short, Osorio believes merging complex data with less-detailed data to create more “computer-friendly” solutions that result in more practical fixes.

“Agencies are now being asked, whenever they propose changes, to estimate what impact that will have environmentally,” she noted. “Currently, such evaluations need to be made after the fact,

through actual measurements. But with these new software tools, we can put the environmental factors right into in plan's design loop.”

To that end, MIT said its team is now working on a project in Manhattan, among other locales, to test the potential of the system for large-scale signal control.

In addition to timing traffic lights, future simulations could also be used to optimize other planning decisions, such as picking the best locations for car- or bike-sharing centers, Osorio stressed.

23. Kerry Urges States, Cities to Offer Pledges in Run-up to End-of-Year Paris Negotiations

On March 12th, Secretary of State John Kerry urged U.S. states as well as private industry and local governments around the world to offer their own pledges to cut greenhouse gas emissions ahead of year-end talks in Paris that are expected to conclude with a global climate accord.

Kerry said he is optimistic the accord, which is to be the first to include actions from developed and developing nations alike, would be an “absolutely vital first step” toward a global low-carbon energy path. A deal concluded between more than 190 nations, which is to enter into force in 2020, would send a signal “that countries everywhere are moving in this direction” toward low-carbon energy sources, Kerry said. “That’s when innovators and entrepreneurs and investors start to say, ‘this is the future,’” he added.

The secretary said the Paris accord “has to be a truly all-hands-on-deck effort” and urged “all of our partners—business and industry groups, mayors, governors throughout the country and around the world—to announce their own targets, their commitments” in the months ahead. That bottom-up effort “can set an example and create a grass-roots movement towards success” in Paris, Kerry said.

Kerry said the November 2014 pledge by the world's two largest emitters, the U.S. and China, which were “long regarded as the leaders of opposing camps” in the talks provided momentum toward getting a global deal signed. The U.S. pledged to its cut emissions 26 percent to 28 percent by 2025 from 2005 levels; China vowed that its emissions would peak by 2030, or possibly sooner.

The European Union also has announced that it would ratchet up its emissions reduction targets under the Paris deal to cut greenhouse gases 40 percent by 2030 from 1990 levels.

But other global action also is needed, the secretary said, including eliminating subsidies for fossil fuels. “We’ll have to stop government money from going toward nonrenewable energy sources like coal and oil,” Kerry said. “It makes no sense to be subsidizing that, which is why the United States has been helping to drive efforts in the G-20 and APEC [Asia-Pacific Economic Cooperation] to phase out wasteful fossil fuel subsidies,” he said.

The secretary also reaffirmed Obama administration efforts to end U.S. financial support for overseas coal-fired power plants that would increase emissions, a commitment the president included in his 2013 climate action plan. The U.S. Export-Impact Bank and the Treasury Department have since issued guidelines largely prohibiting funding of such overseas projects. Those actions are designed to steer global financial institutions away “from funding dirty power plants and putting public money into those things that we know are going to go in the wrong direction,” Kerry said.

24. Christie's Withdrawal from Air Pollution Compact Has Cost N.J. \$114M, Pallone Says

New Jersey lost millions of dollars in potential revenue when Gov. Chris Christie pulled out of a northeastern compact designed to reduce greenhouse gas emissions, U.S. Rep. Frank Pallone Jr. said at a congressional hearing. Pallone, the ranking Democrat on the House Energy and Commerce Committee, said Christie's decision to withdraw from the Regional Greenhouse Gas Initiative meant the state missed out on revenue from selling permits to emit carbon dioxide. The cost to the state: more than \$114 million so far, and the loss of an additional \$387.1 million through 2020.

"That's money that could be used to support energy efficiency upgrades and job creation like it's doing in Maryland and other participating states," Pallone said as the energy and power subcommittee heard from Kelly Speakes-Backman, a member of the Maryland Public Service Commission and chair of the RGGI board. "New Jerseyans deserve to reap the benefits of this successful, economically efficient program that is reducing carbon emissions and creating jobs in the northeast."

Christie spokesman Kevin Roberts said the governor had good reason to pull out of the compact. "RGGI amounted to nothing more than a tax on business that failed to achieve its goals," Roberts said. "Rep. Pallone may look at that failed program as a missed opportunity to tax our state's job creators and yearn to spend more of their money, but that's simply not acceptable to this governor."

Pallone said the compact would make it easier for New Jersey to meet future emissions standards set by the Environmental Protection Agency. "It seems that the program has been tremendously effective in Maryland and other participating states, and that these states will have a leg up when it comes to meeting the EPA standards," Pallone told Speakes-Backman.

Christie pulled out of the cap-and-trade program in 2011, saying it was "not effective in reducing greenhouse gases and is unlikely to be in the future." The goal was to reduce carbon dioxide emissions from power plants across northeastern and mid-Atlantic states from Maine to Maryland by 10 percent over seven years. Plant operators buy and sell emission credits, with revenue going to states to fund projects for energy efficiency and renewables.

Environmentalists successfully sued in 2012, saying the governor could not unilaterally withdraw from the compact without repealing the regulations, which requires public comment. The state Department of Environmental Protection did away with the rules in 2014.

Christie has vetoed bills passed by the Democratic-controlled state legislature to rejoin the compact.

25. Pemex Lets Contract for Salamanca Refinery amid Budget Cuts

Mexico's Petroleos Mexicanos (Pemex), through a contractor, has let a contract to SENER Ingeniería y Sistemas SA, Mexico City, a division of SENER Group, Barcelona, for work related to the modernization of the Antonio M. Amor refinery in Salamanca, Guanajuato. The revamp is part of Pemex's previously announced \$2.8 billion investment into increasing ultralow-sulfur diesel (ULSD) production at five of the country's refineries.

Under the contract, which was awarded by Samsung Engineering Co. Ltd., SENER will provide detailed engineering for modernizing existing units at the refinery, as well as for the integration of those units with associated off-site installations, SENER said.

The contract, for which a value was not disclosed, follows Pemex's previous award of an \$80 million contract to Samsung Engineering for Phase 1 of the ULSD project at the Salamanca plant, which involves design of a 38,000-b/d hydrodesulfurization (HDS) unit as well as the revamping of the refinery's existing 53,000-b/d HDS unit.

While SENER did not confirm a timeline for its leg of the work at Salamanca, Samsung Engineering previously said initial engineering for Phase 1 of the refinery's ULSD project is due to be completed in September 2015.

A timeframe for Pemex's program to improve the quality of fuels produced in Mexico, however, may face an overall delay. On February 13th, Pemex's board of directors approved a plan to slash its 2015 budget by 62 billion pesos (\$4 billion) to meet broader government spending cuts amid sharply lower crude oil prices, according to a February 16th press release from Pemex. As a result, the company said it has deferred spending for a series of downstream activities, which include refinery modernization projects, as well as those geared at improving gasoline and ULSD qualities.

With many of the original contracts for these projects signed under more favorable market conditions, Pemex also plans to renegotiate these contracts, the company said.

The company did not identify which or how many downstream projects would be immediately affected by the budgetary cuts.

In addition to contracts for the Salamanca refinery, Pemex also let fuel quality-related contracts to the following companies:

- Foster Wheeler USA Corp. (\$584 million) for the Antonio Dovali Jaime refinery in Salina Cruz, Oaxaca.
- Tecnicas Reunidas (\$568 million) for the Lazaro Cardenas refinery near Minatitlan in Veracruz State.
- ICA Flour Daniel (\$737 million) for the Francisco I. Madero refinery in Madero, Tamaulipas.
- ACS Group (\$560 million) for the Miguel Hidalgo refinery in Tula, Hidalgo (OGJ Online, Oct. 14, 2014).

26. In Mexico Oil Market, Mood Moves from Excited to Anxious

Mexico kicked off the opening of its oil industry to great fanfare. At a packed event at the Technology Museum seven months ago, maps flashed on a giant screen showing dozens of oil fields that would be put up for bid to private companies for the first time in more than 75 years. With oil fetching around \$100 a barrel at the time, the projections were ambitious. Over the next four years, Mexico would attract more than \$12 billion in investment a year. By 2018, private companies would be pumping half a million new barrels of oil a day.

Now, oil prices have sunk to almost half that level, and the atmosphere has turned anxious. The question is whether private companies will still be eager to invest. Big energy players have been scaling back their investment plans as oil prices have dropped.

To encourage investors to bid, the Mexican government recently sweetened the contract terms. It is also contemplating delaying some auctions until the price environment improves.

The energy reform is at the core of President Enrique Peña Nieto's efforts to jump-start the economy after decades of anemic growth. The hope is that private companies will invest heavily in developing new oil and gas fields, creating jobs and adding to the government coffers.

Attracting private money has taken on new urgency as low oil prices have sped up the decline at the state-owned oil company, Pemex. Squeezed by high taxes and hobbled by government control, Pemex spends — and borrows — more each year to pump less and less oil. Its daily production has slipped to below 2.4 million barrels, a million lower than its peak a decade ago.

Adding to Pemex's woes, the government has sliced the company's 2015 budget by about \$4 billion. The move stymies the company's push to remake itself as a competitive deepwater producer. Pemex's chief executive, Emilio Lozoya, said that the company would delay some of its independent exploration plans in the Gulf of Mexico and look for deep-pocketed partners.

Mr. Lozoya argues that the company's problems are manageable. "Pemex would be in a situation of real emergency if the energy reform hadn't given us the instruments we now have to use money from third parties to carry out our investment projects," he said in a recent radio interview.

As its financial position weakens, Pemex has begun to cut. A long-delayed modernization at three refineries was postponed. The company didn't renew the contracts of some 10,000 workers employed through outsourcing companies. Pemex also got the union to agree to some \$650 million in cuts to perks and benefits, accept early retirement plans for older employees and leave unfilled positions vacant.

Pemex is even planning for the unthinkable: layoffs among its 150,000-strong work force, including members of its politically powerful union. "There would have to be a reduction," Pedro Joaquín Coldwell, the energy secretary, said recently.

The government had hoped to move swiftly to open its oil fields to private investment, planning to offer monthly auctions for contracts on 169 different blocks, from the Gulf of Mexico to shale gas deposits on the Texas border. But gathering all the information for investors and designing attractive contracts is proving more complicated than expected.

Energy officials admit that a lot is riding on the results of the first auction in July, when the government will award a package of 14 exploration blocks in low-cost shallow waters. "Politically, the success of the first auction is the highest priority," said Mr. Coldwell. "It's the national and international reference."

But the low oil price may delay plans for bids on expensive shale and other oil fields that are more complex.

27. Reducing School Bus Pollution Improves Children's Health

In research involving clean fuels and updated pollution controls to measure the individual impact on children of the federal mandate to reduce diesel emissions, researchers found improved health and less absenteeism, especially among asthmatic children.

A change to ultra-low sulfur diesel fuel reduced a marker for inflammation in the lungs by 16 percent over the whole group, and 20-31 percent among children with asthma, depending on the severity of their disease.

"The national switch to cleaner diesel fuel and the adoption of clean air technologies on school buses lowered concentrations of airborne particles on buses by as much as 50 percent," said Sara Adar, the study's lead author and the John Searle Assistant Professor of Public Health at the U-M School of Public Health. "Importantly, our study now shows measurable health improvements from these interventions, too.



Although the study focused only on school children, Adar said it is easy to imagine similar benefits for other groups of people such as commuters, occupational drivers and people living in communities impacted by heavy diesel traffic.

The team's research appears online in the

American Journal of Respiratory and Critical Care Medicine.¹

The EPA's National Clean Diesel Campaign required the production of cleaner fuel and set stricter emissions standards for diesel vehicles purchased after 2006. It also provided EPA-administered grant-based funding to retrofit, replace or repower older diesel engines, ranging from farm equipment to consumer haulers, and school buses to public transit vehicles. From 2008 to 2010, nearly 20,000 school buses were altered or replaced in effort to reduce the amount of particulate matter and nitrogen oxide released into the air.

The researchers followed 275 Washington state elementary children who rode buses to and from school, before and after their districts adopted cleaner fuels and technologies. Air pollution was measured during 597 trips on 188 school buses from 2005 to 2009.

Technicians went to the schools to perform monthly measurements to check lung function and inflammation, and child absenteeism from school was recorded.

Over the course of the four years, the bus fleet of two school districts was altered with special emissions devices or with the fuel used to power them. Some were fitted with diesel oxidation catalysts or closed crankcase ventilation systems, which are used to reduce tailpipe and engine

¹ Sara D. Adar, Jennifer D'Souza, Lianne Sheppard, Joel D. Kaufman, Teal S. Hallstrand, Mark E. Davey, James R. Sullivan, Jordan Jahnke, Jane Koenig, Timothy V. Larson, L.J. Sally Liu. **Adopting Clean Fuels and Technologies on School Buses: Pollution and Health Impacts in Children.** *American Journal of Respiratory and Critical Care Medicine*, 2015; 150413121110003 DOI: [10.1164/rccm.201410-1924OC](https://doi.org/10.1164/rccm.201410-1924OC)

emissions, respectively. All the buses switched to ultra-low sulfur diesel and some used biodiesel. These fuels are projected to reduce particle generation by about 10-to-30 percent, the researchers say.

Children in the districts missed an average of 3.1 school days over nine months but there was an 8 percent lower risk of being absent in the previous month when riding a bus with ultra-low sulfur diesel fuel. For those riding a bus that was fitted with a diesel oxidation catalyst, there was a 6 percent reduction in the risk of absenteeism.

Using these and other measurements, the researchers were able to extrapolate a 14 million day reduction in absenteeism for the nation's bus-riding children if all vehicles were altered to reduce emissions.

"Our research also suggests that children riding buses with cleaner fuels and technologies may experience better lung development as compared to those riding dirtier buses," Adar said. "This is consistent with recent findings from the Children's Health Study in California, which reported more robust lung development in children with improvements in outdoor air quality."

28. U.S. Will Push for Cuts in Black Carbon, Methane as Kerry Takes Arctic Council Helm

The U.S. will use its two-year chairmanship of the Arctic Council to press for significant action in cutting black carbon and methane, two short-lived but powerful greenhouse gases that contribute to rapid melting of sea ice in the region, Secretary of State John Kerry said on April 24th.

Kerry, on hand at the Arctic Council's Ninth Ministerial Meeting , April 24–25, in the Canadian town of Iqaluit to receive the gavel from Canada, said the U.S. is taking the reins at a "pivotal" time for the Arctic and global efforts to cut greenhouse gas emissions and address climate change. Kerry said he and President Barack Obama "will work every single day" with members of the council "to help prepare Arctic communities" for increased melting of sea ice and other drastic changes already occurring in the region and press Arctic Council member nations to curb black carbon and methane.

The U.S. has been laying the groundwork for using the chairmanship to highlight the need for action on the two super pollutants since last summer, when it named Adm. Robert Papp Jr. as U.S. special representative to the council.

During their April 24 meeting, Arctic nation ministers adopted a Framework for Enhanced Action to Reduce Black Carbon and Methane Emissions.

The council is a multinational body coordinating policies among the eight Arctic states: Canada, Denmark (including Greenland and the Faroe Islands), Finland, Iceland, Norway, Russia, Sweden and the U.S. The U.S. theme for its two years at the helm—each nation essentially selects one at the beginning of the revolving chairmanship—is One Arctic: Shared Opportunities, Challenges, and Responsibilities. It will emphasize Arctic Ocean safety, security and stewardship; improving economic and living conditions for native populations and other Arctic communities, and adapting to climate change.

The enhanced U.S. role comes in the run-up to a year-end summit in Paris, where nearly 200 nations will enter into final negotiations on a global climate accord that would be the first to include actions from developed and developing countries alike.

On curbing emissions, a senior State Department official told reporters hours before Kerry spoke that the U.S. will push for reductions in gas flaring, particularly in the Arctic during oil exploration. Other actions will include the development of a “pan-Arctic digital elevation map” that will assist policy makers and scientists in monitoring reductions in sea ice and other environmental impacts in the region, the official said.

The administration sought a “balanced” approach in its priorities to respond to concerns from environmental groups but also industry, the official said, in an attempt to find “the sweet spot” between the need to prepare for increased economic development in the region, including shipping, and demands that it use its chairmanship to push Arctic nations to curb emissions.

The U.S. priorities are seen as a departure from the economic development focus that has been central to Canada's chairmanship over the past two years, which included the creation of the Arctic Economic Council and adopted the theme Development for the People of the North for its 2013–2015 chairmanship, thus highlighting economic development issues within the Arctic Council.

29. Scientists Explain Why Arctic Matters As U.S. Begins Chairmanship

Rapid changes in the Arctic region could have implications for sea level rise on U.S. coastlines and elsewhere, global greenhouse gas emissions, the fish sticks in your freezer and maybe even our weather, according to a new booklet from the National Research Council. Released on April 17th, the booklet is meant to provide a primer on Arctic issues for policy makers, educators and the general public as the U.S. chairs the Arctic Council for the next two years.

While the State Department is working on its own public diplomacy push, researchers, museums and universities also are using the Arctic Council chairmanship as an opportunity to make more Americans care about a region that few understand, but about which more people are becoming curious.

The Arctic is receiving more attention as climatic changes open up new opportunities for shipping, fishing, tourism and oil and gas exploration. Still, there are a number of misconceptions about the Arctic, according to Fran Ulmer, who chairs the U.S. Arctic Research Commission. “For those of us who either live in or work with Arctic issues, I think there's a newly realized responsibility to reach out and try to increase the level of understanding and fill in the gaps and maybe even address some of the misconceptions,” Ulmer, also a special adviser to the State Department on Arctic science and policy, told reporters.

One common misconception is “the Arctic is just a big wasteland” that lacks resources, people, functional ecosystems and productivity, she said. In reality, people have lived in the Arctic for millennia and today the region is home to 4 million people. Meanwhile, waters immediately south of the Arctic Circle are responsible for about half of the U.S. fish catch.

Another misconception is that there is a race to reach oil resources, with countries fighting over ownership of the oil, Ulmer said. The Arctic is home to 13 percent of the world's remaining oil reserves. “Is there really a fight going on up there?” she said. “There really isn't.”

There seems to be even less understanding about the Arctic Council. About half of Alaskans have never heard of it, according to a public opinion survey commissioned in 2013 by the Institute of the North. Another, more recent poll from the institute and the Munk-Gordon Arctic Security

Program showed that the council is little recognized even among Canadians, who have been chairing the council for the past two years.

The council was formed in 1996 as a point of coordination on sustainable development and environmental protection among the eight nations that border the Arctic, including the U.S. The chairmanship rotates among the eight nations. The work of the council has traditionally focused on scientific assessments related to the Arctic. More recently, it has stepped into the policy arena by establishing a permanent secretariat and issuing its first legally binding agreement, covering search-and-rescue operations.

One of the issues topping the agenda for the U.S. chairmanship is climate change, which is rapidly reshaping the Arctic region. Temperatures in the Arctic are warming twice as fast as the global average, melting both sea ice and land ice. As the snow and ice shrinks—which normally reflects sunlight—and is replaced by darker tundra and water, the Arctic absorbs more heat. More heat means more melting, so the cycle starts again in what scientists call a feedback loop.

Thawing permafrost, or permanently frozen ground, could make things even worse as vast stores of greenhouse gas emissions are released.

One reason why all these changes in the Arctic matter—which may be easiest for the average American to care about—is weather. Because temperatures in the Arctic are rising so quickly, the temperature difference between that region and areas farther south is becoming less pronounced. Normally, that temperature difference is what drives the jet stream, which is responsible for most of the weather in the U.S. With a weakened jet stream, weather patterns tend to get stuck. Some scientists think the cold snap that hit the eastern U.S. this winter and the very warm and dry conditions on the West Coast may be examples of what happens when the jet stream weakens.

“It’s really taken me by surprise how amazingly interested people are in this linkage,” Jennifer Francis, a Rutgers University professor who helped come up with the idea, told reporters. She said average Americans who have been noticing “how weird the weather’s been” want to read her research, but so do insurance companies, the World Bank and others because more extreme weather could influence food and water supplies, as well as potential economic damages from storms.

Francis said it has been a “great conversation starter” for helping people understand that “climate change is not just this gradual warming that’s going to happen sometime in the distant future.” “It’s already happening, and it’s already changing people’s lives,” she said.

Another way lives are being affected by changes in the Arctic is through sea level rise. Melting ice in both the Arctic and Antarctic is contributing to sea level rise globally. The sea level has risen about 8 inches since 1901, and scientists project an additional 1 to 4 feet of rise by 2100, according to the National Research Council report.

“It’s going to take less and less of a storm, of a hurricane, or even a strong nor’easter, to cause a lot of coastal erosion and coastal damage as sea level rises,” Julie Brigham-Grette, a professor at the University of Massachusetts Amherst, told reporters. “Less and less of a storm will do the equivalent of what happened in Hurricane Sandy, for example.” Hurricane Sandy’s price tag was in the billions of dollars.

“This is all expensive, so we’re going to need to get ourselves organized as to how we’re going to manage our coastlines in the coming decades,” said Brigham-Grette, who also chairs the Polar

Research Board. The board, part of the NRC, provides information on the Arctic and Antarctic to federal agencies, Congress and the public.

The general public may be the hardest audience to reach, but that is where the Smithsonian Institution comes in.

“Other than researchers, the general attitude about the Arctic is: What is it? Where is it? What’s going on?” said William Fitzhugh, director of the Arctic Studies Center at the National Museum of Natural History in Washington. “They have heard about polar bears, but the rest is pretty much lost on the general public.” To raise awareness, the museum is holding a festival in May that will feature films, cultural and musical performances, and other family-friendly events focused on the Arctic. Fitzhugh said the event won’t go into the “nitty-gritty” of Arctic science, but it will try to explain why the Arctic is changing and how it is affecting the animals and people who live there.

“It’s more than Eskimos and polar bears,” he said. “It’s a whole way of life that’s changing.”

30. 'Green' Political Donor Vows Climate Agenda Push In 2016 U.S. Race

Environmental activist and billionaire Tom Steyer has served notice that he will use his wealth to try to bring climate change into the 2016 U.S. presidential campaign, vowing to target Republican hopefuls who deny the connection between burning fossil fuels and rising global temperatures. Steyer’s NextGen Climate political action committee launched what it calls the Hot Seat campaign aimed at calling out Republican candidates for taking money from the billionaire Koch brothers. The group will target Senator Rand Paul, who is expected to launch his presidential campaign on Tuesday.

Steyer’s PAC found limited success turning climate change into a wedge issue in the 2014 midterm elections, despite spending over \$70 million on candidates backing strong climate change policies. Only three of seven candidates backed by NextGen won their races. This time, it hopes to use the conservative Koch brothers as foils, highlighting the connection between their campaign spending and politicians who deny the science underpinning the rise in global temperatures.

“The Koch brothers have emerged as a serious liability for politicians ... making their political influence a critical wedge issue that moves the dial with swing voters and enrages the young voters needed by the GOP to take back the White House,” according to NextGen’s strategy memo.

NextGen said it will draw from lessons learned from its successful midterm races. In Michigan, for example, NextGen went after the Republican Senate candidate by linking her to the Koch brothers, who were found polluting a river with oil waste they bought from a refinery.

“By following the money trail between the Koch brothers’ unprecedented campaign spending and the specific, local harm that their companies and anti-science policies have inflicted on specific communities, NGC will persuade swing voters and drive key demographic cohorts to the polls,” the NextGen memo said.

Outright denial of climate science is becoming an increasingly difficult political position. The Washington Post reported recently that the American Legislative Exchange Council (ALEC) - a conservative state policy group funded by the Koch brothers - threatened to sue liberal activist groups that accused it of denying climate change.

After several member companies including Google Inc. and Facebook Inc. left ALEC over its climate position, the group sent a cease-and-desist letter to organizations asking them to "remove misleading material" that suggests it does not believe in climate change.

31. United States Sets Official Strategy for Paris Climate Talks

The Obama administration has published plans to cut greenhouse gas emissions up to 28 percent below 2005 levels by 2025, part of a strategy to generate momentum for a global agreement later this year on combating climate change. The formal submission to the United Nations fleshes out domestic measures to be taken and the White House said the U.S. target "will roughly double the pace of carbon pollution reduction in the United States."

The U.S. plan cited existing measures such as standards for vehicle fuel economy and improved appliance efficiency to help meet the target, and proposed Environmental Protection Agency regulations to cut carbon emissions from power plants and methane emissions from the oil and gas sector.

Many of those policy steps have run into hostility from Republicans who control both houses of Congress and threats of lawsuits from industry groups and some states challenging the administration's legal authority to impose those regulations.

Seeking to take a leadership role ahead of U.N. talks from Nov. 30 to Dec. 11 in Paris, U.S. officials highlighted that countries producing 60 percent of global greenhouse gases have now pledged to cut or slow the pace of those emissions. The U.S. plan relies on a host of executive actions to hit the upper end of the target to reduce greenhouse gas emissions 26 to 28 percent below 2005 levels by 2025.

"What is significant about where we are today is ... that the countries that have made commitments span the spectrum of countries, including emerging economies," said Brian Deese, the senior environmental advisor to Obama:

- China announced its plan to cap its emissions around 2030 in a joint announcement with the U.S. last November.
- Mexico recently announced a goal to cap its emissions in 2026.
- The European Union, Switzerland, Norway and Russia have also submitted plans to slash their greenhouse gas emissions, meeting the U.N.'s informal deadline of March 31.

But major carbon emitters from India to Brazil and Canada to Japan have yet to produce their plans, which may hinder the process of reaching agreement before the Paris talks, according to some environment policy observers.

32. California Getting 'Second-Hand Smog' From Asia, Researchers Say

California is suffering from "second-hand smog" drifting in from Asia and other places, according to researchers, even as the state's prolonged drought has made air quality worse. About 10 percent of ozone pollution, the main ingredient in smog, in the state's San Joaquin Valley farm region comes from other countries, mostly in Asia, said Ian Faloon, an atmospheric scientist with the University of California, Davis.

"What's happening upwind strongly affects what's happening downwind," Faloona said. If California were a human body, the area around the Golden Gate Bridge in San Francisco would be the mouth, "breathing in air from across the Pacific Ocean," he said. Faloona's conclusions, which are still preliminary, come during an increase in air pollution in the most populous U.S. state, as drought and warmer temperatures have triggered a spike in the number of winter days thick with soot and dirt.

Faloona presented his findings at a conference near Yosemite National Park in California's Sierra Nevada Mountains.

His research, funded by the San Joaquin Valley Air Quality Management District, looked at pollution at higher elevations. "Secondhand smog from Asia and other international sources is finding its way into one of the nation's most polluted air basins, the San Joaquin Valley," UC Davis said in a news release.

The residents of the San Joaquin Valley have asthma at twice the rate of people in other parts of the state, the university said. Despite considerable improvement in California's notoriously troublesome air, the San Joaquin Valley recently missed a federal deadline for cleaning up its winter air of sooty particulates, a development blamed on warm, dry conditions and stagnant air.

Last summer, California was out of compliance with federal ozone rules for 99 days in the San Joaquin Valley, up from 89 the year before. Sooty particulates, which cause brown haze in the late autumn and winter, were up throughout the state last winter.

For December 2014 to February 2015, the South Coast Air Quality Management District, which covers Los Angeles, reported 24 days that failed to meet federal pollution rules, up from 16 in 2012-2013.

Faloona urged regulators to look beyond regional pollution sources as they try to manage air quality. "Gradually we're starting to come to this understanding that pollution is actually of a larger scale than we originally planned for and thought about," Faloona said.

33. U.S. Judges Raise Doubts about Early Challenge to EPA Carbon Rules

In the first legal test of the Obama administration's plan to limit greenhouse gas emissions from power plants, two of three federal judges hearing a challenge to the regulations expressed skepticism about weighing in before they are formally adopted. More than a dozen states and Murray Energy Corp have filed lawsuits challenging the administration's proposal, which would require the U.S. power sector to slash carbon dioxide emissions by 30 percent from 2005 levels.

Judges Thomas Griffith and Brett Kavanaugh, both of the U.S. Court of Appeals for the District of Columbia Circuit, asked if it was too early to address whether the Environmental Protection Agency had the legal authority to regulate power plants, as proposed under the administration's Clean Power Plan. "We could guess what the final rule looks like, but we're not usually in the business of guessing," Griffith said, pointing out that theoretically the rules could still change.

The administration's Clean Power Plan is the centerpiece of Democratic President Barack Obama's effort to address climate change in his final term in office.

The states and Murray Energy, facing potentially substantial compliance costs, took the unusual step of suing the government before the rules were finalized.

While the judges hearing the case are all Republican appointees, who may be sympathetic to arguments against government overreach, the lawsuits pose a legal quandary for the court, which typically does not rule on regulations that are not final.

The high-profile hearing featured arguments by Laurence Tribe, a Harvard Law School professor and former Obama mentor. Working on behalf of Peabody Energy Corporation, which intervened in the case, Tribe said EPA's proposal was an unconstitutional attempt to circumvent the law. "It's clear they're trying to make law, not execute law," he said.

The states and Murray Energy argued that EPA cannot regulate power plants as proposed because the facilities are already covered under the Clean Air Act by the Mercury and Air Toxics Standards, leading to double regulation. They urged the court to act now to prevent harm to states that cannot be undone.

The government pushed back on what it called an "unprecedented" request to stop a rulemaking before the rules are completed, arguing EPA has the right to offer its final interpretation of the statute before the court steps in.

ASIA-PACIFIC

34. China Pushes up New Fuel Standards Schedule in Pollution Fight, News Says

China pushed up the adoption of cleaner fuel standards as the government increases efforts to curb pollution, China Business News has reported. The nation will adopt a fuel standard that caps sulfur content in gasoline and diesel at 10 parts per million by the end of 2016, one year ahead of an original deadline set by the State Council, China Business News reported, citing an unidentified source. The criterion is the same as in Europe.

China has been struggling to fight pollution, a byproduct of the nation's high-speed economic growth over the past 30 years, as dirty air and water persist as a source of public discontent. President Xi Jinping pledged in March at the annual session of the National People's Congress to punish violators of the nation's environmental laws with an "iron hand." (See below.)

Refiners and government agencies often don't see eye-to-eye as companies struggle to pass on billions of yuan of fuel upgrade costs to end-consumers as retail prices are set by the government. China Petrochemical Corp., the nation's top refiner, said it will spend 30 billion yuan (\$4.8 billion) a year upgrading fuel quality while China National Petroleum Corp., will spend 15 billion yuan for the same effort.

China is currently studying stricter fuel standards, Cao Xianghong, director of China's petrochemical standards committee, said in March.

35. China to Toughen Inspection on Air Quality Data: Xinhua

China's vice minister for environmental protection has announced a two-year inspection campaign to root out fake air quality data and accused some local governments of manipulating the data to meet national standards, state media said. The move comes as China has sought to improve transparency and compel polluters to provide comprehensive and real-time emissions data. Some local governments make monitoring stations fabricate or tamper with air quality data, state news agency Xinhua quoted Wu Xiaoqing, vice minister of environmental protection, as saying.

Wu said that such acts severely compromise the credibility of the government and environmental protection agencies and harm environmental monitoring efforts. "Guaranteeing the truthfulness of the data is the bottom line," Wu said, according to Xinhua.

Monitoring stations directly affiliated to the ministry would help cross check data from other stations, Wu said.

Beijing recently introduced measures to limit the number of motorists on heavily polluted days, the latest move by authorities in the Chinese capital to battle the choking smog that has blanketed the city in recent years.

Under China's newly amended environmental law, criminal penalties will be imposed on those found guilty of trying to evade pollution monitoring systems.

36. China Vows Active International Role in Pollution Fight

China recently pledged to actively cooperate with other nations and International organizations in its battle against pollution. China's newly appointed Environmental Protection Minister Chen Jining made the remarks at a press conference on the sidelines of the ongoing annual session of the National People's Congress, China's top legislature.

He said that as a responsible member of the international community, China will enhance its cooperation with others to push forward the nation's energy conservation and pollution cut.

37. Beijing to Shut Major Coal Power Plants in 2016 to Reduce Emissions, Air Pollution

Beijing, where pollution averaged more than twice China's national standard last year, will close the last of its four major coal-fired power plants next year. The capital city will shutter China Huaneng Group Corp.'s 845-megawatt power plant in 2016, after recently closing plants owned by Guohua Electric Power Corp. and Beijing Energy Investment Holding Co., according to a March 23rd statement on the website of the city's economic planning agency. A fourth major power plant, owned by China Datang Corp., was shut last year.

The facilities will be replaced by four gas-fired stations with capacity to supply 2.6 times more electricity than the coal plants.

The closures are part of a broader trend in China, which is the world's biggest carbon emitter. Facing pressure at home and abroad, policy makers are racing to address the environmental damage seen as a byproduct of breakneck economic growth. Beijing plans to cut annual coal consumption by 13 million metric tons by 2017 from the 2012 level in a bid to slash the concentration of pollutants.

Shutting all the major coal power plants in the city, equivalent to reducing annual coal use by 9.2 million metric tons, is estimated to cut carbon emissions of about 30 million tons.

Nationally, China planned to close more than 2,000 smaller coal mines from 2013 to the end of this year, Song Yuanming, vice chief of the State Administration of Coal Mine Safety, said at a news conference last July.

From 2003–2013, coal demand globally grew by more than 50 percent, meeting almost half the increase in the world's total primary energy needs, the International Energy Agency said in its 2014 annual energy outlook report. China was the principal source of the surge, the IEA said.

Closing coal-fired power plants is seen as a critical step in addressing pollution in China, which gets about 64 percent of the primary energy it uses from the fossil fuel. Coal accounts for about 30 percent of the U.S.'s electricity mix, while gas comprises 42 percent, according to Bloomberg New Energy Finance data.

Coal use is declining or slowing in China as policy makers encourage broader use of hydroelectric power, solar and wind. The nation also is pushing to restart its nuclear power program in a bid to clear the skies. China's electricity consumption last year grew at its slowest pace in 16 years, according to data from the China Electricity Council.

The nation's emissions of carbon dioxide fell 2 percent last year from 2013, the first decline since 2001, signaling that efforts to control pollution are gaining traction, according to a Bloomberg New Energy Finance estimate based on preliminary energy demand data from China's National Bureau of Statistics.

Air pollution has attracted more public attention in the past few years as heavy smog envelops swathes of the nation, including Beijing and Shanghai. About 90 percent of the 161 cities whose air quality was monitored in 2014 failed to meet official standards, according to a March report by China's National Bureau of Statistics.

The level of PM-2.5, the small particles that pose the greatest risk to human health, averaged 85.9 micrograms per cubic meter in the capital in 2014, compared with the national standard of 35.

38. China's 'War on Pollution' Giving Rise to More Fines, Tougher Punishments

A year ago, China's leadership declared a “war on pollution.” Now officials say they will deal with polluters—in the words of President Xi Jinping—“with an iron fist.” But beyond all the tough rhetoric, perhaps the most important development for environmental protection has been a real increase in the size and frequency of fines for pollution violations this year, after amendments to the Environmental Protection Law (EPL) took effect on January 1st.

At the final press conference of the annual National People's Congress (NPC) meetings in Beijing on March 15th, Premier Li Keqiang—who articulated the war on pollution pledge at the event last year—said enforcement of environmental laws could not be a “cotton swab” and polluters should be “brought to justice and held accountable.”

Even before these statements were voiced, however, polluters began to feel the pain of larger penalties for illegal activity or failure to control emissions, including daily accumulating penalties first launched under a Clean Air Action Plan implemented last year and codified into law under the EPL.

And the battles continue. Later this year, amendments to the Air Pollution Prevention and Control Law, and action plans on water and soil pollution, could strengthen China's use of fines and other penalties.

Zhang Bo, a researcher working on simulating models for sustainable development at the Information Office of the Ministry of Environmental Protection (MEP), told the press on March 17th he expected that the ministry “will definitely increase the size and frequency of penalties” over time in order to implement the amended EPL.

Zhang, who said he was expressing his own opinion and not directly those of the MEP, gave a few recent examples of how enforcement of the EPL is starting to have impact.

- In late January, the environmental protection bureau in Guizhou, along with two local environmental protection bureaus, joined with provincial police to halt production at the Guizhou Linan Group Polysilicon Materials Co. Ltd. and doled out daily accumulating penalties of 260,000 yuan (\$42,000). The general manager and production manager of the company were detained and given administrative punishment.
- In a separate case in late February, the ministry conducted special investigations in the cities of Linqi and Chengde and subsequently halted three major projects until officials agree to fully implement the EPL.
- Also last month, Lukang Pharmaceutical Co. Ltd. in Shandong province was fined 50,000 yuan (\$8,000) and ordered to relocate its factory in Jining. Two legal representatives of the company were taken into custody and will receive administrative punishment. MEP's Zhang said administrative punishment of the top brass at the company was “a rare phenomenon.”

What was rare when first announced appears to be becoming a standard tool for environmental enforcement and part of the “new normal,” a term Chinese officials use more often for policing environmental crimes.

On March 3, the MEP said 15 companies were given daily accumulating penalties totaling 7.23 million yuan (\$1.15 million) in the first two months after the EPL amendments took effect. The highest fine was 1.9 million yuan (\$304,000). Another 136 companies had assets confiscated or were forced to close; 122 companies had production suspended; and 107 companies had legal representatives detained, pending investigations.

On Feb. 10, a court in the Inner Mongolia sentenced the legal representative of Wuhai Nanguang Chemical Co. to three years in prison and issued a fine of 150,000 yuan for illegally dumping industrial waste muriatic acid into local water systems. Three others also were given prison time and fined, and the company was fined 800,000 yuan (\$128,000). It was the first environmental crime case to be heard in courts in that autonomous region, according to a report from China Environment News, a news agency affiliated with the MEP.

In addition, six chemical companies in Taizhou, Jiangsu province were ordered to pay public compensation of 610 million yuan total (\$97.5 million) after years of illegal wastewater discharges, the largest-ever environmental public interest lawsuit compensation award in China.

Beijing's municipal government also said that in 2014, more than 100 million yuan (\$16 million) was assessed for pollution violations. Beijing was one of the first to implement the Air Pollution Action Plan last March.

On March 15, China adopted revisions to its Legislation Law, which greatly expands the number of municipal governments with their own legislative powers from 49 to 284 cities. They can craft

their own take on environmental regulation, Fu Ying, spokeswoman of the NPC meetings, said on March 5th.

On March 7th new MEP head Chen Jining said that a primary task for implementing the amended EPL is “promoting the responsibility of local governments. ... We want more than 30 percent of the municipal governments to carry out [increased] supervision and to strengthen local responsibility” for environmental protection regulation enforcement.

“We see it as an issue that local governments should be responsible for the environmental quality of their regions; this is very clear,” Chen said. “The environmental law [amendments] also provide for a way to assess whether the local governments are meeting their responsibilities of reaching environmental targets.”

39. New Environment Chief Vows Tougher Legal Enforcement, Innovation

The new Chinese environmental protection minister, Chen Jining, who was appointed last week, is tasked with spearheading his country's uphill drive to resolve a conflict between environmental protection and economic development that he has described as "unprecedented in human history." One year after the world's second-largest economy "declared war" on the pollution that has taken a heavy toll on its air, water and soil during its three-decade dash for growth, Chinese leaders are resolved to alleviate the environmental woes.

President Xi Jinping asked Chinese people to protect the environment like "caring for one's own eyes and life." "We are going to punish, with an iron hand, any violators who destroy ecology or environment, with no exceptions," said Xi while reviewing the work report of the State Council together with National People's Congress (NPC) deputies from Jiangxi Province.

In his annual report at the National People's Congress (NPC), Premier Li Keqiang compared pollution to "a blight on people's quality of life" and promised that the world's biggest emitter of carbon dioxide will cut such emissions by at least 3.1 percent this year.

Afterward, Chen, a 51-year-old environmental scientist and former president of the prestigious Tsinghua University, echoed the leaders' rhetoric and gave his suggestions for easing the development-environment conflict that he believes is more severe than that Germany and Japan faced in their early industrialization.

He pledged tougher environmental law enforcement, innovation and market leverage to help the world's most populous country cut pollution.

The environmental issues "cannot be addressed with undue haste, but neither should they be allowed to go unchecked," he told a press conference on the sidelines of the country's NPC session.

A new law went into effect on January 1st, giving the country more powers to punish officials breaking environmental regulations. It follows allegations of corruption in the watchdogs that are supposed to enforce rules on environmental standards. In response, the minister warned that graft in environmental impact assessments should never be tolerated, vowing to crack down on illegal mediation between polluting enterprises and the watchdogs.

Chen promised to speed up China's pollution control with economic leverage including legislation on environmental protection tax. Environmental protection is an important growth driver for China,

he said, stressing that the demand for investment will be huge in years to come. According to the minister, the market for environmental protection in China will be worth around 8 trillion yuan (1.3 trillion U.S. dollars) to 10 trillion yuan in the next few years. Such investment provides "good momentum" for economic growth, he added.

Currently, the government provides about 30 to 40 percent of the funding for environmental protection. Experts believe the private capital needs to be given fuller access to this market. Chen said that his ministry will advance price reform to build a mechanism for measuring project returns and ease market access by means such as public-private partnerships.

He also said that China will cooperate with other nations and international organizations in the battle against pollution. His remarks came months after Beijing and Washington, the world's two leading emitters, reached a historic climate deal, in which China is committed to increasing the share of non-fossil fuels in primary energy consumption to around 20 percent by 2030.

Chen's promise also came in advance of a new universal climate agreement expected to be inked in Paris in December. The minister urged developed countries to take the lead and offer more capital and technological assistance to developing countries to tackle climate change. He voiced hope that parties attending the Paris climate conference will respect the UN Framework Convention on Climate Change and follow the principle of common but differentiated responsibilities to reach an agreement as soon as possible.

Talking about the smog that has been blanketing most of China, Chen said "extra efforts" should be made. More than 80 percent of about 300 monitored cities failed to meet the official standard of air quality last year, with smog most frequently hitting the Yangtze River and Pearl River deltas as well as the Beijing-Tianjin-Hebei region.

"No country in the world is making such great efforts as China to combat air pollution," Chen said. The government will strengthen implementation of the revised environmental protection law and improve pollution controls, he vowed.

As China is gearing up for a slower but more self-sustaining growth, observers have warned that as the country's coastal regions turn against pollution, low-end manufacturers and factories may be relocated to the poorer central and western regions that are desperate for investment. Chen pledged not to let this happen: "We will not allow the central and western regions to become a harbor for polluting enterprises."

He also vowed to pay more attention to pollution in China's countryside, where the amount of pollutants is also on the rise. The central government allocated 25 billion yuan to deal with rural pollution at the end of 2014.

"Problems such as administration loopholes, weak public awareness and lack of supervision still exist," said Qin Dahe, an academic with the Chinese Academy of Sciences. He suggested long-term planning with a focus on promoting green techniques.

40. Pollution Documentary 'Under the Dome' Blankets Chinese Internet

A new documentary on the pall blanketing China's skies by a former state television reporter swiftly commandeered the attention of tens of millions online over its first weekend. Titled "Under the Dome," the film is an impassioned production by Chai Jing, a well-known journalist who left China Central Television last year shortly after the birth of her first child. Since its release online

on Saturday, it has racked up some 100 million views on major Chinese video portals such as Tencent and Youku.

The film's release came just days before the start of China's most public annual political event – the meetings of the national legislature and a government advisory body.

The film shows Ms. Chai showing a sonogram of her unborn baby daughter, who was diagnosed with a benign tumor at birth and had to be swiftly operated upon. "Before, I never paid attention to pollution. Wherever I went, I never wore a mask," Ms. Chai says. But with the birth of her child, — whom she likens to a prisoner for most of her first year, kept inside away from the smog – Ms. Chai says she felt compelled to investigate the issue.

Deeply emotive, the film draws on a number of materials, from footage of her time as a reporter to official interviews to cartoon depictions of various pollutants, each wielding tiny axes directed at the human nose and throat.

"You don't have any choice about breathing, there's no way to avoid it," Ms. Chai tells her audience in the documentary, throughout which she paces before a screen showing video clips or charts in a manner reminiscent of Al Gore's call-to-action film on climate change, "An Inconvenient Truth."

In one particularly harrowing scene in "Under the Dome," a doctor pulls out pieces of lymph node from a female lung cancer patient in her 50s. They are filthy and blackened from breathing the air, though the woman has never been a smoker.

The newly appointed environment minister, Chen Jining, told reporters on Sunday that he sent Ms. Chai a text to thank her for her work. The official China News Service reported that Mr. Chen drew parallels between the film and Rachel Carson's 1962 book *Silent Spring*, which helped galvanize the environmental movement in the U.S.

Over the past few years, China's growing middle class has grown increasingly more vocal and concerned about air pollution, especially since 2013, when the government began releasing PM2.5 information following public pressure. Air masks have become a more common sight in big cities, while apps tracking daily smog levels have proliferated.

A journalist who built a reputation for herself investigating the SARS pneumonia outbreak and coal mine accidents, Ms. Chai tackles questions such as why air pollution spikes in Beijing overnight. She finds that despite being marked as meeting national standards, many diesel trucks don't carry the required emissions-control equipment, something that a Beijing environmental official acknowledges on camera is a widespread problem.

While laws may be stringent in China, enforcement is another question: to date no manufacturers of such lorries have yet been punished under the law, Ms. Chai says.

Ms. Chai's film also drew attention for its focus on state-owned oil firms and her criticism of the country's lagging fuel standards. An official she interviews on camera tells her that's because industry representatives dominate the committee charged with helping set such standards.

41. China to Encourage Internet Companies to Develop More Electric Vehicle Models

China will encourage Internet companies like Leshi Internet Information & Technology Corp. to develop electric vehicles as they have the potential to create a manufacturing model for the automobile industry, according to the industry and information technology minister. “We’ll encourage them because they can totally outsource their production,” Industry Minister Miao Wei said in Beijing as he left a National People’s Congress session at the Great Hall of the People. “To cite one example, Foxconn, they don’t have their own mobile phone, but they produce Apple’s mobile phones.”

China, which is promoting electric vehicles to reduce the reliance on imported oil and to cut tailpipe pollution, is experimenting with allowing companies outside the manufacturing industries to develop electric vehicles as a way to inject innovation and spur competition. The initiative is taking place at a time when Silicon Valley companies from Apple Inc. to Uber Technologies Inc. are getting into transportation from cars to drones to space ships and pioneering new business models.

Miao’s comments are the clearest indication to date that technology companies will be allowed to develop electric vehicles. His ministry jointly regulates the auto industry with the National Development and Reform Commission.

The biggest hurdle for non-automakers entering the industry was a stipulation that companies had to possess vehicle production capacity in addition to experience in product research and development and vehicle design. They also needed at least 15 sample electric vehicles that met national technical standards, according to the draft of the policy from the National Development and Reform Commission.

“The rally in battery makers and automakers is driven by speculation that these capital-intensive companies stand to gain from cooperating with cash-rich Internet companies,” said Harry Chen, an analyst with Guotai Junan Securities Co. in Shenzhen. “The likely model is they form joint ventures and seek mutual benefits.”

Miao said March 5 that the policy will probably be finalized in a “couple of months.” After that, companies can apply for the licenses and relevant panels of experts will be convened to review the applications, he said.

Miao also said China will step up its efforts to build more charging stations for alternative-energy vehicles in an effort to resolve a bottleneck that is holding back sales. He said he expected sales of alternative-energy cars, China’s term for plug-in hybrids and electric vehicles, to improve this year.

42. China Needs CO2 Cap To Meet Climate Pledges: Legislator

China needs to impose a nationwide carbon cap if it is to fulfill a pledge made last year to bring emissions to a peak by around 2030, a legislator said in a proposal submitted to parliament. Wang Yi, a member of the China Academy of Sciences and adviser to China’s climate negotiation team, said the country should include an absolute CO2 cap of around 10 billion tons for 2020 in its five-year plan covering the 2016-2020 period.

China has not published official carbon emissions data but researchers at Tsinghua University estimated the total reached 7.25 billion tons in 2010.

"A target to control overall CO2 emissions should be a mandatory target in the 13th five-year plan, to be broken down according to variations in regional and industrial development," Wang said in the proposal.

Wang's proposal is based on academic studies into how China can meet a promise to bring emissions to a peak by around 2030, made in a joint statement with the United States last November. "The studies show that it is very likely that energy-related CO2 emissions will peak around 2030 at 11-12 billion tons, and will be in the range of 9.5-10.5 billion tons by 2020," Wang wrote.

China aims to keep coal consumption below 4.2 billion tons in 2020, according to a government action plan published last year. If the target becomes legally binding, it will be the first time China has capped coal use.

China has established seven regional carbon trading exchanges and aims to create a nationwide scheme by 2016. A mandatory cap on emissions will help determine how big the national market will be.

China is likely to regulate 3-4 billion tons of carbon dioxide by 2020 and the market could be worth up to 400 billion yuan (\$72 billion), a government official disclosed in September. That would be twice the size of the European Union's market, currently the world's biggest.

43. China's Hebei Province Says Paying 'Huge Price' In War on Pollution

China's biggest steel-producing region, Hebei, is paying "a huge price" for the country's war on pollution, the province's top Communist Party official said days after the central government offered more financial support. Hebei, which surrounds the capital Beijing, churns out nearly a quarter of Chinese steel output, but it is now bearing the brunt of a campaign aimed at easing the country's dependence on heavy and polluting industrial capacity.

Production fell 0.6 percent last year to 185.3 million tons, official data showed.

Annual economic growth in the province slipped to 6.5 percent last year, missing an 8 percent target, with steel demand hit by a nationwide slowdown as well as the campaign against pollution.

"In order to solve the problems of industrial restructuring and pollution, Hebei has made huge efforts and paid a huge price," Zhou Benshun, the province's Party secretary, told reporters on the sidelines of China's annual parliamentary session.

At a closed meeting with the Hebei delegation, Premier Li Keqiang said the state needed to help the province in its efforts to wind down excessive steel production capacity. "Hebei's easing of steel overcapacity needs state help and we need to offer some preferential policies in aspects such as financing," Li was quoted by state media as saying.

Hebei governor Zhang Qingwei also urged Beijing to provide long-term loans to his province to help cover the costs of cutting overcapacity. Provincial officials told reporters that Hebei's steel firms had already reached state requirements but said they were being forced to go even further to cut excess capacity.

Hebei comprises seven of China's 10 smoggiest cities, according to official 2014 air quality data, and local officials have long complained that it has been asked to sacrifice too much for the "war on pollution".

It vowed to close 60 million tons of outdated and polluting crude steel capacity in the 2014-2017 period and met its target to shut 15 million tons last year. It also aims to cut coal consumption by 30 million tons over the same period.

However, Hebei has struggled to find alternative sources of economic growth and hopes a new state plan aimed at integrating the province's economy with the prosperous cities of Beijing and Tianjin will help reduce its reliance on steel and coal.

The plan, due to be released soon, aims to break down administrative barriers and improve transportation networks in the region. It will also involve the relocation of "non-essential" industries and government functions from Beijing to Hebei.

44. China Orders Two Local Governments to Punish Polluting Steel Mills

China's environmental ministry has ordered local governments in two key steel-producing cities to take tougher action against polluters from the sector as part of efforts to improve air quality. That could pile pressure on mills already struggling with weak demand-growth as the world's No.2 economy loses momentum.

Inspectors from China's Ministry of Environmental Protection (MEP) last week summoned mayors from the cities of Linyi in the eastern province of Shandong and Chengde in the northern province of Hebei, urging them to crack down on firms that have violated environment laws, the ministry said on its website.

"We have to fully implement the law ... to shut down those enterprises which haven't taken any environmental protection measures and haven't run environment protection equipment," MEP official Gao Zhenning told state television channel CCTV.

Thirteen of the 15 enterprises inspected in Linyi had violated environmental laws. Most were steel and coke plants, with some found to have provided fake environmental data.

Beijing is determined to tackle hazardous smog by imposing higher environmental standards and strengthening monitoring in high-polluting regions, with some unqualified steel mills closed permanently since last year.

China put a new environment law into effect at the start of 2015, and can now impose unlimited fines and even prison sentences on officials who fail to conform to new standards.

The MEP has already used its strengthened powers to take on local governments in Hebei and elsewhere, summoning local leaders to explain themselves when they failed to comply with emergency pollution guidelines during a major international summit in Beijing in November.

Chinese steel mills, already suffering from persistently low prices as a result of overcapacity and an economic slowdown, are now paying an estimated 160 yuan (\$26) per ton of steel to comply with environmental guidelines.

45. End of the Road for Dirty Vehicles in Shanghai

Shanghai's air quality is getting worse due to rising vehicle emissions, the high number of construction projects and various meteorological factors, a senior official said. In the first three months, the average density of PM2.5 pollutants — the tiny particles that are particularly hazardous to health — rose 14 percent from the equivalent period of last year to 66 micrograms per cubic meter, Vice Mayor Jiang Zhuoqing told a conference on pollution.

The increase was mostly due to dust from building sites, vehicle emissions and a “fluctuating climate,” Jiang said.

In contrast, the air quality in neighboring Jiangsu and Zhejiang provinces in the first quarter improved by about 8 percent in terms of PM2.5 densities, Jiang said.

“The poor start to the year has made the situation quite difficult,” he said. “But we must strive to achieve air quality levels of at least as good as last year and then move on from there,” he said.

Over the whole of last year, the average PM2.5 density in Shanghai fell 16 percent from 2013 to 52 micrograms per cubic meter. While the decrease was rightly regarded as progress, the figure remained far above the World Health Organization's recommended safe levels.

Despite the poor start to 2015, the government has set a target to reduce carbon emissions in the city by 8.7 million tons, or 2 percent, from last year, the Shanghai Development and Reform Commission said yesterday. Meanwhile, coal consumption will be capped at 4 million tons, it said, without providing a comparative figure.

In a bid to meet those targets, 15 major state-owned enterprises in the electricity, steel and concrete sectors will be required to upgrade 39 of their facilities to help reduce carbon emissions. The city government has set a deadline of July 1 for the completion of the work, Jiang said. Before the end of the year, 150 industrial companies will have taken similar steps to upgrade their operations, he said.

A major program of denitrification is also under way at major coal-burning power plants. This is scheduled for completion in October, with an equivalent scheme set to cover all such facilities by 2017.

On the subject of traffic pollution, Jiang said that all high-polluting vehicles will be banned from Shanghai's roads by the end of the year. Despite restrictions introduced last year, which eliminated 172,000 such vehicles, about 90,000 are still in operation, he said.

The city government will also continue to promote the use of prefabricated structures to help reduce air pollution from construction sites he said, adding that more than half of all new buildings in the city this year will be prefabricated.

46. China Carbon Emissions Decline for First Time Since 2001; World Levels Steady

China's emissions of carbon dioxide fell last year for the first time in more than a decade, helping stall global production of climate-warming gases. The finding, along with new data from the International Energy Agency, is a sign that efforts to control pollution are gaining traction.

Total carbon emissions in the world's second-biggest economy dropped 2 percent in 2014 compared with the previous year, the first drop since 2001, according to a Bloomberg New Energy Finance estimate based on preliminary energy demand data from China's National Bureau of Statistics.

Global carbon emissions from the energy sector were unchanged in 2014, the first time in 40 years that a halt or dip wasn't associated with an economic downturn, the IEA said March 13 in a statement. China and developed nations have encouraged investment in renewable energy and efficiency measures, decoupling economic growth from emissions, the agency added.

The IEA identified shifting energy consumption in China, the most populous nation with 1.4 billion people, as among the reasons global carbon dioxide emissions "stalled" last year.

Faith Birol, the IEA's chief economist who was named the agency's next executive director in February, said the results are an encouraging sign. "This gives me even more hope that humankind will be able to work together to combat climate change, the most important threat facing us today," Birol said in the IEA statement.

The China results show that the country's battle to rein in pollution is having a tangible effect. The world's biggest carbon emitter has poured money into clean energy sources such as solar and wind and hydro developments while cutting its dependence on coal.

China led in renewables last year with investments of \$89.5 billion, accounting for almost \$1 out of every \$3 spent on clean energy in the world, according to BNEF figures released in January. Domestic Chinese coal production is falling along with consumption.

The country's energy consumption growth weakened to 3.8 percent in 2014, the lowest since 1998, as the economy expanded at its slowest pace since 1990.

The world's biggest energy consumer got 11 percent of its primary energy from non-fossil fuels including renewables and nuclear in 2014, up from 9.8 percent a year earlier, the National Energy Administration said Dec. 31, 2014. China is targeting 15 percent of its energy from such fuels by 2020.

The proportion of coal fell to 64.2 percent last year from 66 percent in 2013, according to the NEA. Hebei, China's most polluted province, cut coal consumption by 15 million tons, closed 141 mines and stopped work to improve 478 mines in 2014, said Chen Guoying, head of the provincial environmental protection department.

47. Beijing to Limit Motorists on Heavily Polluted Days

Beijing has introduced measures to limit the number of motorists on heavily polluted days, the latest move by authorities in the Chinese capital to battle the choking smog that has blanketed the city in recent years.

Lung cancer rates are rising among the 21 million residents of China's capital, health officials say, with Beijing ranking amongst the world's most-polluted cities.

Earlier this month Premier Li Keqiang pledged to do everything possible to fight pollution, calling it a "blight on people's quality of life".

Motorists will be limited to driving on alternate days when the city announces a "red alert", forecasting heavy pollution for three days, Beijing's environmental protection bureau said in a statement. The bureau defines heavy pollution when the air quality index tops 200, under its four color-coded air quality warning system.

Heavy vehicles including construction vehicles will be banned from the roads during orange or red alerts, the environmental protection bureau said.

The agency said that "in recent years, the city has continued to increase its air pollution prevention and control efforts by curbing coal and controlling the fuel emissions from cars," among other measures. "However, currently, the environmental pollutants that are being discharged still exceeds the environment's capacity (to deal with it)," the agency said. "Under extreme adverse weather conditions, it is likely to lead to serious air pollution."

An increasingly affluent urban population has begun to object to China's policy of growth at all costs, which has fueled the economy for three decades.

48. Report Finds Excessive Airborne Emissions from Heavy Industry in Key Chinese Areas

The vast majority of major companies in two Chinese provinces had excessive airborne emissions last year, despite the rollout of a nationwide air pollution action plan, according to a report from Greenpeace East Asia using government data. The nongovernmental organization examined publicly available hourly emissions data from the key-monitored enterprises in Jiangsu and Hebei provinces, businesses that are required to submit that data directly to the government.

It found that about 85 percent of the 351 major companies that fall into that category had excessive airborne emissions in 2014. The companies were primarily state-owned or controlled coal-fired power producers, and steel, iron and cement makers.

"While we welcome how transparently the government is reporting this data, it does paint a bleak picture of what the reality is on the ground," Zhang Kai, climate and energy campaigner at Greenpeace East Asia, said in a statement announcing the findings.

The report questioned whether the two provinces will be able to meet emissions reduction targets that need to be fulfilled by the end of 2017. Jiangsu and Hebei were designated as parts of key air pollution control areas under an air pollution action plan released at the end of 2013.

Jiangsu is in the Yangtze River Delta region around Shanghai; Hebei surrounds the capital of Beijing.

Of the 168 companies studied in Jiangsu, only four met all airborne emissions standards, while 69 of the companies had "seriously excessive" emissions for sulfur dioxide and nitrogen oxide. Six companies in the province did not publicly report their emissions data.

Of 183 companies in Hebei, only two met all airborne emissions standards, while 42 did not report their emissions, although they were officially required to do so. Hebei had seven of the top 10 cities with the worst air quality in the country in March, according to recent data,

Greenpeace East Asia faulted environmental protection bureaus in the two provinces for lax enforcement of airborne emissions standards and regulations, partly because, it said, of local

protectionism of companies which are important to the economies of these areas, as well as poor quality data being released by the companies.

A separate report released by the group on April 21st found that 90 percent of 360 cities studied in China did not meet official air quality standards during the first quarter of 2015. The report indicated that emissions of small particulate matter (PM-2.5) rose the most in the central and western provinces of Henan, Hubei, Hunan and Sichuan, while dropping slightly in Beijing and coastal provinces where air pollution controls are starting to take hold.

While Beijing showed modest improvement compared to the year before, the number of severe air pollution days spiked in the wider Beijing-Tianjin-Hebei region in March, according to an April 23rd report on the Ministry of Environmental Protection (MEP) website.

But the government said air pollution cleanup policies in the Yangtze River Delta region, which includes Jiangsu province, are beginning to take effect. In the region, PM-2.5 intensity fell 10.4 percent in 2014, according to a statement.

A report from state-run Xinhua news agency on April 24th indicated that Jiangsu is in the process of allocating PM-2.5 reduction targets for cities there, with officials also to be held responsible for failures to meet those targets once finalized.

Zhai said coal consumption reduction targets for 2016 and 2017 for the area will be decided by the end of June, and that new air pollution standards for key industries will be updated. Other action plans—one for high-emissions vehicles and another for prevention and treatment of air pollution from ships in the region's ports—have been finalized and are awaiting official approval.

49. Toyota to Launch Two Hybrid Cars in China This Year

Toyota Motor Corp, the world's largest automaker by sales volume, plans to launch two hybrid cars in China this year as part of efforts to launch vehicles that will help to reduce pollution in the country. The gasoline-electric hybrid cars, called Levin Hev and Corolla, will be launched in China in the second half of the year, the Japanese company said on the eve of the Shanghai auto show.

Toyota's joint venture with Guangzhou Automobile Group will make the Levin Hev, while its joint venture with FAW Group will manufacture the Corolla.

China has been the world's largest car market since 2009, with sales rising 6.9 percent to 23.5 million vehicles in 2014, the China Association of Automobile Manufacturers said in January.

50. Hazardous Air Particles in Beijing Exceed National Target: State Media

Hazardous air particles blamed for asthma and breathing problems show up in the Chinese capital at a rate of more than double the national target, an environmental watchdog said, according to state media. Pollution has triggered increasing unease in China, where smog blankets many major cities, including Beijing, home to 21 million people.

The government has launched a war on pollution, vowing to abandon a decades-old economic model of growth at all costs that has damaged China's water, air and soil.

The average density of PM 2.5 particle pollution in Beijing stands at 85.9 micrograms per cubic meter, or 1.45 times more than the national standard, the official Xinhua news agency reported

the watchdog as saying. PM 2.5, which refers to particles smaller than 2.5 micrometers in diameter, leads to hazardous smog that is a major cause of asthma and respiratory diseases, experts say.

The average densities of nitrogen dioxide and PM 10, another type of particle, both exceeded national standards, Xinhua said.

Lung cancer rates are rising in Beijing, say health officials, with the capital ranked among the world's most polluted cities.

51. China to Surpass U.S. As Top Cause of Modern Global Warming

China is poised to overtake the United States as the main cause of man-made global warming since 1990, the benchmark year for U.N.-led action, in a historic shift that may raise pressure on Beijing to act. China's cumulative greenhouse gas emissions since 1990, when governments were becoming aware of climate change, will outstrip those of the United States in 2015 or 2016, according to separate estimates by experts in Norway and the United States.

The shift, reflecting China's stellar economic growth, raises questions about historical blame for rising temperatures and more floods, desertification, heatwaves and sea level rise.

Almost 200 nations will meet in Paris in December to work out a global deal to fight climate actions beyond 2020.

"A few years ago China's per capita emissions were low, its historical responsibility was low. That's changing fast," said Glen Peters of the Center for International Climate and Environmental Research, Oslo (CICERO), who says China will overtake the United States this year.

Using slightly different data, the U.S.-based World Resources Institute think-tank estimated that China's cumulative carbon dioxide emissions will total 151 billion tons for 1990-2016, overtaking the U.S. total of 147 billion next year.

The rise of cumulative emissions "obviously does open China up to claims of responsibility from other developing countries," said Daniel Farber, a professor of law at the University of California, Berkeley.

In a U.N. principle laid down in 1992, rich nations are meant to lead in cutting greenhouse gas emissions because their wealth is based on burning coal, oil and natural gas since the Industrial Revolution began in the 18th century.

Emerging nations, meanwhile, can burn more fossil fuels to catch up and end poverty. But the rapid economic rise of China, India, Brazil and many other emerging nations is straining the traditional divide between rich and poor.

"All countries now have responsibility. It's not just a story about China -- it's a story about the whole world," said Ottmar Edenhofer of the Potsdam Institute for Climate Impact Research and co-chair of a U.N. climate report last year.

India will overtake Russia's cumulative emissions since 1990 in the 2020s to rank fourth behind China, the United States and the European Union, according to the CICERO calculations.

China surpassed the United States as the top annual emitter of carbon dioxide in around 2006 and now emits more each year than the United States and the European Union combined. Per capita emissions by its 1.3 billion people are around EU levels.

Beijing says the best yardstick for historical responsibility is per capita emissions since the 18th century, by which measure its emissions are less than a tenth those of the United States. But stretching liability so far back is complicated. Should heat-trapping methane gas emitted by rice paddies in Asia in the 19th century, now omitted, count alongside industrial carbon emissions by Europe? Should Britain be responsible for India's emissions before independence in 1947?

Lawyers say it is difficult to blame people living today for emissions by ancestors who had no inkling that greenhouse gases might damage the climate. "I feel very uneasy about going back more than a generation in terms of historic responsibility," said Farber, arguing that Berlin could hardly be blamed if someone died by setting off a rusting German World War One landmine in France.

"China is acting. It has acknowledged its position as a key polluter," said Saleemel Huq, of the International Institute for Environment and Development in London.

And historical responsibility is at the heart of talks on solving the problem.

The U.N. panel of climate scientists estimated last year that humankind had emitted 1.9 trillion tons of carbon dioxide since the late 19th century and can only emit a trillion more before rising temperatures breach a U.N. ceiling of 2 degrees Celsius (3.6 Fahrenheit) above pre-industrial times. Any fair formula for sharing out that trillion tons, or roughly 30 years of emissions at current rates, inevitably has to consider what each country has done in the past, said Myles Allen, a scientist at Oxford University. "Until people start thinking about blame and responsibility they are not taking the problem seriously," he said.

52. China Wants U.S. Climate Commitment to Extend Beyond Obama Administration

China is well aware of Republican attacks on President Barack Obama's climate agenda but hopes his efforts to achieve an international climate deal that includes the U.S. won't be undercut by his opponents or his successor, China negotiator Gao Feng said on April 23rd. "We are aware of the dynamics and what conservatives, mostly Republicans, are saying" in opposing U.S. participation in a global accord slated for final negotiations at year's end in Paris, Gao said.

Whether the U.S. can maintain its commitment to any deal could be at risk, depending on who wins the U.S. presidency in 2016, according to Gao, who is China's special representative for climate change negotiations. He spoke at a forum held by the Center for Climate and Energy Solutions. "Everything will depend on the outcome of the next [U.S.] general elections," the negotiator said, but China "fully" hopes "there will be no backsliding" by future administrations on a deal to reduce greenhouse gas emissions, which is to enter into force in 2020.

Gao said China is "encouraged" thus far by the Obama administration's commitment to reaching a new United Nations climate deal, which would be the first to commit nearly 200 developed and developing nations alike to reduce emissions of carbon dioxide and other greenhouse gases.

Many Republicans argue the Senate should review any deal.

Gao and other climate negotiators and environment ministers from New Zealand, the European Commission and Gambia said there remain significant hurdles to overcome by the end of Paris meeting. The hurdles include what is generally viewed as a too-long draft negotiating text approaching 100 pages; apportioning responsibility for emissions between developed and developing countries; and what has thus far been a surprisingly small number of countries to submit formal pledges to the UN to reduce emissions.

With the Paris talks seven months away, just eight parties have thus far submitted their pledges outlining the domestic actions they would take under the post-2020 deal, including Liechtenstein, which unveiled its submission April 23. The others have come from the European Union, the U.S., Russia, Switzerland, Mexico, Norway and Gabon.

Harald Dovland, a former environment minister for Norway who also spoke at the forum, said the obstacles ahead are challenging. "I'm very optimistic that we will be able to reach an agreement," he said, but added that the multitude of issues still to be agreed to is disconcerting. "At present, it looks messy," Dovland said.

The negotiators all acknowledged the high expectations going into the Paris meeting in the wake of the 2009 summit in Copenhagen, talks that drew a record number of world leaders but nearly broke down over the divide between rich and poor countries. A relatively modest deal was salvaged only after Obama and leaders from China, India, Brazil and other nations brokered a compromise that fell well short of a global climate agreement.

New Zealand's climate change ambassador, Jo Tyndall, said she remains optimistic that the Paris talks will produce a deal.

"The train is leaving the station with everybody on board," she said, although she suggested there may have to be "more stations in the future"—future negotiations to strengthen the deal.

53. China to Step Up Urbanization Along Yangtze River

China's government has released a framework to develop sprawling urban areas along the Yangtze River as it moves forward with a decade-long ambition to turn the Chinese heartland into a major economic belt. Although no specific investment details were released, the State Council, China's cabinet, said on its website it would designate 317,000 square kilometers along the river to become urban areas, hosting transportation and energy projects.

The designated urban development area will span the three provinces of Hubei, Hunan and Jiangxi near and around the metropolitan areas of Changsha and Wuhan.

China's top leadership has outlined plans to turn the Yangtze, which runs from China's western highlands and empties into the East China Sea near Shanghai, into an economic axis that would catch up with China's highly developed coastal regions.

54. Baoding Takes Heat for Severe Pollution

Controlling air pollution has become a top priority for Baoding, Hebei province, after it was listed as the country's most polluted of 74 major cities in China for five straight months. "It's a shame for every Baodinger that the city has been notorious for its bad air quality," said Nie Ruiping, Party chief of Baoding, at a recent video conference, adding that government officials should feel guilty about this.

According to Nie, although Baoding has rolled out measures to fight air pollution, government officials have not put the measures into place effectively.

For the first three months of this year, Baoding only had 11 days that met air quality standards, and had 39 heavily polluted days, despite an average 29.5 percent year-on-year drop in PM2.5 density in Hebei province.

Neighboring Beijing, which also counts as one of the country's most polluted cities, witnessed a 19 percent year-on-year drop in the average density of PM2.5 - airborne particles smaller than 2.5 microns in diameter that can penetrate the lungs and harm health - in the first quarter. The city's environmental watchdog attributed this to "the capital's continuous air pollution control efforts and favorable weather conditions".

Baoding has set up a special team led by Nie and Mayor Ma Yufeng to ensure the proper implementation of measures to curb air pollution. The team will hold monthly meetings to summarize the progress, and government leaders will secretly inspect companies. "The city will punish enterprises that illegally discharge pollutants, and also punish government officials who protect those enterprises," Nie was quoted as saying.

According to Ma, by the end of this year, the average density of PM2.5 in Baoding should drop by 8 percent from last year. By the end of 2017, it should fall 33 percent from 2013.

The effectiveness of the anti-air pollution campaign will be a key factor in officials' performance evaluations.

Baoding is seen as an important city in the coordinated development of the Beijing-Tianjin-Hebei zone. Since the region's development was set as a national strategy last year, many enterprises from the capital and Tianjin have moved to the city and explored cooperation with local companies.

Nie said that every project has to be aware of air pollution.

The campaign also encourages the public to report air-polluting behavior to the government. Each person will be given up to 1,000 yuan (\$160) if the reported behavior is confirmed.

55. Automakers Charged Up About China's E-Car Market

Automakers in China and abroad are eagerly plugging into the new-energy vehicle market, as Chinese customers slowly warm up to going green. To dispel lingering concerns among drivers about the accessibility of charging stations and the range of e-vehicles, major companies are launching ambitious forays into the market.

German automaker BMW's local joint venture, BMW Brilliance, last month teamed up with eHi Car Services to lease its fully electric Zinoro 1E in Beijing. The manufacturer made the model available for daily and long-term rental last year, installing charging posts in customers' homes. To boost sales, it has also increased the number of its public charging points in Beijing and Shanghai.

“Electric mobility is one of the hottest topics in the automotive industry; everyone is talking about it,” said Jochen Goller, BMW Brilliance’s senior vice-president for marketing. “But it’s not only talking about it, it’s about putting e-mobility into action.”

The infrastructure for recharging, and helping customers to understand what e-mobility is, were vital to making e-mobility work, he said, explaining that the company provided rental services so drivers could experience low budget e-cars, get used to them, and maybe buy one in the future.

Daimler’s joint venture, Shenzhen BYD Daimler, also launched its electric SUV Denza in China last year.

Yet it is not just global players who are buzzed by the market. Chinese automaker BYD has made developing new-energy vehicles a priority, while its plug-in hybrid sedan, the Qin, has already proved popular, with 14,747 units sold in China last year.

This year, Geely also signed a deal with Taizhou Xindayang Group to make the Zhidou, an electric passenger car, in Gansu province. The joint venture will focus on developing and manufacturing e-vehicles for the domestic market.

Thanks to a rise in public awareness of environmental protection and the need for sustainable growth, China’s new-energy vehicle industry is booming. More than 23 million cars were purchased last year, more than anywhere else in the world.

According to the China Association of Automobile Manufacturers, output of new-energy vehicles was 78,499 units, 3.5 times higher than in 2013, while sales also more than tripled to 74,763 units.

Industry insiders see huge potential, especially in light of the high expectations placed on the industry by the government and its supporting policies. “With central and local government backing, China can guarantee the best environment for growth in the sector,” predicted Hu Xiaoqing, marketing director for Shenzhen BYD Daimler.

The country’s more environmentally aware consumers have been quick to get on board with new-energy vehicles, and many have been equally anxious to share their concerns. “I like electric cars because they’re friendly to the environment,” said Wan Yang, a 32-year-old TV producer in Beijing. “I’ll drive one as long as it’s convenient to charge.”

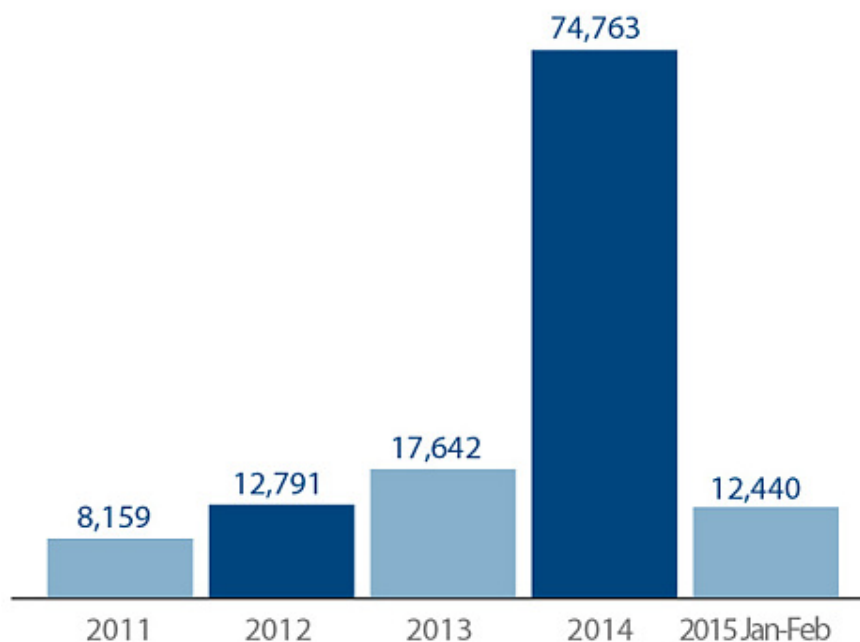
It is the second part of that comment that has so far proved a stumbling block. Zhang Yi, 33, lives in Baoding, northern Hebei province. Driving an e-vehicle in Beijing or Shanghai was fine, he said, because there were plenty of places to recharge the engine. But that is not the case in smaller cities and on highways, he said. “I won’t drive one in my hometown, there are no charging points. And what can I do if the car runs out of power on a highway?”

Independent industry analyst Jia Xinguang has urged the government to focus on promoting the sale and use of new-energy autos in small and medium-sized cities. “The subsidies on offer in smaller cities are much lower than in Beijing and Shanghai,” he said. “They need more charging stations and better after-sales service facilities.”

Chinese policymakers are attempting to lay the foundations for a transformation in the auto industry, from a global sales leader to a manufacturing powerhouse. Over the past 50 years, although the market has boomed, the competitiveness of domestic brands in advanced

manufacturing has remained relatively weak, partly due to the fact that China was a latecomer and that its companies did not spend much on research and development.

New-energy vehicles sold in China



Sources: China Association of Automobile Manufacturers

But it is not too late when it comes to new-energy vehicles. Today, China stands on the starting line along with Germany, the United States and Japan; so with a major push China could realistically become a manufacturing power in the sector.

In 2012, the State Council, China's cabinet, set a goal of having 500,000 new-energy cars on the road by the end of this year, and a total of 5 million by 2020. To achieve this, the government plans to establish a research and development system and industrial chain for e-cars within the next four years.

The State Council last month also unveiled "Made in China 2025", a program aimed at upgrading the country's manufacturing power over the next decade. It includes special funding and tax incentives for 10 industrial sectors, including new-energy vehicles.

A draft plan to boost research and development of new-energy vehicles was opened for public consultation by the Ministry of Science and Technology in February, while city authorities have also introduced supporting policies.

For example, Beijing plans to ensure drivers within the sixth ring road do not need to travel farther than five kilometers to reach the nearest charging point by the end of this year. The city was also planning to cut the costs of parking and toll roads for e-cars in the near future.

Green energy and the environment were widely discussed at the annual sessions of the country's top legislative and advisory bodies last month, including the development of new-energy vehicles. In a speech to the National People's Congress, the legislature, Premier Li Keqiang promised to beef up the fight against pollution by introducing cleaner energy and clamping down on illegal emissions.

China has gradually been increasing its emissions standards, and last month southern Guangdong province upgraded its standards for light vehicles to National V, which requires a sulfur content in fuel of no more than 10 parts per million, one fifth of the National IV's 50 ppm. The province is the third provincial level region to apply the standard, after Beijing and Shanghai.

Yao Jie, deputy secretary general of the China Association of Automobile Manufacturers, urged Chinese automakers to invest more in research and development. "Auto manufacturers need to be more innovative to meet the government's rising emissions standards, as well as reduce vehicle fuel consumption and polluting emissions," he added.

56. Hong Kong's Elderly Face Special Air Pollution Risk, Unique Study Finds

A groundbreaking tracker study offers evidence for the first time that the fine suspended particles known as PM2.5 lead to a higher death rate among elderly people in the city. Conducted by a team from the University of Hong Kong's School of Public Health, the study successfully tracked more than 60,200 elderly Hongkongers for 10 to 13 years, from 1998 to 2011, and analyzed the mortality rate in correlation to the levels of PM2.5 where they lived. There are participants from all 18 districts.

Its results were published recently in journal *Environmental Health Perspectives*.

"There have been studies on the lethality of PM2.5 and other pollutants but no data at all in Asia ... this study provides new evidence on mortality from the long-term effects of being exposed to PM2.5 among the elderly," said HKU associate professor Dr Wong Chit-ming, of the School of Public Health, who led the study. "This refutes [claims] that perhaps Asians are less susceptible to the effects of PM2.5."

The study - which used NASA satellites to narrow down PM2.5 levels by square kilometer - was the first of its kind in Asia not just Hong Kong, and was rare worldwide in its scope and detail, Wong said. While most overseas studies compare different cities, HKU's examined Hong Kong in detail, and can therefore give more accurate results specific to the city.

The study is also relevant as Hong Kong grapples with a fast-ageing population.

Every 10-unit increase in PM2.5 correlated to a 22 per cent hike in deaths by cardiovascular causes, a 42 per cent increase in coronary heart disease and a 24 per cent increase in strokes.

The study took into account participants' individual variables - health records, income, education level and lifestyle habits such as smoking - as well as the socio-economic status of the communities in which they lived, Wong said. The variables were factored in to the calculations.

There were around 16,000 deaths from natural causes during the study. The report stated that survival was highest among those who were exposed to the least amount of PM2.5, and "markedly lower" for those with high exposure.

The World Health Organization sets 25 micrograms per square meter as the maximum 24-hour average concentration for PM2.5. Hong Kong averages 40 to 50, while mainland readings often surpass 100.

57. Hong Kong Expected to Require Low-Sulfur Fuel for Oceangoing Vessels in Port by July

Oceangoing vessels at berth in Hong Kong waters could be required to use fuels with a sulfur content of 0.5 percent or lower starting July 1, under a regulation the Legislative Council is expected to approve soon. Currently, oceangoing vessels not following a voluntary scheme use

heavy fuel oil with a sulfur content of 2.6 percent on average, according to the Environmental Protection Department.

Mandatory fuel compliance by all vessels could lower emissions of sulfur dioxide and respirable suspended particles (PM-10) by 12 percent and 6 percent respectively, Hong Kong's Environmental Protection Department said in a statement.

The Legislative Council is scheduled to review the regulation between March 13 and March 18. Air pollution watchdog Clean Air Network praised what it called a "significant move" that would make Hong Kong a "pioneer in Asia."

The regulation covers use of fuel one hour after arrival and up to one hour before departure for vessels in Hong Kong waters.

Operators also would be required to keep records of time and date of low-sulfur fuel use for a period of three years. Adoption of technologies that achieve the same emissions reductions without switching fuels could exempt vessels from the regulation, according to the department.

A failure to use low-sulfur fuel could lead to a fine of up to \$200,000 Hong Kong dollars (\$25,750) and up to six months in prison. Failure to keep required records would be punishable by a fine of \$50,000 Hong Kong dollars (\$6,400) and up to a three-month incarceration.

The nearby mainland China city of Shenzhen in Guangdong province began introducing subsidies for oceangoing vessels to switch to fuels with a 0.5 percent or lower sulfur content toward the end of 2014.

The Clean Air Network said it hopes that Hong Kong and Guangdong will work for a mandatory policy for shared waters, with a long-term goal of establishing an emissions control area for the region.

58. Taiwan: Puli Rally Demands PM2.5 Action

Environmental groups urged the Nantou County Government to join others in the region and pledge to ban the use of coal and petroleum coke

Hundreds of residents of Nantou County's Puli Township (埔里) yesterday staged a demonstration to raise awareness about elevated levels of PM2.5 — fine particles less than 2.5 micrometers in diameter — detected in the area, urging the Nantou County Government to join a coalition of central and southern counties pledging to ban the use of petroleum coke and coal.

Data produced by the Puli air-quality survey station showed that the majority of hourly PM2.5 concentrations were above level 10 on its scale yesterday, representing 71 micrograms of PM2.5 per cubic meter of air, which according to the Environmental Protection Administration's (EPA) Web site is "extremely high."

In addition, daily PM2.5 concentrations last month indicated that the township saw 26 days on which the value exceeded 35 micrograms per cubic meter of air — the EPA's recommended value.

The daily average last month often exceeded 50 micrograms and on two days exceeded 80 micrograms.

Citing the WHO, Taiwan Healthy Air Action Alliance founder Yeh Guang-peng (葉光芃) said that PM2.5 concentrations of 25 micrograms or above represent a threat to public health.

Taiwan Academy of Ecology director Yang Kuo-cheng (楊國禎) said that Puli, like Taichung, is located in a natural basin, making it susceptible to air pollution from the nearby Taichung Power Plant, which he said is the largest coal-fired power plant in Asia.

He said that Puli is not an industrial town, but still suffers the effects of pollution, which demonstrates that air pollution is not confined to the area of its origin. He called on local and national governments to work together and take action to curb air pollution.

In a joint statement, the environmental groups participating in the demonstration called on the Nantou County Government to set up a committee to monitor efforts to prevent air pollution and to commit to banning the use of coal and petroleum coke, thereby joining Yunlin, Chiayi and Nantou counties as well as Tainan and Taichung in a campaign to ban the materials.

Environmental Monitoring and Information Management Director-General Tsai Hung-teh (蔡鴻德) said PM2.5 found in Puli mainly originates in Taichung and municipalities along the western coast and then is carried into the area by ocean air currents.

He said factory emissions account for between 20 and 30 percent of PM2.5 and that mitigation efforts also rely on a change in residents' habits, adding that people should take public transportation more often, barbecue less and refrain from burning ghost money during rituals to venerate ancestors and deities.

A plan to ban old scooters is being considered by the EPA, as fumes emitted by vehicles are a major source of PM2.5, accounting for about 36 percent of the overall quantity, he said.

59. Weak Rural Demand Ruptures Two-Wheeler Sales in India

During the last five months ending in February, domestic motorcycle sales have fallen by 6% to 4.28 mn units.

Scores of villages in Maharashtra's Marathwada are reeling from a severe drought. A few hundred kilometers away, the region of Vidarbha has recorded unseasonal rains and hailstorms. Such events have taken a toll on agriculture and crippled rural incomes. The situation isn't unique to Maharashtra. Farm output has come under pressure in states such as Madhya Pradesh, Uttar Pradesh, and Haryana, too.

This has hit demand for two-wheelers, especially motorcycles. During the five months ended February, domestic motorcycle sales have fallen six per cent to 4.28 million units. High-mileage entry-level bikes (110-110 cc), a hit in rural areas, have seen a drop in sales in recent months.

RURAL SENTIMENT HURTS BIKES

The market sentiment in rural areas has been affected

	Motorcycles		Scooters		Mopeds		Total	
	No of units sold	% chg	No of units	% chg	No of units	% chg	No of units	% chg
Oct 14	1,008,761	-8.73	383,885	10.89	69,066	6.22	1,461,712	-3.61
Nov 14	853,254	-3.04	386,547	26.49	61,630	11.78	1,301,431	4.88
Dec 14	779,908	-3.5	374,159	24.01	58,929	10.2	1,212,996	4.24
Jan 15	868,507	-5.85	404,919	25.29	54,531	-20.17	1,327,957	1.06
Feb 15	774,122	-8.21	370,527	18.77	63,435	-2.02	1,208,084	-0.98

Domestic sales

Source: Siam

Last month, Hero MotoCorp reported a drop of eight per cent in sales. It is India's largest two-wheeler manufacturer, and generates more than half its volumes from rural markets. From selling more than 500,000 units every month, Hero's sales were no more than 485,000 in February.

"In some rural areas, the market sentiment has been hit by various factors, including the curtailment of

the MGNREGS (Mahatma Gandhi National Rural Employment Guarantee Scheme) spend, poor crop realization, and moderating wages. The sector has felt some impact in Bihar and Madhya Pradesh and the sugar cane-growing areas in Uttar Pradesh and Maharashtra," said a Hero spokesperson.

The fall recorded by Pune-based Bajaj Auto has been the steepest. In February, its motorcycle sales fell 26 per cent to 115,840 units, according to data by the Society of Indian Automobile Manufacturers. Entry-level bikes such as Discover and Platina, which account for more than half of Bajaj's sales, recorded a fall of 43 per cent.

Eric Vaz, president (motorcycle business), Bajaj Auto, said, "A fall in income in rural areas has led to a decline in the demand for entry-level bikes. Poor weather conditions have led to poor farm output, which has affected bike sales. We sell an average of 70,000 units every month from our 100-cc range, most of which are sold in rural areas."

Scooters escaped the slowdown. Most scooter sales are in urban areas. The segment has recorded growth of 27 per cent this financial year, selling 4.1 million units in the domestic market during April-February.

Y S Guleria, vice-president (sales and marketing), Honda Motorcycle and Scooter India, said, "We see there is a slowdown in the entry segment, impacting sales from semi-urban and rural areas. A few pockets are being disturbed due to inclement weather; standing crops are being destroyed. The buying sentiment is down. Scooters are largely urban-driven; so, there is no impact there."

While the kharif crop was lower than expected, unseasonal rains and hailstorms have hit the rabi crop, too, especially in Uttar Pradesh and Maharashtra. This has affected tractor sales, too, with the sector posting a decline of about 30 per cent in the past three months.

Though some say the onset of the marriage season in April will lead to an improvement in market sentiment, some manufacturers aren't optimistic. "There is no good reason to believe market conditions will improve from next month," said Vaz.

60. India Court Says Check Impact of Old Diesel Vehicles on Air'

The National Green Tribunal bench has directed the government to assess the impact of diesel vehicles—"whether commercial or otherwise"—over 10 years old and state why they shouldn't be

banned. Opining that "human health is an integral facet of the right to life and thus must take precedence over all commercial and infrastructure projects", the bench, headed by Chairperson Justice Swatanter Kumar, asked the government to submit "the exact number of diesel vehicles which are more than 10 years old and their impact on ambient air quality".

It also directed that a compliance report be submitted to it on a parking ban in Lajpat Nagar ahead of the next hearing on April 7 and ordered six DTC buses not following pollution norms be taken off roads. "We are informed that temporary parking by Delhi Urban Shelter Board has not been operated as earlier agreed by the Board. We issue clear and unambiguous directions that parking in that area shall be permitted forthwith. In event of default, the director of the Board shall be personally responsible rendering himself liable for an action in accordance with law," NGT directed.

Hearing an application filed by Vardhaman Kaushik, NGT earlier passed a slew of directions, including a complete ban on vehicles more than 15 years old and no parking on tarred roads. But there has been hardly any progress on their implementation. "We are pained to note that despite our orders the authorities have not risen to the occasion... The response lacks will and bona fides and exhibits callous attitude of shifting responsibility from one to other," the bench noted.

The bench directed Delhi government to submit a status report on compliance of these orders. "We direct compliance be made within one week from today without default. The affidavit-cum-status report shall be filed by the secretary, NCT Delhi, after holding a meeting chaired by the chief secretary of Delhi," it said.

CPCB had also recently inspected if 15 old and 12 new buses are complying with norms. While the new buses were doing so, six old buses weren't. NGT directed all six buses be taken off roads immediately.

61. India Parliament Votes to Allow Use of Electric Rickshaws, E-Carts Across Country

On March 11th, India's Upper House of Parliament passed a measure that is expected to allow electric rickshaws to legally travel roads nationwide. If the measure is approved by the president, as expected, the Motor Vehicles (Amendment) Bill will bring e-rickshaws and e-carts under the ambit of the Motor Vehicles Act of 1988 and give the federal government the power to make rules governing their safety standards and licensing.

The bill defines e-rickshaws and e-carts as special-purpose, battery-powered, three-wheel vehicles powered by up to 4,000 watts of electricity. They can be used to transport goods or passengers.

Such lightweight vehicles have been operating in many parts of the country for several years. But after a series of accidents last year, a public interest lawsuit in the Delhi High Court sought to ban e-rickshaws and e-carts in Delhi, forcing the government to acknowledge a lack of regulations for the vehicles.

E-rickshaws and e-carts found vocal supporters among environmentalists, who said they offer an eco-friendly alternative to other small public transport, such as taxis. They also said the vehicles provide indispensable last-mile connectivity for many who use public transport.

The lower house of parliament, the Lok Sabha, passed the bill on March 3rd. After the March 11 passage in the Rajya Sabha—the upper house—the measure is expected to receive presidential approval and become official.

62. Automobile Industry to Adopt Bharat Stage V and VI Norms Ahead Of Schedule

The outcry over worsening air quality in Indian cities has prompted the government to urge automakers to move to the advanced Bharat Stage V and VI emission norms a year ahead of schedule, in 2019 and 2023 respectively. "The auto industry has agreed to compress the deadline by a year," said Atanu Ganguli, senior director, Society of Indian Automobile Manufacturers (SIAM). This will lead to an increase in the cost of diesel vehicles by Rs 30-50,000 as the industry moves from BS IV to V norms, and another Rs 20,000-40,000 per diesel vehicle as it switches to BS VI norms. "All we need is development time to make and test vehicles suited to Indian conditions, its weather and terrains," said Ganguli.

The auto industry has said that it will not be able to speed up the compliance further. The road ministry, which has pressed upon the industry the urgency to reduce emissions, is also pushing for BS IV norms across the country. The norms, introduced in 2010, are currently in force in 38 Indian cities. The government is tightening the fuel efficiency norms even as it is opposing the National Green Tribunal's order to ban diesel vehicles older than 10 years in Delhi. It is also trying to provide a robust vehicle health inspection mechanism on a pan-India level.

"A good engine is not limited by age. The fuel quality has to be improved to ensure pollution levels come down," a senior government official said. The road ministry is also planning to enforce Pollution Under Control (PUC) checks more strictly, for which it is planning to involve private entities as well.

Earlier, when the green tribunal had banned all vehicles older than 15 years from plying in Delhi, the road ministry had opposed the move in an affidavit in the Supreme Court. The ministry had stated that banning older vehicles was not a solution to the problem of road safety and environment pollution

63. High Court 'Appalled' Over Govt's Lack of Concern about Air Pollution

The Delhi High Court today said it was "appalled" over how bureaucrats are unconcerned over air pollution in the national capital and how cutting of trees could lead to worsening of the situation and called for some "radical" steps to address the issue. The court said it was not its or the Additional Solicitor General's (ASG) "job" to give an agenda of topics on the issue of air pollution for the government to deliberate upon, rather it was the duty of the officials and bureaucrats and asked what were they doing.

"Not our or your (ASG) job to give agenda to government. It is their (bureaucrats) job to do so. Aren't they concerned about air pollution? What are they doing? Governments come and go... What are they doing? Sometimes it appalls us. They are not moved by anything. Something radical has to be done," the court said.

It made the remarks in response to ASG Sanjay Jain's submission that he will communicate to the government the agenda of topics to be discussed to come up with an action plan for Delhi and National Capital Region (NCR).

He made the submission in response to the court's observation that the minutes of a meeting recently held between representatives of Delhi, Uttar Pradesh, Rajasthan and Haryana governments as well as the Centre on preparing an action plan to combat air pollution, lacked specifics.

The court said the minutes were very general and vague did not talk of trees or pollutants and contained no details.

"You all don't know how to prepare an action plan and by you all we mean the bureaucracy. We want an action plan which is clear-cut and which everyone can understand and we want you to implement it," it said.

It asked the ASG to "impress upon" the central government to come up with an action plan with regard to air pollution in Delhi and NCR.

"The action plan shall address specifics with regard to nature of pollutants found in the air of Delhi," it said.

The court said there was also a need for more monitoring stations, which at present number 17, and asked the ASG to meet with officials of Central Pollution Control Board (CPCB) on the issue.

It gave one week to Delhi Development Authority (DDA), Public Works Department (PWD), Delhi Metro Rail Corporation (DMRC) and city government to file their reports and affidavits regarding cutting and replanting of trees. The reports were to be filed today as per the court's direction of April 15.

Meanwhile, Delhi government was asked to file an affidavit on the issue of who were the PWD officials who spoke to the media recently and what they had said with regard to the court proceedings. The affidavit was sought after the bench was informed that a newspaper report has quoted officials of the civic body in such a manner as to give the impression that the High Court is holding up or delaying development.

On air pollution inside the court building, an issue highlighted by senior advocate Meet Malhotra on the last date of hearing, it said it will pass directions on May 15, the next date, based on a report given by the Registrar General.

As per the Registrar's report, based on a survey carried out on April 21, the air quality inside the court building was beyond safe levels with the lobby and court room 2, where the matter is being heard, exhibiting the worst air quality. Both the lobby and court room two showed high levels of particulate matter.

The explanation for the high concentration of particulate matter (PM) was the poor ambient air quality outside the court premises. Due to poor air outside, it is not able to dilute the air from within the court and thus the quality of air inside becomes concentrated with PM, Malhotra told the bench. He said more air purifiers are required to be installed within the court rooms as well as doing away with the floor carpets.

On the issue of air pollution in the city and felling of trees, Delhi government told the court that both PWD and the Metro plant five to ten times the number of trees they cut for projects. It said the trees are not replanted in the same area but in the vicinity and added that the green cover of Delhi has risen to 20.08 per cent in 2013.

However, amicus curiae Kailash Vasudev disagreed with the submission. On the last date of hearing, the amicus had told the court that the notified green cover which as per authorities was supposed to be 30 per cent had fallen to 10.2 per cent in 2009 and may be much lower today, which had prompted the bench to call for an action plan from the city and the central government to restore the green cover.

He had also told the court that DMRC and PWD have cut over one lakh fully-grown trees in the past eight years.

Apart from a PIL initiated by the court on its own, it was also hearing a petition filed by advocate Sudhir Mishra seeking directions to the Centre to take immediate steps to control rising air pollution in Delhi.

64. Experts Urge Delhi to Work Out Implementation Plan to Curb Pollution

TOI's action plan for countering air pollution by next winter can be effective if the government starts delivering on it immediately. Transport and air quality experts from various organizations feel it has managed to address crucial aspects of the transportation sector which is one of the largest contributors of PM 2.5 (fine, respirable particles).

According to a recent study by urbanemissions.info, the transport sector contributes about 25% of PM 2.5 emissions while an emissions inventory developed by SAFAR under MoEF for NCR shows it could be as high as 38%. The Delhi government hasn't addressed how this sector can cut down on its contribution to air pollution.

Amit Bhatt, director of EMBARQ India, feels TOI's agenda is "very good and timely" but "I would like to add a couple of more things. Many a times vehicles from Delhi buy a national permit to be able to buy Euro 3 or Euro 2 vehicles and they often operate these heavy vehicles within Delhi. We should have uniform fuel norms across the country to counter this problem. The other suggestion is that Chinese cities have a quota of total number of cars in the city. We should also have a quota or cap on total registrations or we will never be able to control the problem of too many vehicles," he said.

Akshima T Ghate, fellow at TERI, said: "The points on improving public transport, walking and cycling are good but to implement the ban on old vehicles, the provisions in MV Act may need to be amended, which may delay the process. Why not create state-of-the-art fitness checking infrastructure? Let only fit vehicles ply on roads irrespective of fuel type."

"Also, why impose cess only on diesel vehicles? Two-wheelers and petrol cars also contribute significantly to emissions - follow the polluter pays principle. It's time we also look at innovative measures like flexi-timings in offices so as to reduce the load on roads, all at the same time. Also, savings due to reduction in idling could be substantive," said Ghate.

Anumita Roy Chowdhury of Centre for Science and Environment (CSE)'s clean air program said the action plan needs an implementation strategy. "This action plan gives us an idea of what needs to be done immediately. These are urgent. Emphasis should be on performance-based action and not a legal ban. Tighten emission standards and use tax measures to disincentivise old and polluting vehicles. Scale up integrated public transport, walk and cycle options to reduce dependence on cars."

SP Singh of Indian Foundation of Transport Research and Training (IFTRT) appreciated TOI's action plan but said the agenda should also have measures to cap the total number of cars on roads. "We have submitted to transport department that Delhi should stop registering diesel SUVs and cars. That's the only way to actually bring down the number of polluting vehicles. Manufacturers were extremely defensive about this idea. But it has to be done," he said.

"The TOI agenda looks good although it would be better to identify whose responsibility it is to do each of these things. The only agenda item I would add is adoption of Euro VI standards from 2020 onwards," said Anup Bandivadekar, Passenger Vehicles Program director, International Council on Clean Transportation.

65. India Takes 'Significant Step' In HFC Decision: U.S. Envoy

India's surprise decision to agree to phase-down the use of a potent greenhouse gas after years of opposition is a "significant step" toward global action to address climate change, according to the U.S. State Department's climate change envoy. India proposed an amendment to the United Nations' Montreal Protocol, which calls on countries to phase out their use of HFCs, gases used in refrigerators, air conditioners and insulating foams that are a highly potent form of greenhouse gas emissions.

India's amendment calls for a 15-year transition period for developing countries to phase down their use of HFCs in appliances.

India had for years opposed a phase-out of HFCs under the protocol, which focuses on curbing the use of ozone-depleting substances. It has argued HFCs should be handled instead under the Kyoto Protocol, which places the responsibility only on developed countries to make greenhouse gas cuts. Negotiations on a climate agreement to succeed the Kyoto Protocol have been more challenging, as countries disagree over how to share the burden of emission cuts.

President Barack Obama and State Department climate change negotiators had long pressed India to agree to phase out HFCs under the Montreal Protocol, to which every country in the world is a member.

Obama discussed phasing-down HFCs with Indian Prime Minister Narendra Modi in a bilateral meeting in India in January. The United States had already secured cooperation in 2013 from China to phase out HFCs under the Montreal Protocol after years of opposition.

Air conditioner and refrigerator use has been projected to grow by up to 20 percent per year in India, according to the Environmental Investigation Agency, putting it on track to surpass HFC consumption in the United States.

"It signals that they share our concern about the growth of HFCs and their impact on the climate system, are in agreement that the Montreal Protocol is the right forum in which to address this issue," U.S. envoy Todd Stern told Reuters in an e-mailed statement.

Durwood Zaelke of the Institute for Governance and Sustainable Development said the move will help the UN climate talks. "It will build critical momentum for a successful outcome in Paris for the climate negotiations in December, and complement what is expected to be an agreement where all countries participate by pledging to attack climate pollutants at their own pace," he said.

66. Modi Says India to Strike Own Path in Climate Battle

Indian Prime Minister Narendra Modi signaled recently that he would not bow to foreign pressure to commit to cuts in carbon emissions, instead pledging to use more clean energy and traditional methods to lead the fight against climate change. India, the world's No.3 emitter of greenhouse gases, has come under pressure to tackle its rapidly rising emissions since the United States and China committed last November to start cutting their own emissions after a "peak year".

United Nations climate talks will be held in Paris later this year to look at ways to limit a damaging rise in global temperatures. Getting India to agree to a strategy to lower its own emissions is vital if the talks are to be judged a success.

"The world guides us on climate change and we follow them? The world sets the parameters and we follow them? It is not like that," Modi said at an event in Delhi. "We can lead the world."

The Indian government has said it needs to emit more to industrialize and lift millions out of poverty.

While Modi has in the past highlighted the dangers posed by climate change, he has also argued that the world must focus more on clean energy and less on outright emission cuts. India has set an ambitious target to raise renewable energy generation but is also expanding the mining of coal, a major contributor to its growing emissions.

Modi suggested using traditional methods such as switching off street lights on full-moon nights to save on energy and cut emissions.

Modi also accused the world of double standards by lecturing India about the environment but refusing to sell it the fuel needed for nuclear power. Some countries maintain a ban on selling uranium to India because New Delhi has refused to ratify the nuclear non-proliferation treaty.

Modi will soon begin an overseas trip to Europe and Canada and is expected to push for more help in expanding India's civil nuclear industry and easing the uranium ban.

67. Rajasthan Chalks Out 3-Pronged Strategy to Curb Pollution

Rajasthan government under its joint three-month action plan with states Haryana, UP and Delhi to check air pollution in the national capital region (NCR) is committed to taking strict action against pollutants emitting vehicles, maintaining strict standards at construction sites and banning burning of waste.

Acting against the rising air pollution in Delhi and NCR, state governments of four states-Haryana, Rajasthan, UP and Delhi-agreed to work together towards reducing it. Officials of environment department under Union environment minister Prakash Javadekar chalked out a set of strategies last week.

Rajasthan government which has parts of Alwar and Bharatpur in NCR agreed to put a ban on burning of waste immediately in these two districts.

Government also decided to ensure compliance of set guidelines for construction by developers in NCR. To construct and demolish structures, proper screens will have to be installed at the sites.

The areas where any such activity is going has to be kept wet and construction material will have to be ferried in closed trucks.

According to the officials, the state committed to monitoring the quality of fuel being used in industrial units in Bhiwadi. It also vowed to act against vehicles emitting pollutants, set up automatic identification of overloaded vehicles at borders, phase out coal-based units and adhere to upcoming norms on handling of construction waste.

The main focus of the state government was to keep a check on particulate matter. In both Alwar and Bharatpur districts oxides of Nitrogen and Sulfur are within the standards of ambient air quality but it is the suspended particulate matters (SPM) that are in excess and are a matter of great concern. Against the set limit of 60 respirable suspended particulate matter (RSPM) in Alwar it is often recoded at 150-260 RSPM.

Experts attributed natural reasons apart from man's contribution to high presence of SPM in the state. "Being an arid and dry area natural emission of dust in the ambient air from the dry soil is very substantial. This pushes the air pollution even in the areas where there are no major vehicular movements or presence of industries," said D N Pandey, member secretary of Rajasthan state pollution control board.

Officials concerned of the four states will meet again in July and review the implementation of the action plan.

68. Raise Diesel Cess, Cut Tax on Buses for Green Delhi

The Centre for Science and Environment (CSE) has recently prepared an action plan to counter high air pollution levels, and an implementation strategy for the new government with special emphasis on clean fuel and scaling up of public transportation in the capital. While the Centre has already announced a three month plan for NCR, most of the actions pointed out by CSE can be taken up by the Delhi government immediately but will require major planning and financial intervention.

In UP, retail price of diesel is higher than Delhi, while in Haryana it is roughly the same. "The current cess on diesel of 0.25 paise in Delhi should be increased to Rs 2.25 to dis-incentivize diesel and increase revenue for pollution control," recommends CSE. The pollution cess on diesel, which was imposed in 2007, has already raised Rs 200 crore that should be used for public transport, they said.

BS-IV fuel is already available across north India, but a notification to register BS IV compliant vehicles in non-BS IV states has not been issued by the ministry of transport yet. CSE recommends that Delhi immediately take up the matter with Centre. Only a few approved models of e-rickshaws (registered according to ARAI guidelines) are getting registered now, but CSE suggests development of a citywide road map of deploying battery-run two-wheelers, three-wheelers, taxis and buses.

The Kejriwal-led government may have to now invest more resources in promoting public transport. "Ironically, tax on bus is higher than cars in Delhi. There is a 12% excise duty and 12% VAT on basic and excise on each bus. On an Rs 29 lakh bus, it would mean there is a tax of roughly Rs 7 lakh. This should be waived off and there should be increase in car tax," CSE's action plan recommends.

It backs up the recommendation with numbers. In Ambedkar Nagar, buses take up 8% of the space but move 61% of people. Cars in general carry only about 12% of people. "Transport department has nine clusters of 2,436 buses in Delhi. But currently 1,400-1,500 buses are plying as land for bus depots has not been made available by DDA. This needs to be addressed," a CSE researcher suggested.

They have also recommended ways to make cluster buses financially viable by using the interiors and exteriors of buses as advertisement spaces. In spite of the common reciprocal agreement signed by all NCR states, public transport connectivity in the region is poor. CSE recommends that an initial plan be presented in three months and then arrangements for implementation across NCR will be worked on.

UTTIPPEC guidelines for pedestrian access are not complied with in many cases because of lack of road space. "In all future projects, roads with all agencies will be designed from end to middle, starting with pedestrian space," CSE said.

A few other solutions include asking BIS to issue guidelines to allow reused material to be used in construction, negotiating with Centre on supply of affordable gas for Delhi's power stations, a 5-year procurement plan and global tender for 5,000 buses.

69. NGT's Ban On Diesel-Run Vehicles over 10 Years Old in Delhi Hits Used Cars Hard



For diesel cars, the National Green Tribunal's order has come as a double whammy. Customer inquiries have fallen drastically in Delhi since the tribunal's order banning diesel-run vehicles that are older than 10 years from the capital's roads, say industry executives. The situation is severe in the used-car market, where prices have tanked for diesel cars and few takers are left for vehicles that are older than 7-8 years.

The order adds to the woes in a segment where sales have already lost momentum because of the narrowed price difference between diesel and petrol, after the government lifted diesel subsidies last year. Several of India's auto makers had tweaked production to meet growing

demand for diesel vehicles a couple of year ago when the subsidy had kept diesel much cheaper than petrol. With a reversal in consumer preference now, these companies will likely have to readjust production plans to make more petrol cars.

The tribunal order doesn't put curbs on new diesel-powered vehicles.

But the confidence of potential customers of diesel vehicles has been affected, say industry executives. The ruling could pose a problem when vehicles purchased now are sold a few years down the line in the used-car market.

And, similar rules could be brought in other cities as well. "This decision has come as a shock for the consumer and forced him to rethink on the purchase plans," said a senior marketing executive at a car company. "Customers are perplexed," said a Delhi-based auto dealer.

"Even those who preferred diesel vehicles for better pickup and mileage over petrol variants are now concerned about their shortened lifecycle," he said.

The National Capital Region, comprising Delhi and adjoining areas, accounts for nearly 18% of India's overall cars sales. Diesel so far accounted for almost a third of the sales. Diesel is more polluting than petrol and the tribunal's order is aimed at improving air quality. The used-car market has already taken a hit.

Prices have dropped 40-60% for preused diesel cars. A six-seven-year-old Ford Endeavour now costs as low as Rs 2 lakh, compared with Rs 8 lakh earlier. An eight-year-old Mahindra Scorpio can be yours for Rs 1 lakh.

The All India Car Dealers' Association (AICDA), fearing the ban to affect their livelihood, has decided to approach the Supreme Court. "There are no customers willing to buy older cars that form the bulk of our business. We have no option but to seek a legal recourse. While the government has taken the road tax for 15 years, it is silent over the ban," said Lokesh Munjal, vice president of the association.

Several other bodies are planning to approach Union Transport Minister Nitin Gadkari to apprise him of the situation and find a way to make some solutions.

According to some, there are many cars that have done just 45,000-50,000 kilometers and are in good condition, so don't need to be replaced though they may have completed 10 years.

70. Delhi Issues Notices to 172 Construction Projects

Continuing its crackdown on major sources of air pollution in the national capital, the Delhi Pollution Control Committee has issued notices to 172 ongoing construction projects in the city. The concerned parties have been directed to submit reports on the current status of construction and steps being taken by them in compliance with the Ministry of Environment and Forests guidelines, 2010, on prevention of dust and garbage accumulation on their sites, while carrying out the construction.

They will also have to submit adherence reports on directions mentioned in the orders of the National Green Tribunal.

It has been found that though these projects had obtained prior environmental clearance from the Ministry of Environment and Forests or from State Environment Impact Assessment Authority (SEIAA), Delhi, subsequently, the mandatory 'Consent to Operate' clearance was not sought from the Delhi Pollution Control Committee.

State environment minister Asim Ahmed Khan has also directed the officials of the department to follow-up on the steps being taken to penalize those responsible for burning of garbage, leaves and plastic in the open, another main source of air pollution apart from the vehicular traffic in the nation capital.

Mr. Khan has sought a presentation report on further steps that could be taken to reduce air pollution caused by open construction activity in the city. He will also take up the matter with the Public Works Department (PWD) and other concerned departments to draw up a joint comprehensive plan comprising of awareness programs and punitive measures to check the growing sources of air pollution in the city.

71. Breathing Poison in the World's Most Polluted City



Saharan dust, traffic fumes and smog from Europe may be clogging up London's air at present - and causing alarm in the newspapers - but in the world's most polluted city London's air would be considered unusually refreshing. That city is Delhi, the Indian capital, where air quality reports now make essential reading for anxious residents.

In London last week, the most dangerous particles - PM 2.5 - hit a high of 57 - that's nearly six times recommended limits. Here in Delhi, residents can only dream of such clean air. Its reading for these minute, carcinogenic particles, which penetrate the lungs, entering straight into the blood stream - is a staggering 215 - 21 times recommended limits. And that's better than it's been all winter.

Until a few weeks ago, PM 2.5 levels rarely dipped below 300, which some here have described as an "air-pocalypse". Like the rest of the world, those in Delhi believed for years that Beijing was the world's most polluted city. But last May, the World Health Organization announced that Delhi's air is nearly twice as toxic.

The result is permanent lung damage, and 1.3 million deaths annually. That makes air pollution, after heart disease, India's second biggest killer. And yet, it's only in the past two months as India's newspapers and television stations have begun to report the situation in detail that we've been gripped, like many others, with a sense of acute panic. It's a little bit like being told you're living next to an active volcano that might erupt at any moment.

72. Will Over 10-Year-Old Diesel Vehicles Be Banned Across India?

Widening the ambit of the case against rising air pollution in Delhi, the National Green Tribunal (NGT) on Friday issued notice to chief secretaries of all states and UTs, asking them what steps were being taken to combat the menace.

The NGT bench, headed by Chairperson Justice Swatanter Kumar, also directed states to submit information on the density of vehicles and air quality readings by May 1 and come up with suggestions to improve air quality. Citing examples of cities like Bangalore, Hyderabad, Pune and Mumbai, the bench sought details of what they were doing to deal with the issue.

The bench was hearing a petition by lawyer Vardhaman Kaushik on high air pollution levels in Delhi. Kaushik's plea was merged with a case filed by Agra-based pediatric surgeon Dr Sanjay Kulshrestha who said severe air pollution levels across the country were not just affecting newborns but also fetuses. Since the cases have been combined, the bench decided to involve the rest of country in responding with possible solutions.

With regard to the capital, NGT directed the Delhi Pollution Control Committee and Central Pollution Control Board to monitor emissions at the Badarpur and Rajghat thermal power plants.

The bench also enquired about the enforcement of parking rules in Karol Bagh and Lajpat Nagar and directed municipal corporations to come up with parking space solutions as soon as possible. It demanded a clarification from the Rajasthan and Haryana governments as well on why trucks plying through NCR were not checked for emissions and fitness.

Earlier this week, NGT had stayed for two weeks its earlier order of impounding diesel vehicles more than 10 years old plying in Delhi. It has sought suggestions from various agencies in Delhi government on better implementation of its order by May 1.

The case has seen a number of landmark orders in the past few months as NGT took up the issue of air pollution actively. In November last year, while hearing the matter, the bench had issued a 14 point directive which included a ban on petrol and diesel vehicles older than 15 years -a move that's likely to take an estimated 10 lakh vehicles off the road. It also barred burning of waste in the open besides placing restrictions on parking and ordering stricter vigil on overloaded trucks entering the city.

73. Volkswagen Plans To Make India Low-Cost Export Hub

Hannover - German auto major Volkswagen is planning to make India a low-cost manufacturing hub, catering to both the emerging as well as developed markets. Also, as part of Prime Minister

Narendra Modi's 'Make in India' initiative, the company will be investing Rs 1,500 crore for localization and produce cost effective products, Volkswagen India chief representative Mahesh Kodumudi told on the sidelines of the Hannover Fair.

"We are looking at making India a low-cost manufacturing hub catering to emerging and developed export markets. In 2014, we exported 65,000 cars which is 60 per cent of our production from the Chakan plant," Kodumudi said. "We are looking to export 70,000 cars this year," he said.

The company will also increase production capacity at the Chakan and Aurangabad units in the next two years.

Volkswagen AG chief executive Martin Winterkorn said: "India is and will remain an important strategic growth market for the Volkswagen Group. We are convinced that VW will take on a key role in the Indian automobile market in the long-term. We are driving localization forward with our new engine assembly plant in Pune."

VW plans to increase production to 200,000 units by 2018 and add more new models from the 130,000 units Chakan plant.

Kodumudi said the company is looking at getting into top down segment and focus will be on building the brand. The company is planning to reintroduce the Passat sedan and a new model of the iconic Beetle this year.

India has good potential to grow. Last year the country produced 2.4 million units and this year the target is 2.5 million, which will grow to 4-4.5 million by 2020, he said. Kodumudi, however, pointed out that the frequent policy change and large currency fluctuations have hampered growth of the industry in last two years.

"Now we need the government to create stable policy framework and labor reforms, which need to be simplified. This will help gain confidence of foreign investors. We also need to talk about FTA with the EU to help the growth of the industry," he said.

The company is also talking to the government over the cut in export incentives from 4 to 2 per cent in the recent new Foreign Trade Policy. "This move will hit the company's export plans. We are hopeful of the government restoring export incentives," he added.

74. 'No Mandatory Recall for Vehicles with Manufacturing Defects'- Government

The government has no proposal to ask vehicle manufacturers to conduct 'mandatory recalls' in the event of defects being found in a model, Parliament was informed. The companies currently voluntarily recall the models if some defects in them come to light, but there is no requirement for mandatory recalls in such cases.

Asked whether the government has any proposal in which "vehicle manufacturers may have to face mandatory recall rather than hiding behind voluntary recalls when a particular model is found to be defective", Minister of State for Heavy Industries G M Siddheshwara replied: "No". In a written reply in the Lok Sabha, he also said that the government was not considering bringing a legislation to make vehicle recall mandatory if 100 or more people complain about a particular defect in any vehicle model.

Incidentally, the Ministry of Road Transport and Highways in the draft Road Transport and Safety Bill 2015 had proposed a mandatory recall policy for vehicles, keeping the safety of vehicle users in mind. The draft bill had even proposed that manufacturers should be liable to pay compensation for damage due to crashes caused by manufacturing defect in vehicles. It had also proposed levying penalties on vehicle makers for non-compliance in notifying manufacturing defects.

The Road Ministry had sought stakeholder comments on the draft Bill, which will be introduced in the Parliament after being approved by the Cabinet. Currently, the automobile makers in India follow a voluntary recall policy under an initiative by industry body Society of Indian Automobile Manufacturers that was introduced in July 2012.

Over 7 lakh vehicles have been recalled under the voluntary recall policy since July 2012. Under the policy, which is applicable for all manufacturers, from two-wheelers to commercial vehicles, if a company is of the opinion that there is a manufacturing defect that compromises safety of vehicles, it will voluntarily rectify the problem free of cost to the customer.

75. Toyota to Start Tokyo Trial of Electric Three-Wheeler in Green Mobility Push

Tokyoites will get a chance to zip around town on Toyota Motor Corp's three-wheeled electric car-motorbike very soon, in a trial aimed at crafting a global business model to reduce gridlock and pollution. The world's top-selling automaker will partner Japanese car-sharing service operator Park24 Co Ltd for a six-month experiment leasing the i-Road concept vehicle, with a view to setting up a green car-sharing business akin to Daimler AG's car2go service.

The pint-sized i-Road has two front wheels that move up and down independently of each other, allowing it to lean like a motorcycle but retain the stability of a car. Toyota has not yet decided whether to mass-produce it.

"Our concept was to offer something that's both fun and convenient for city driving," i-Road chief engineer Akihiro Yanaka told reporters.

Devising smarter ways to get around - known in the industry as "smart mobility" - looks set to become a new battleground for automakers as urbanization grows, pollution worsens, and more cars clog up cities in emerging markets.

Germany's Daimler has taken the lead with car2go, where its 1 million-plus members in 30 European and North American cities use a mobile app to reserve the tiny Smart Fortwo car, many of which are zero-emission. Drivers pay by the minute and can drop the car off at various spots around town.

Ford Motor Co in January announced the Ford Smart Mobility initiative that would involve various types of trials around the world including a car-sharing service in London.

Toyota also has car-sharing experiments underway in its namesake city as well as in France's Grenoble, but Tokyo would be its first in a major metropolis, which it says would benefit most from the i-Road.

"Data shows that about 70 percent of cars in big cities are occupied by one person, with most traveling less than 10 km (6.2 miles)," said Toshiya Hayata, group manager of Toyota's Smart Community department. "That means the mode of transportation doesn't have to be a car."

In the upcoming trial, users can lease one of five i-Roads from the upmarket Ginza shopping district for 412 yen (\$3) per 15 minutes, dropping it off at any of five spots in the capital. To turn the trial into a viable business, Toyota said it would need to slash costs both for the i-Road and for operating a car-sharing network.

"But Daimler doesn't have anything smaller than the Smart," Yanaka said. "If we can make it work, the i-Road could have an advantage."

76. Japan Targets About 20 Percent Emissions Cuts by 2030: Media

Japan is considering reducing emissions of greenhouse gases by around 20 percent by 2030 as its contribution to a global summit on climate change in Paris later in the year, Japanese media has reported. The target is lower than that outlined by the United States, which says it will cut emissions by as much as 28 percent from 2005 levels by 2025 and the European Union which is proposing at least a 40 percent cut from 1990 levels by 2030.

Japan is the world's fifth-biggest emitter of climate warming carbon dioxide, but has watered down earlier emissions targets due to the shutdown of its nuclear plants after the 2011 Fukushima disaster, with utilities burning record amounts of coal and gas for power generation.

Japan is considering a pledge to cut emissions by at least 20 percent by 2030, compared with 2005 levels, Kyodo News reported, citing sources close to the matter. The Nikkei reported that the Japanese government will propose cutting emissions by about 20 percent by 2030 from 2013 levels, implying a slightly lower absolute reduction due to a later base year.

Japan has switched its baseline to 2013 from 2005, reflecting a rise in emissions following Fukushima, which would help make the cuts of around 20 percent more attainable, the Nikkei said.

Japan's greenhouse-gas emissions rose to a record in the year ended March 2014, up 1.3 percent from 2005, as the closure of nuclear power plants following the disaster pushed up coal and gas use.

Japan is aiming to announce its carbon emissions targets at the Group of Seven meeting in Germany in early June, and trying to finalize the breakdown for power generation mix for 2030 as early as this month as a basis for finalizing emissions targets.

The government is considering cutting the ratio of fossil fuel-fired generation in 2030 power mix to around 55 percent from about 90 percent now, which alone would cut emissions by around 15 percent from 2013 levels, the Nikkei report said.

77. Electric Trucks Set To Power Up In Brisbane As Diesel Becomes Costly

Electric delivery trucks and vans assembled in Brisbane may soon be whizzing around city streets as they become cheaper to operate than diesel and petrol models. US-based Smith Electric Vehicles and partner Smith Electric Australia are eyeing either Brisbane or Melbourne for an assembly plant that could eventually put together more than 200 light delivery trucks a year.

Smith has been producing electric vehicles for 80 years but is now riding a wave of demand for cost effective, environmentally-friendly commercial vehicles. Toll Group has been trialing one of the company's delivery vans since 2013.

Smith Electric Australia executive director Glenn Baird said the rising costs of running fleets of diesel or petrol commercial vehicles meant the demand for electric vans would grow.

“They can be 70 per cent more cost effective, which means they will increasingly become the norm in commercial vehicle fleets,” Mr. Baird said. He said improved battery technology and increased environmental compliance costs for internal combustion engines would push adoption of electric fleets. The trial Toll van has travelled over 26,000 kilometers over the past 18 months completing more than 335 delivery runs.

“Electric vehicles have become more efficient,” he said. “The cost of electric vehicle batteries alone are 30 per cent of what they were five years ago.”

Smith is expected to make a decision on where to locate the plant by late this year. Victoria, which is trying to re-establish its manufacturing base after the shutdown of the car industry, is expected to provide stiff competition for Brisbane.

Mr. Baird, Smith Electric Australia managing director Tony Fairweather and senior Smith Electric executives from the United States met with Brisbane City Council, Brisbane Marketing and the Queensland Government last week to discuss the proposal.

The chassis, engines and batteries of the vehicles will be manufactured overseas with the body work and assembly done in Australia.

78. Asian Air Pollution Causes Super-storms

Last November Category 5 Typhoon “Nuri” roared towards Japan and the Bering Sea with 300 km per hour winds. Incredible video images and headlines popped up all over the internet as well as talk of 50-foot-plus waves and the endangered Alaskan crab fishing fleet. This super-typhoon was so powerful that it changed the entire Northern Hemisphere’s weather pattern.

In April, 2014 and about 6 months ahead of the super-storm, the Texas A&M Department of Atmospheric Sciences published an incredible report that has gone unnoticed by the popular press. Comparing air pollution rates from 1850 to 2000, scientists found that man-made particles in Asian air pollution impact the Pacific storm track and influence much of the world’s changing weather.

Yuan Wang, Yun Lin, Jiayi Hu, Bowen Pan, Misti Levy and Renyi Zhang of Texas A&M’s Department of Atmospheric Sciences, along with colleagues from Pacific Northwest National Laboratory, the University of California at San Diego and NASA’s Jet Propulsion Laboratory, contributed to the work.

By comparing aerosols the team found that Asian air pollution conclusively impacted cloud formation and mid-latitude cyclones associated with the Pacific storm track. Zhang said, “There appears to be little doubt that these particles from Asia affect storms sweeping across the Pacific and subsequently the weather patterns in North America and the rest of the world.”

“The climate model is quite clear on this point. The aerosols formed by human activities from fast-growing Asian economies do impact storm formation and global air circulation downstream. They tend to make storms deeper and stronger and more intense, and these storms also have more

precipitation in them. We believe this is the first time that a study has provided such a global perspective.”

We also know that these aerosols have a serious impact on global climate by altering cloud formation. Coincidentally, 93% of California is moving into its fourth year of drought. Little rainfall and record-breaking high temperatures drive the water shortages. The state’s snowpack is the lowest ever at 5 percent of the historical average according to the April 1 measurement when snowpack is normally at its maximum. Little snow means no water for reservoirs.

Research shows that California’s drought is the worst in 1,200 years. Most ascribe the drought to climate change and the data pouring out of NASA satellites. In fact, the 2014 calendar year was the warmest in California in 119 years of record keeping and broke prior records by an unprecedented margin.

But climate change is complex and not just the result of greenhouse gases.

Zhang says large amounts of aerosols and their transport from Asia across the Pacific to North America can clearly be seen by satellite images. “Our results support previous findings that show that particles entering the air over Asia tend to affect global weather patterns.”

Coauthor Yuan Wang, who currently works at NASA’s Jet Propulsion Laboratory as a Caltech Postdoctoral Scholar says that air pollution from the rapidly developing countries in Asia is impacting on agriculture and economies half a world away.

The recent super- storms and changing rainfall patterns are no doubt connected with the increasing Asian air pollution. Perhaps it’s time for developing economies to begin to fall in line with environmental standards on this tiny planet that we all must share.

MIDDLE EAST

79. Haifa Orders Factories Shut After Report of Cancerous Pollution

Haifa has decided to order a number of local factories to shut down after a Health Ministry report claimed that air pollution is responsible for half of Haifa's child cancer cases.



Trucks block Haifa factory
(Photo: Avihu Shapira)

Yona Yahav, Haifa's mayor, said Sunday that "if the data is correct then we demand all work in the polluting factories end effective immediately. If the data is not correct, then government representatives need to come here and tell us why they have lied to the

public."

Yahav explained he had sent official city trucks to block the entrance to the Bazan, Haifa Chemicals and other factories.

According to the Health Ministry report, over the past decade, of the 780 individuals in Haifa who contracted cancer as a result of air pollution, 30 were children. The report also shows that the number of children in Haifa up to the age of 14 who have contracted cancer is double the national average; the rate among children of other ages is also higher than elsewhere in the country.

"The factories in the Haifa Bay never really bothered me and were simply part of the city's landscape," said Yuval Ben-Tyar, 36, when we met him in the Oncology Ward at Ruth Rappaport Children's Hospital (Rambam Health Care Campus) with his seven-year-old daughter, Amit, who is suffering from leukemia. "But everything changed when my daughter got sick. I started asking questions: Why did this happen to her? Why should she and her whole family have to suffer like this?"

Meanwhile, activists arrived outside of the Rambam Health Care Campus after the mayor spoke and claimed that his attempts to block the factories' operations were a way for him to "blur" his part in supporting the development of gas and chemical reservoirs in the city.

"If (the mayor) really wants to do something, he should express his objections and participate in the appeal committee for these plans," said Hannah Cooperman, one of the activists.

The move came after a senior health ministry official sent a letter to the interior ministry's planning department warning of a disproportionately high cancer rate in the Haifa area due to the operation of such plants. Written by Professor Itamar Grotto, head of the ministry's public health services, the letter quoted Hebrew University research published in the American Journal of Cancer Epidemiology and Prevention which found "an increased risk of developing cancer in a heavily-industrialized sub-district" of the city.

The letter was submitted as part of an appeal against plans to expand oil refineries in the area.

"Compared to the incidence in the rest of Israel, the Haifa sub district population had an elevated hazard ratio of lung, head and neck, colo-rectal, gastric and esophagus, bladder and cervical carcinoma," the researchers wrote.

"If the latest data is correct, we demand an immediate halt to all operations of the polluting factories in the Greater Haifa area," Yahav said.

The environmental protection ministry confirmed the Haifa Bay area "ranked first in pollutant emissions in Israel" while noting that the research was based on data from a decade ago and there had been "a 70 percent drop in air pollution" in the bay area over the past six years.

In a statement, Israel Oil Refineries said it had invested over one billion shekels (\$255 million) in "preserving the environment and diminishing pollutant emissions." The company, which describes itself as Israel's "largest integrated refining and petrochemical group," said "objective bodies" had measured "dramatic improvements" in pollution levels.

Recently it was reported that the Haifa Municipality collects tens of millions of shekels a year from polluting factories and in the past demanded to receive hundreds of millions of shekels for development taxes - a demand rejected by the Administrative Court.

A few years ago, the city of Haifa received a 75 million shekel contribution for the construction of the city's soccer stadium, named after business tycoon Sammy Offer, whose son Idan has controlling interests in Israel Corporation - which owns many of the refineries in the city. The city's basketball team is also tied in to Haifa's refinery culture - the team is sponsored by Oil Refineries Ltd., an oil refining company located in Haifa Bay.

GENERAL

80. Association of Improved Air Quality with Lung Development in Children Found

Air-pollution levels have been trending downward progressively over the past several decades in southern California, as a result of the implementation of air quality-control policies. The researchers assessed whether long-term reductions in pollution were associated with improvements in respiratory health among children.²

As part of the Children's Health Study, they measured lung function annually in 2120 children from three separate cohorts corresponding to three separate calendar periods: 1994–1998, 1997–2001, and 2007–2011. Mean ages of the children within each cohort were 11 years at the beginning of the period and 15 years at the end. Linear-regression models were used to examine the relationship between declining pollution levels over time and lung-function development from 11 to 15 years of age, measured as the increases in forced expiratory volume in 1 second (FEV₁) and forced vital capacity (FVC) during that period (referred to as 4-year growth in FEV₁ and FVC).

Over the 13 years spanned by the three cohorts, improvements in 4-year growth of both FEV₁ and FVC were associated with declining levels of nitrogen dioxide (P<0.001 for FEV₁ and FVC) and of particulate matter with an aerodynamic diameter of less than 2.5 μm (P= 0.008 for FEV₁ and P<0.001 for FVC) and less than 10 μm (P<0.001 for FEV₁ and FVC). These associations persisted after adjustment for several potential confounders. Significant improvements in lung-function development were observed in both boys and girls and in children with asthma and children without asthma. The proportions of children with clinically low FEV₁ (defined as <80% of the predicted value) at 15 years of age declined significantly, from 7.9% to 6.3% to 3.6% across the three periods, as the air quality improved (P=0.001).

Researchers found that long-term improvements in air quality were associated with statistically and clinically significant positive effects on lung-function growth in children. (Funded by the Health Effects Institute and others.)

81. Influential Role Seen for Pope Francis at 2015 Climate Negotiations in Paris

Pope Francis, leader of the world's 1.2 billion Catholics, could have an influential role in this the Paris negotiations for a climate agreement later this year and is expected to issue a call for action to address the problem this year, observers and Senate Democrats told reporters. Those predictions come shortly after a senior Vatican official, who helped write the first draft of Pope Francis's expected encyclical on the environment, outlined several key themes expected in the upcoming document, expected to be released this summer.

² N Engl J Med 2015; 372:905-913 [March 5, 2015](#) DOI: 10.1056/NEJMoa1414123

The pope's views, possibly expounding on climate change, will again take center stage in September when he will travel to the U.S. and address a joint session of Congress and the United Nations General Assembly.

Cardinal Peter Turkson, head of the Pontifical Council for Justice and Peace, said the pope won't make a political statement on climate change but instead will emphasize ancient church teaching that core components of life include fighting inequality and protecting the environment. While international agreements on climate are important, Turkson said, a "changing of human hearts" is necessary to adequately fight the problem on a global scale.

Speaking on March 5th in Ireland, Turkson acknowledged lingering disagreement over the role of human activity in climate change. But "what is not contested is that our planet is getting warmer," and Christians have a duty to address the problem, he said.

"Even the compelling consensus of over 800 scientists of the [Intergovernmental Panel on Climate Change] will have its critics and its challengers," Turkson said. "For Pope Francis, however, this is not the point. For the Christian, to care for God's ongoing work of creation is a duty, irrespective of the causes of climate change."

Francis himself in January said climate change is "mostly" due to the actions of humans and criticized UN negotiators for a "lack of courage" to address the problem. The pope expressed hope that negotiators would be "more courageous" when they meet Nov. 30—Dec. 11 in Paris with the goal of reaching an international climate accord.

Those closely monitoring the climate negotiations and some senators told reporters in interviews March 11–13 that the pope would bring a significant moral influence to the discussions that could help boost the odds of reaching a final agreement. "Few individuals wield a megaphone as big as the pope's," said Elliot Diringer, who tracks the negotiations as executive vice president for the Center for Climate and Energy Solutions. "He can introduce a genuine moral dimension into a debate that otherwise is far too ideologically driven.

"We typically make the case based on science, but when science and religion are pointing in the same direction, that can be a powerful signal," Diringer added.

Even coal industry representatives and several conservative organizations acknowledged that the pope could have a major impact on the negotiations through his encyclical and other speeches, but they said Francis should consider scientific work that doesn't back the consensus that human activity significantly contributes to climate change and should weigh the impact climate policies could have on many of world's poorest people.

Others expect Pope Francis to help raise public awareness about the issue of climate change and tout the issue to a worldwide audience due to his popularity across various religious groups. "Will it transform the discussion and lead to a totally different outcome? Maybe not, but it will bolster the chances of an agreement in Paris and boost the urgency world leaders feel," said Alden Meyer, director of policy and strategy for the Union of Concerned Scientists. "It will have a pretty big impact."

The encyclical, in particular, could have a profound impact on certain world leaders and lead to greater engagement at the negotiations, others said.

“The pope can touch hearts and minds in ways that few others can—by connecting with people on a personal, moral level,” Jennifer Morgan, global director for the World Resources Institute’s climate program, told reporters in a statement. “His encyclical on climate change could prompt some leaders to engage more productively in the lead up to the Paris climate negotiations.”

While not a formal party to the negotiations, the Holy See holds the status of an “observer state” to the talks held under the UN Framework Convention on Climate Change.

82. Stable Emissions Show Growth, Mitigation Possible, World Bank Envoy Says

A report showing that global emissions were unchanged in 2014 shows economic growth is possible amid the fight against climate change, a World Bank official said. Carbon-dioxide emissions were stable at 32.3 billion metric tons, even as the global economy advanced 3 percent, the International Energy Agency said in a March 13th statement. It was the first time that has happened amid economic growth in 40 years, the Paris-based agency said, citing preliminary estimates.

“The IEA report was terribly important because it shows it can be done,” Rachel Kyte, the World Bank’s special envoy for climate change, said March 16th. “It shows that we can begin to really plan growth that is low-carbon and resilient, and we can begin to decouple growth from carbonization.”

The halt in emissions growth is attributable to changing patterns of energy consumption in China and Organization for Economic Cooperation and Development countries, according to the IEA. China, the world’s largest emitter, generated more electricity from renewable sources such as hydropower and solar and less from coal last year, the agency said.

83. Arctic Melt Brings More Persistent Heat Waves to U.S., European Nations

The U.S., Europe and Russia face longer heat waves because summer winds that used to bring in cool ocean air have been weakened by climate change, German researchers said March 12. Rapid Arctic warming disturbs air streams in ways that have “significantly” reduced summer storms, raising the likelihood of heat waves, the Potsdam Institute for Climate Impact Research said in a report in the journal *Science*. Hot weather in Russia in 2010 devastated crop harvests and caused wildfires.

“Unabated climate change will probably further weaken summer circulation patterns, which could thus aggravate the risk of heat waves,” co-author Jascha Lehmann said in an e-mail. “The warm temperature extremes we’ve experienced in recent years might be just a beginning.”

With heat-trapping gases from burning oil, coal and natural gas at record levels, global temperatures are set to warm by 3.6 degrees Celsius (6.5 Fahrenheit) by the end of the century, according to the International Energy Agency. That is the fastest climate shift in 10,000 years. Temperature gains can disrupt air flows that govern storm activity, the Potsdam report showed.

“When the great air streams in the sky above us get disturbed by climate change, this can have severe effects on the ground,” lead author Dim Coumou said. The study used data on atmospheric circulation in the Northern Hemisphere from 1979 to 2013.

Warming in the Arctic, where temperatures rise faster than elsewhere as ice caps melt, is believed to narrow temperature differences and thus weaken the jet stream—air motion that is important for shaping weather patterns, according to scientists.

“The reduced day-to-day variability that we observed makes weather more persistent, resulting in heat extremes on monthly time scales,” Coumou said. “The risk of high-impact heat waves is likely to increase.”

84. Why Diesel Vehicles Are More Harmful

Diesel exhaust is a significant component of urban air pollution, containing a complicated mixture of gases and airborne particles. Researchers have shown how exhaust pollution from diesel engines affects nerves within the lung.

Identifying potential mechanisms linking exposure to diesel exhaust and the exacerbation of respiratory diseases may lead to treatments for those affected. “Our results indicate that our reliance on fossil fuels, and particularly diesel, could have a detrimental effect on our health, supporting the idea that we should be looking towards alternative fuel sources,” said Ryan Robinson, one of the researchers, from the Imperial College London.

Diesel exhaust is a significant component of urban air pollution, containing a complicated mixture of gases and airborne particles.

“Studies have shown that exposure to these diesel particles is associated with harmful health effects,” said Robinson. “These particles are very small - around 20 nanometers in diameter - and are therefore not only invisible to the naked eye, but can penetrate deep into the lungs,” he added.

The lungs contain numerous sensory nerves that can detect potentially harmful stimuli and thus allow the body to respond, for example by triggering a cough. “However, we know that these nerves can also be involved in exacerbating respiratory conditions, for example by causing the bronchi to constrict in diseases such as asthma,” Robinson said.

The researchers found that the diesel particles from a forklift truck could activate airway sensory nerves in an in vivo anaesthetized guinea pig model. “It was interesting to see that the more chemically sensitive airway nerves were involved, rather than the mechanically sensitive ones,” Robinson explained.

The researchers then used an in vitro isolated nerve preparation that allowed them to probe the mechanisms involved more rapidly. “The first thing we noted was that the chemicals isolated from an organic extraction of the diesel particles were key to the activation of the nerve,” he added.

Robinson presented the study at the 13th European Respiratory Society Lung Science Conference.

85. Study: Air Pollution Can Be Bad For Children – Starting Even Before Birth

Researchers studied exposure to polycyclic aromatic hydrocarbons, or PAHs, a form of pollution caused by burning gasoline, diesel fuel, home heating oil and coal. They found that prenatal exposure to these compounds was tied to changes in the structure of offspring’s brains and to intellectual deficits and behavioral problems in childhood.

The researchers measured PAH concentrations in the air and in the blood and urine of 40 mothers in their third trimester of pregnancy, as well as in their children's urine. They followed the children until they were 7 to 9 years old, performing M.R.I. exams on their brains. The results are in JAMA Psychiatry.

The higher the exposure to PAHs, the more reductions the children had in the white matter surface of the left hemispheres of their brains. The amount of damaged white matter correlated directly with higher scores on measures of symptoms of attention deficit hyperactivity disorder and other behavioral problems.

Higher exposure to PAHs and white matter deterioration were also associated with lower scores on tests of processing speed, the ability to take in new information and respond to it.

"Everyone is exposed to these compounds," said the lead author, Dr. Bradley S. Peterson, director of the Institute for the Developing Mind at Children's Hospital Los Angeles. "Pregnant women and young children are very vulnerable to environmental insults to the developing brain, and these exposures are likely having devastating effects."

86. Company Bosses Pledge Emission Cuts, Call for Strong Paris Climate Deal

Bosses from more than forty global companies called on negotiators to agree a United Nations climate change deal in Paris in December and pledged to make their own emission cuts, they said in an open letter. The group of 43 chief executives, representing firms which generated a combined \$1.2 trillion in 2014, said they would set internal emission reduction targets and called on negotiators to make sure a new international climate deal limits the global rise in temperatures to below 2 degrees Celsius.

The letter is designed to put pressure on government officials ahead of a spring meeting of a World Bank group in Washington from April 17-19.

Companies signing the letter include cement maker Lafarge, telecom group Erikson, consumer goods company Unilever, and car maker Volvo.

"This initiative being launched today is a significant commitment in efforts to combat climate change. As businesses, we have the obligation to contribute to sustainable development," Ignacio Galan, CEO of utility Iberdrola said in a statement.

Most governments missed an informal March 31 deadline to submit their climate pledges for the new deal.

The firms also join more than 340 institutional investors that last September called on governments to set carbon pricing policies that encourage the private sector to invest in cleaner technologies.

87. Air Pollution Causes Stroke -- New Study

A new study found that air pollution not just leads to respiratory problems but also causes cardiovascular diseases. It has several health consequences and increases the risk of death by cardiovascular and respiratory diseases. The study is conducted by Barbara Hoffmann and her co-authors.

Hoffman investigated the population of the German Ruhr region and analyzed the number of times stroke and cardiovascular diseases occurred. Her team also analyzed the frequency of their exposure to particulate matter and noise. The participants in the study were residents from Bochum, Essen and Mülheim an der Ruhr. A total of 4400 subjects were selected over the period of 2000 to 2003. They belonged to the age groups of 45 and 74 years. The study analyzed the occurrence of stroke and cardiovascular diseases annually. They simultaneously checked the mortality rate related to cardiovascular diseases. They examined the participants' exposure to particulate matter and noise, depending on their place of residence.

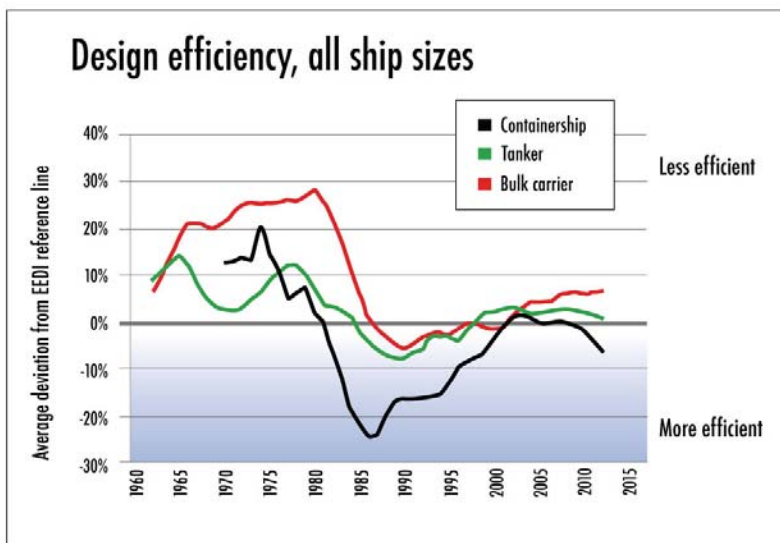
They found that those who were exposed to pollutants and noise had a higher risk of developing cardiovascular diseases and dying of stroke, the release states. The study focused heavily on particulate matter exposure. The authors state that the study pointed towards an increased risk of cardiovascular diseases with the increased exposure to particulate matter.

The authors state in the report, "Particulate matter with aerodynamic diameters less than 10 or 2.5 µm (PM10 and PM2.5) are considered air pollutants for which adverse health effects have been proven."

The report states that traffic, agriculture, heating and industry are the main sources of particulate matter. These cause pulmonary and systematic inflammation, imbalance of the autonomic nervous system and an increase in blood pressure.

The study was conducted in Deutsches Ärzteblatt International.

88. New Ships 10% Less Fuel Efficient Than Those Built In 1990 – Study



New ships built in 2013 were on average 10% less fuel-efficient than those built in 1990, according to a new study. It also shows that container ships built 30 years ago already, on average, beat the so-called 'Energy Efficiency Design Index' standard that the International Maritime Organization (IMO) has set for new ships built in 2020. The standard is up for review next month.

This first ever study of the historical development of the design efficiency of new

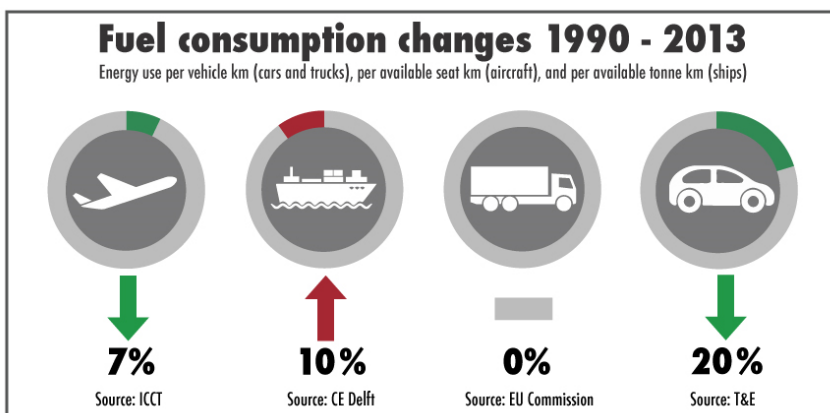
ships, commissioned by Seas At Risk and Transport & Environment, finds that bulk carriers, tankers, and container ships built in 2013 were on average 12, 8 and 8% less fuel efficient than those built in 1990, a quarter of a century ago.

The findings contradict claims that shipping has been constantly improving its environmental performance. They also demonstrate that market forces by themselves don't result in more fuel

efficient ships being built. Oil prices in the late 1980s and early 1990s, the time when new ships were historically most fuel efficient, were around a quarter of the levels seen in the 2008-2013 period (ca \$25 vs \$100 per barrel, in today's prices).

John Maggs, policy advisor at Seas At Risk and president of the Clean Shipping Coalition, said: *“Now we know that we cannot rely on rising fuel prices, other market forces or the good intentions of industry to solve shipping’s climate problem. Instead we need a clear and ambitious target for reducing ship greenhouse gas emissions and legally binding measures to get us there.”*

The IMO will review the stringency levels of its Energy Efficiency Design Index (EEDI) – the efficiency standards for new ships – during a meeting of its Marine Environmental Protection Committee (MEPC) in London next month.



Bill Hemmings, clean shipping manager at Transport & Environment, said: *“The truth is out! Aircraft and cars have become more fuel efficient, but despite a generation of technological improvements, ships have largely gone backwards for most of the past 25 years. The IMO’s design efficiency standard for new ships itself needs a redesign and strengthening if the standard is not supposed to merely bring us back to levels achieved 25 years ago.”*

89. 100 Mayors Adopt Seoul Declaration for Sustainable Cities

Together with ICLEI President Park Wonsoon (Mayor of Seoul), ICLEI First Vice President James Nxumalo (Mayor of Durban) and ICLEI Secretary General Gino Van Begin, 100 mayors from around the world were onstage at the ICLEI World Congress 2015 Opening Plenary to adopt the Seoul Declaration.

The Seoul Declaration (ES) is a collaborative document that sets out a path to urban sustainability. It acknowledges the grave issues facing our world today and establishes how cities can change in response. The Seoul Declaration is linked to ICLEI’s new Strategic Plan 2015-2021.

UN Secretary-General Ban Ki-moon began the session by delivering a message commending Mayor Park Wonsoon for his leadership on urban sustainability. Ban Ki-moon expressed his belief that cities would drive a global transformation and encouraged them to strengthen their networks.

A number of Mayors made short speeches endorsing the Seoul Declaration and explaining why the various aspects were important. Mayor Jürgen Nimptsch of the City of Bonn highlighted the contribution of the carbon Climate Registry – the world’s largest database on local and subnational climate action, and the central repository for the Compact of Mayors.

James Nxumalo, the Mayor of Durban and ICLEI Vice President, welcomed the commitment of the Seoul Declaration to new cooperation initiatives between cities and small island states on adaptation and resilience. Mayor Parks Tau of Johannesburg praised the emphasis on EcoMobility and reminded participants that Johannesburg will host the second EcoMobility World

Festival in October 2015, during which the Central Business District of the city will be closed to cars.

Mayor Kinlay Dorjee of Thimphu, Bhutan, described how Bhutan has established a Gross National Happiness index, introducing meditation and the study of green initiatives in schools. Maimunah Mohd Sharif – the Municipal President of Seberang Perai, Malaysia – reiterated her hope for an Urban SDG and invited all cities to scale up best practices to ensure a transformation to global sustainability.

Andrea Reimer of Vancouver’s City Council discussed Vancouver’s plan to become the greenest city on earth by 2020, commenting that “People will embrace significant action when they see significant leadership and they have the tools to act.”

A range of other Mayors spoke in support of the Seoul Declaration, including Chinese Mayors Baocheng Yuan (Dongguan) and Ningfeng Ji (Guiyang).

ICLEI President Mayor Park Wonsoo of Seoul closed the session by mentioning the Seoul Action Plan, which will set out concrete plans for climate change mitigation. Mayor Park expressed his belief that the Seoul Action Plan would allow cities to make significant progress before the COP21 in Paris in December 2015, putting pressure on national governments to reach a binding agreement.

Earlier in the session, Professor Jørgen Randers had delivered a speech entitled “2052 – A Global Forecast for the next 40 years”. Randers suggested that the global population would peak at eight billion in 2040, that the global economy would grow slowly, and that humanity would face a growing set of challenges, including resource scarcity, pollution and climate change. He also explained how resistance to structural change could be overcome with intelligent policies that gave voters advantages in the short term while solving longer-term climate problems

90. Prolonged Exposure to Air Pollution Linked To Brain Damage, New Study Finds

A new study confirms that long-term exposure to air pollution -- even at low levels -- can lead to brain damage that precedes other neurological disorders associated with old age.

Investigator Elissa Wilker of the Cardiovascular Epidemiology Research Unit at Beth Israel Deaconess Medical Center and the Harvard T.H. Chan School of Public Health, along with colleagues, published their findings in the journal *Stroke*.

The team tested the effects of long-term exposure to PM2.5, or fine particles found in the air like dust, dirt, soot, smoke, and liquid that measure less than 2.5 micrometers in diameter. Between 1995 and 2005, they used magnetic resonance imaging (MRI) to analyze the brain health of more than 900 healthy adults over the age of 60 living around Boston and New York.

They found that a PM2.5 increase of 2 micrograms per cubic meter of air, a common level in metropolitan regions, was linked to a 0.32 percent reduction in total brain volume and a 46 percent increased risk of covert brain infarcts, a type of so-called "silent" stroke, which often presents no outward symptoms but increases the risk of future strokes. These covert brain infarcts occur deep within the brain and are linked to poor cognitive function and dementia, Wilker says.

"Long-term exposure to air pollution showed harmful effects on the brain in this study, even at low levels, particularly with older people and even those who are relatively healthy," Wilker said in a press release.

The World Health Organization estimates around 7 million people died in 2012 due to air pollution; about 40 percent of those deaths were linked to stroke.

"We now plan to look at more the impact of air pollution over a longer period," said Wilker, "its effects on more MRI sensitive measures, on brain shrinkage over time and other risks including of stroke and dementia."

91. Governments Call For End to Fossil Fuel Subsidies

A group of smaller countries, including the Nordic countries, have called on world governments to prioritize eliminating fossil fuel subsidies ahead of the Paris climate conference. Denmark, Finland, Sweden and Norway, together with Costa Rica, Ethiopia, New Zealand and Switzerland called on other countries to support "accelerated action to eliminate inefficient fossil-fuel subsidies in an ambitious and transparent manner as part of a major contribution to climate change mitigation".

They argued that this would make a "significant contribution" to keeping global warming below 2°C, which is the objective of the new global climate agreement that is set to be negotiated in Paris in December.

The group collaborates in the framework of the Friends of Fossil Fuel Subsidy Reform initiative, which the G20 committed to in 2009. The countries want to "highlight the importance of fossil-fuel subsidy reform as a key climate change mitigation policy with clear economic, social and environmental benefits", said Denmark's trade and development cooperation minister Mogens Jensen.

Moving from high-level commitments to concrete action will require "ambition in the scope and timeframe for implementing reforms" as well as targeted support that ensures the reforms do not hit the poorest, the group said. Transparency about the timescales and engagement with civil society will also be crucial, they added.

The European Commission announced as part of its energy union strategy that it will publish biennial reports analyzing the role of taxes, levies and subsidies on energy prices, starting next year.

92. Particle Number Linked To Heart Rate Variability

A new study³ has been carried out to assess the immediate impact of personal exposure particle to number concentrations (PNC) on heart rate (HR) and heart rate variability (HRV) measured by ambulatory electrocardiograms (ECG) during five to six hour periods in individuals with diagnosed type 2 diabetes or impaired glucose tolerance (IGT). Specifically, the study assessed the impact of personally measured PNC during the morning hours on heart rate variability. It builds on

³ "Elevated particle number concentrations induce immediate changes in heart rate variability: a panel study in individuals with impaired glucose metabolism or diabetes", Annette Peters*, Regina Hampel, Josef Cyrys, Susanne Breitner, Uta Geruschkat, Ute Kraus, Wojciech Zareba and Alexandra Schneider, Particle and Fibre Toxicology (2015) 12:7, DOI 10.1186/s12989-015-0083-7

previous analyses that assessed the association between centrally monitored ambient air pollution and cardiac function. The authors had previously reported associations between 1-hour PM_{2.5} and decreased heart rate variability upon concurrent exposure as well as exposures occurring up to 4 hours before the ECG recording.

Sixty-four individuals with type 2 diabetes and impaired glucose tolerance recorded ambulatory electrocardiograms over five to six hours on 191 occasions in a panel study in Augsburg, Germany. Personal exposure to particle number concentrations (PNC) was monitored for each individual on 5-minute basis concurrently and particulate matter with an aerodynamic diameter < 2.5 µm (PM_{2.5}) was acquired from a central monitoring site on an hourly basis.

More than 11,000 5-minute intervals were available for heart rate and measures of heart rate variability including SDNN (standard deviation of NN intervals). A concurrent decrease in 5-minute SDNN of -0.56% (95% confidence limits (CI): -1.02%; -0.09%) and a 5-minute delayed increase in heart rate of 0.23 % (95% CI: 0.11%; 0.36%) was observed with an increase in personal PNC of 16,000 per cm³ in additive mixed models. Models evaluating the association of concurrent 5-minute personal PNC and of 1-hour PM_{2.5} showed independent effects on SDNN.

The data suggest that freshly emitted ultrafine particles and aged fine particulate matter are both associated with changes in cardiac function in individuals with type 2 diabetes and impaired glucose tolerance in urban areas.