CAAC
中国清洁空气联盟
Clean Air Alliance of China

STATE COUNCIL
AIR POLLUTION PREVENTION AND CONTROL
ACTION PLAN

China Clean Air Updates

English Translation

October, 2013

Prof. CHAI Fahe
CAAC Steering Committee Member
Vice President Chinese Research Academy of Environmental Sciences

"This plan is the most aggressive and ambitious air quality management action plan with comprehensive measures, thorough safeguards, as well as strict assessment criteria. It contains much more stringent requirements than the 'Twelfth Five-Year Plan on Air Pollution Prevention and Control in Key Regions', which was released in 2012. Therefore, the plan will become a milestone document in China's air pollution control history, and even the history of environmental management and governance."

YANG Jintian
CAAC Steering Committee Member
Deputy Chief Engineer, China Academy of Environmental Planning

"The Air Pollution Prevention and Control Action Plan clearly states that mid and long-term national coal consumption control targets shall be established, and target responsibility system shall be adopted for implementation and evaluation. Ambient air quality in China is affected by several key factors of coal consumption, including total volume, geological distribution, distribution in industrial sectors, and level of technology. Therefore, it is imperative to set regional coal consumption cap to improve air quality. Based on the requirements of *'Air Pollution Prevention and Control Action Plan'*, it is strongly recommended that long-term coal consumption control roadmap and technology options should be clarified as soon as possible."

ZHANG Yuanhang
CAAC Steering Committee Member
Professor, Peking University

"This action plan addresses all key aspects upon ambient air quality, which is concrete action of the national strategy of ecological civilization, embodying the concept of controlling pollutions in whole life cycle. The level of authority and the binding effect of this plan are unprecedented. The previous pollution prevention plans were designed in the context of existing economic development plans and urban construction plans. Nevertheless, this action plan was formulated with consideration of both pollution control and regional development mode, comprised by economical struction, spatial layout and energy consumption, under the target of environmental quality improvement. It reflects a 'big environment' management concept that a win-win outcome can only be achieved with integrated environmental management approaches based on consensus."

CAAC CHINA

Clean Air Updates

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China Clean Air Updates

China Clean Air Updates is a series product provided by Clean Air Alliance of China (CAAC) to address recent policy, management and science updates of China in the field of clean air management. The China Clean Air Updates are compiled by the CAAC secretariat with support from members and experts of the CAAC networks.

AIR POLLUTION PREVENTION AND CONTROL ACTION PLAN

Issued by State Council on 10th September, 2013 (Document NO. GUOFA[2013]37)

The protection of atmospheric environment assures the people's welfare, the sustainable development of economy, enhances a well-off society and the great rejuvenation of the China Dream. Currently the air pollution issue is serious in China. Regional air quality problem characterized by the inhalable particulate matter (PM_{10}) and fine particles ($PM_{2.5}$), has become increasingly prominent, which harms people's health and affects social harmony and stability. As the deepening of the industrialization and urbanization, energy resource consumption keeps growing, and the pressure of air pollution prevention and control continues to increase. This action plan is developed in order to improve air quality in China.

General requirements: Taking "Deng Xiaoping's Theory", "Three Represents" and the "Scientific Development" as the guiding principles, taking the protection of people's health as the starting point; we shall promote the ecological civilization, combine government regulation and market rules, strikes to achieve overall improvements with key breakthroughs; coordinates regional cooperation and local administration; total emission reduction control along with air quality improvement. A new air pollution prevention and control mechanism will be established in which government takes the leading role incorporating enterprises' initiatives, market drives and public participation. The new mechanism relies on regional management and stage by stage control, which promotes industrial structure optimization, science and technology innovation, and quality economic growth. The ultimate goal is to achieve environmental, economic and social benefits, and strive to build the beautiful China.

Goal: After five years' efforts, the overall national air quality shall be improved. Heavily polluted days shall be reduced dramatically. Regional air quality in Beijing-Tianjin-Hebei, Yangtze River delta and Pearl River delta will be turned better. Through another five years' or even longer efforts, heavily polluted days shall gradually be eliminated and the national air quality shall be improved significantly.

Specific indicators: By 2017, the urban concentration of Particulate Matters (PM_{10}) shall decrease by 10% compared with 2012; annual number of days with fairly good air quality will gradually increase. Concentration of fine particulate matter ($PM_{2.5}$) in Beijing-Tianjin-Hebei, Yangtze River Delta and Pearl River Delta region shall respectively fall by around 25%, 20% and 15%. Fine particulate matter annual concentration in Beijing shall be controlled below 60 micrograms per cubic meter.

1. INCREASE EFFORT OF COMPREHENSIVE CONTROL AND REDUCE EMISSION OF MULTI-POLLUTANTS

(1) Enhance comprehensive air pollution control on industrial enterprises. Comprehensively control small coal-fired boilers. Accelerate the use of centralized/district heating, push fuel switching including "coal to gas" and "coal to electricity". Unless in special needs, coal-fired boilers with size

below 10 tons of coal burned per hour will be phased out in urban area and new plants with capacity below 20 tons per hour will not be allowed to be built by 2017. Coal-fired boilers with capacity below 10 tons per hour shall be forbidden to be built in other areas in principle. Electricity, new energy, clean coal and efficient energy saving boiler will be used in areas without gas and heating supply. CHP units are going to replace scattered coal-fired boilers in chemical, paper, printing and dyeing, leather making, pharmaceutical and other industries concentrated areas.

Accelerate desulfurization (SO_2 control), denitrification (NOx control), and dust removal (PM control) retrofit projects in key industries. Desulfurization facilities must be installed in every coal-fired power plant, sintering machine and pellet production equipment of iron-steel enterprises, catalytic cracking units of oil refining enterprises and non-ferrous metal smelting enterprises. Coal-fired boilers with over 20 tons of coal burnt per hour should install desulfurization facilities. Denitrification facilities should be installed in all coal-fired units except circulating fluidized bed (CFB) boilers; low NOx combustion technology should be applied and denitrification facilities should be installed in new dry cement kilns. Existing dust removal facilities in coal-fired boilers and industrial furnaces should be upgraded.

Strengthen VOCs control. Comprehensive VOCs control should be implemented in petrochemicals, organic chemicals, surface coating, packaging, printing and other industries. Technology transformation of 'Leak Detection and Repair' (LDAR) should be conducted in petrochemical industry. Complete oil and gas vapor recovery in petrol stations, oil storage tanks and oil tank trucks within limited time, actively carry out oil and gas recovery in crude and refined oil products dock. Improve VOCs emission limit standards for coatings, adhesives and other products; promote the use of water-based paint; encourage the production, sale and use of low toxicity, low volatile organic solvents.

In Beijing-Tianjin-Hebei, Yangtze River Delta and Pearl River Delta regions, basically complete the construction and renovation of pollution control facilities in coal-fired power plants, coal-fired boilers and industrial furnaces, and complete the comprehensive control of organic waste gas in petrochemical enterprises by the end of 2015.

(2) Enhance area source pollution control. Comprehensively control urban dust. Strengthen the dust regulation in construction site and actively promote green construction. Construction site should be fully enclosed by setting protection wall and the ground of the site should be hardened. Sediment transport vehicles should be sealed and gradually installed satellite-positioning systems. Promote low-dust practices such as automated road sweeping. Closed storage facilities or wind and dust protection facilities should be built in large material and coal stockpile. Promote the forestation; increase the green area in the cities and suburbs.

Advance oil and smoke treatment in catering services industry. Efficient oil and smoke purification facilities should be installed in cooking places. High efficient household hood should be promoted as well.

(3) Enhance mobile source pollution prevention and control. Strengthen urban transportation management. Reduce urban traffic congestion by optimizing the layout of urban functions and planning, and promoting intelligent traffic management. Prioritize public bus, increase the proportion of public transport and upgrade the pedestrian and public bicycle system. Reasonably control the vehicle population according to urban development planning; Beijing, Shanghai, Guangzhou and other big cities should strictly limit the vehicle population. Reduce vehicle use by encouraging green transport, increasing the cost of use and other measures.

Improve fuel quality. Accelerate the upgrade of petroleum refining enterprises. Aim to supply National Stage IV gasoline and diesel by the end of 2013 and 2014 respectively nationwide. National Stage V gasoline and diesel will be supplied in key cities in Beijing-Tianjin-Hebei, Yangtze River Delta and Pearl River Delta regions before the end of 2015. National Stage V gasoline and diesel should be provided nationwide before the end of 2017. Strengthen supervision and inspection of the fuel quality, and crack down on illegal production and sale of substandard oil.

Accelerate the elimination of yellow-sticker vehicles and old vehicles. Progressively eliminate yellow-sticker vehicles and old vehicles by setting restriction areas, economic compensation and other measures. All the yellow-sticker vehicles registered before the end of 2005 should be eliminated, and in Beijing-Tianjin-Hebei, Yangtze River Delta and Pearl River Delta regions 5 million yellow-sticker vehicles should be phased out till 2015. At the national level, the yellow-sticker vehicles will almost disappear by 2017.

Strengthen environmental management of vehicles. The departments of environment protection, industry and information technology, quality inspection, industry and commerce should jointly enforce the environmental regulation of new cars and strictly penalize the production and sale of cars that cannot fulfill the environmental requirements. The annual inspection of vehicles should be strengthened. Those unqualified vehicles cannot receive the environment label and should not be allowed to go on the road. Increase the construction of urea supply system for diesel trucks and research on measures to shorten mandatory retirement age for buses and taxis; encourage taxies to replace the exhaust purification devices annually; Carry out off-road mobile machinery and ship pollution control, such as construction machinery.

Accelerate the upgrade of low-speed vehicles. Continuously improve energy saving and environmental requirements and reduce the pollutant emission of the low-speed vehicles (pedicabs, low-speed trucks); promote the upgrade of related industries and technologies. New low-speed trucks will apply the same emission standard as the light trucks starting from 2017.

Promote new energy vehicles. The new energy vehicle should be firstly used in public transport, sanitation department and government agencies. Granting car licenses and financial subsidies will be used to encourage individual purchases. More than 60% of new or renewed public bus should be new energy and clean fuel vehicles in Beijing, Shanghai and Guangzhou.

2. Optimize the Industrial Structure, Promote Industrial Restructure

(4) Strictly control new capacity in high energy consuming and high polluting industries. Revise the entrance requirements of high energy consuming, high polluting and resource-intensive industries; clearly define the energy and resource saving, and pollution emission indicators. Local governments could make industry entrance requirements stricter than national standard. New built, modified and expanded projects should fully offset (100% or more) the production capacity increases.

(5) Accelerate elimination of backward productivity. Continue improving the environment, energy consumption, safety and quality requirements according to the actual industrial development and environment condition. Assign the targets to different areas and force the industry to restructure.

Complete the backward productivity elimination target required in "12th Five Year Plan" one year ahead (by 2014) in iron and steel, cement, electrolytic aluminum, glass, etc. 21 key industries in total according to "Guidance Catalogue for Elimination of Backward Technology, Equipment and Product (2011)" and "The 2011 Industrial Restructuring Guidance Catalog" through economic, technical, legal and necessary administrative means. Another 15 million tons of backward productivity in iron making, 15 million tons in steel making, 100 million tons in cement and 20 million weight cases of glass should be eliminated in 2015. For areas fail to complete the target in time, the punishment will be as following: strict control central planned investment projects; suspension of review, approval and filing procedures for construction projects in key industries. Each region should set up stricter policies with higher standard in 2016 and 2017 to eliminate more backward productivity.

A comprehensive investigation will be conducted on scattered small industrial enterprises with poor equipment and environment protection facilities. Then a comprehensive reform scheme will be developed to implement control measures targeting different categories.

(6) Reduce excess capacity. Emphasize the enforcement on environmental protection, energy consumption, safety; establish mechanism based on energy saving and environmental standards to promote the elimination of high energy consuming and high polluting industries with the support of fiscal, land, financial and other policies. Encourage advanced enterprises to play a leading role in industry development; promote the reduction of excess capacity by cross-regional, cross-ownership corporate mergers and acquisitions. Strictly prohibit new program from being built where there is already over capacity.

(7) Firmly stop illegal construction projects in industry with over capacity. For those illegal projects, such as construction without approval process, construction in parallel with approval process and approval beyond authority, if it hasn't started, it should be prohibited from constructing; if it has stated, it should be stopped immediately. Local governments should organize the supervision and inspection so as to firmly prohibit the blind expansion of industry with over capacity.

3. ACCELERATE THE TECHNOLOGY TRANSFORMATION, IMPROVE THE INNOVATION CAPABILITY

(8) Strengthen scientific and technological development and promotion. Strengthen the research on the formation mechanism, source analysis, transfer pattern, monitoring and emergency response of haze and ozone to provide scientific support for pollution control. Improve the research on relation between air pollution and human health. Support the establishment of enterprise technology center, national key laboratory, and national engineering laboratory; promote the establishment of technology infrastructure such as large-scale atmospheric photochemical simulation lab, large aerosol simulation lab.

Enhance the technology development of desulfurization, denitrification, efficient dust removal, VOC control, diesel (vehicle) emissions purification, environmental monitoring, new energy vehicles and smart grid; promote the application of technology achievements. Strengthen the international exchange and cooperation on advanced air pollution control technologies and management experience.

(9) Fully practice clean production. Clean production audit should be conducted in iron and steel, cement, chemical, petrochemical, non-ferrous metal smelting key industries. Advanced technology and equipment should be adopted in energy saving and emission reduction key fields and weak points to implement clean production retrofits. The emission intensity in key industries should be reduced over 30% till 2017. Promote non-organic solvent-based paints and pesticides innovation; reduce VOCs emission in production and use processes. Actively develop new type slow-release fertilizer to reduce the ammonia emission from the fertilizer utilization.

(10) Vigorously develop circular economy. Encourage cluster industry development; Implement circular renovation; promote energy multi-step utilization, water recycle, waste exchanging utilization, land conservation and intensive land use; accelerate the circular production of enterprise, circular development of industrial park, and circular combination of industries; construct the circular industrial system. Promote the co-treatment of the waste from kilns and boilers in the cement, iron and steel industry. Strive to develop the reproduction of mechanical and electrical products and promote the recycling industry. By 2017, the industrial energy intensity per industrial value added should reduce by 20 percent compared to 2012; 50 percent of national industrial parks and more than 30 percent of provincial industrial parks should complete circular economy retrofit; the recycled nonferrous metals and iron and steel production should attain 40%.

(11) Foster energy saving and environmental protection industries. Effectively gear policy requirement on air pollution control toward market driven for environmental protection industries; promote the development and industrialization of key technologies and equipment. Expand domestic market, support new type and new pattern of business, to foster a number of large companies with international competitiveness; increase production value of air pollution control equipment, product and service industry; effectively promote the development of emerging strategic industries, such as energy saving and environmental protection industries and new energy industries. Encourage foreign investment.

4. Adjust the Energy Structure and Increase the Clean Energy Supply

(12) Implement coal consumption cap. Set mid and long-term national coal consumption cap targets and clarify the responsibilities to achieve the targets. The share of coal in total energy consumption will decrease to less than 65% by 2017. Beijing-Tianjin-Hebei, Yangtze River Delta, Pearl River Delta, will aim to have negative growth of coal consumption, replace coal by increasing imported electricity, natural gas supply and the use of non-fossil energy.

Prohibit building power facilities for self-supply in the key regions. Projects with new coal consumption should offset the same or more amount of coal. Except CHP projects, prohibit the approval of other new coal-fired power plants; While, according to the equal coal offset principle, new coal-fired power generation unit with capacity more than 300MW could be built to replace multiple small units.

(13) Accelerate clean energy utilization. Increase the supply of natural gas, coal based SNG (substitute or synthetic natural gas) and coal-bed methane. The new natural gas pipeline capacity will be more than 150 billion cubic meter in 2015, which will cover Beijing-Tianjin-Hebei, Yangtze River Delta, and Pearl River Delta regions. Optimize the utilization of natural gas, and prioritize the use of newly increased natural gas in residential sector or as a substitute to coal; encourage the efficient use of natural gas as distributed generation; restrict natural gas use in chemical projects; orderly develop natural gas power plants as peaking resources, no more new natural gas power plants should be built in principle.

Set plan for coal to SNG development, accelerate the industrialization and scale up coal to SNG, under the strictest environmental protection requirement and sufficient water supply conditions.

Actively develop hydro power; explore geothermal, wind, solar power and biomass; safely and efficiently develop nuclear power. The capacity of running nuclear power will reach 50 GW, and the non-fossil energy's share in energy structure will rise up to 13% in 2017.

Accelerate the replacement of coal to natural gas facilities in industries in key regions; coal to natural gas retrofits for coal-fired boilers, industrial furnace and captive coal-fired power plant should be finished in 2017.

(14) Advance clean use of coal. Increase the coal washing by installing the coal washing facilities synchronously with new coal mine; accelerating the pace of installation in existing coal mines. Coal washing rate will increase to more than 70% in 2017. Forbidden to import low quality coal with high-ash and high-sulfur content, and release the regulation on coal quality. Prohibit the import of high-sulfur petroleum coke.

Expand the restriction zones for high polluting fuels in cities, which will expand from built-up areas to suburbs. In the same pace with the retrofits of villages in the city, urban fringes and shantytowns, progressively replace coal by natural gas or electricity given compensation as well as the pricing

signals like time-of-use tariff, seasonal tariff, inclined block tariff and peaking regulation tariff. Encourage the establishment of clean coal distribution center in northern rural area to promote clean coal and briquette coal.

(15) Improve energy efficiency. Implement energy conservation evaluation regime strictly. The energy intensity of new units with high energy consumption should reach national advanced level; facility efficiency should be at the top level measured by energy efficiency standards. The energy intensity of new facilities should achieve international advanced level in key regions.

Proactively develop green buildings. Adopt green building standard in public buildings and indemnificatory housing first. Strictly implement mandatory energy saving standard in new buildings, promote the utilization of the techniques and equipments, such as solar water heater system, ground source heat pump, air source heat pump, building integrated PV and combined "electricity-heat-cooling" supply system.

Advance heating metering reform. Accelerate the push for heating metering and energy efficiency retrofit in existing residential buildings in northern regions. Charge heating supply according to meter reading in new buildings and existing buildings that retrofits have been done. Accelerate the establishment and retrofit of heating-supply pipe networks.

5. Strengthen Environmental Thresholds and Optimize Industrial Layout

(16) Optimize industrial layout. Reasonably determine the development layout, structure and scale of key industries according to the plan and requirement of main function regions; Key projects will be built in optimizing and key development zones in principle. Carry out environmental impact assessments for all the new, modified and expansion projects. The projects that do not pass the assessment are not allowed to be built; the illegal construction behavior will be punished. Industrial policies will be the guiding and restraining forces during the industrial transfer; the "high energy consumption and heavy pollution" industrial projects are prohibited in ecological fragile and environmental sensitive regions. Environmental impact assessment for all kinds of industrial development plans should be enhanced.

Implement differential industrial polices in western, central and eastern China, and make stricter environmental protection and energy saving requirement in Beijing-Tianjin-Hebei, Yangtze River Delta, Pearl River Delta regions. Enhance environmental supervision, and prohibit shift of the backward productivity.

(17) Enhance the use of environmental protection and energy saving indicators. Rise up the environmental threshold and perfect the entrance requirement for key industries. Publish the list of companies which match the requirements and implement dynamic management. Strictly implement pollutant emission total control, and take the criteria whether the emissions of SO_2, NOx, dust and VOCs can meet the total control requirements to be a precondition for the environmental impact

assessment approval of a construction project.

Special emission limits will be adopted in the new facilities in thermal generation, iron&steel, petrochemical, cement, non-ferrous metal, and chemical sectors and new coal-fired boilers projects in the 47 cities in the key regions, which are Beijing-Tianjin-Hebei, Yangtze River Delta, Pearl River Delta, as well as the city clusters of Central Liaoning, Shandong Province, Wuhan and surrounded region, Changsha-Zhuzhou-Xiangtan, Chengdu-Chongqing, Straits Fujian, Central and Northern Shanxi, Shaanxi Guanzhong, Gansu-Ningxia, and the city of Urumqi in Xinjiang. Each region can expand the implementation scale of special emission limits according to the need of environmental quality improvement.

For the projects which do not pass energy audit and environmental impact assessment review, relevant departments are not allowed to review, approve and record the projects, neither to provide land, approve the construction, issue production license, safety production license and pollution permit; financial institution cannot provide any kinds of new credit support; and relevant companies cannot supply electricity and water.

(18) Optimize spatial arrangement. Scientifically develop and implement urban plan, enhance the urban spatial control and green land regulation requirement, specify the establishment and layout of all kinds of industrial parks and new urban districts, prohibit the adjustment and modification of urban plan casually, to form better urban and regional spatial arrangement which is beneficial to diffuse air pollution. Research and develop pilot projects for combined urban and environmental plan. Combined with excess capacity absorption, energy saving and emission control, as well as company merging and restructure, the high-polluting facilities in iron&steel, petrochemical, chemical, non-ferrous metal, cement, plate glass sectors in central city zones should be relocated and retrofitted orderly, which should be accomplished in 2017.

6. Better Play the Role of Market Mechanism and Improve Environmental Economic Policies

(19) Play the role of market mechanism. In the principle of “Who pollute who take the responsibility; more emission, more responsibility”, actively promote the energy saving and emission reduction mechanism by integrating constraints with incentives.

Allocate the resources such as water and power consumption allowances to enterprises by sectors and by regions. Build a “Top runner” system, to encourage the enterprises who achieve higher energy efficiency and pollution intensity standard.

Fully implement the financial policies on the “Energy Performance Contracting”; perfect the supportive policies to improve the development of environmental service industry; promote the integrated management which includes investment, construction and operation of pollution control facilities. Improve and perfect the green credit and green stock policies; incorporate the environmental information of enterprises into the credit assessment system. Restrict the loan and

finance raising activities of the enterprises that fail to meet environmental criteria. Promote paid use of pollution rights and trading pilots.

(20) Improve the pricing and tax policy. Based on the denitrification cost, improve the denitrification pricing in combination with adjustment of retail pricing. Provide pricing support to the existing thermal power plants who adopt advanced dust control facilities. Implement the progressive power tariff.

Promote the development of natural gas pricing mechanism; make the pricing of natural gas in line with the pricing of other alternatives.

According to the principles of “reasonable compensation, good quality price ratio, polluters pay”, establish the refined oil pricing. Provide subsidy to the groups with difficulties and to the public welfare sectors.

Increase efforts on pollution charges; make sure to charge as it supposes to be. Properly increase the pollution charges and take the volatile organic compounds pollution into the charging system.

Consider to include the products with high pollution and high energy consumption into consumption tax coverage. Perfect the export tax rebate policy and comprehensive use of resources tax policy. Actively promote the reform on imposing tax of coal and other resources on its pricing. Complying with the taxation law and regulation, provide income tax incentives to the enterprises of specialized equipment or conducting environmental protection programs and high-tech enterprises.

(21) Open up investment and financing channel. Deepen investment and financing reform of energy saving and environmental protection, encourage private and social capital to flow into air pollution control field. Guide banking and financial institution to increase credit support for air pollution control projects. Explore financing option to use emission rights as mortgage, and expand financial and leasing business for energy saving and environmental protection facilities.

Local governments should enhance the policy support for the programs related to people's livelihood, such as “coal to gas” fuel switching retrofit project, elimination of yellow-sticker vehicles and older vehicles, as well as replacing low-speed truck with light truck. Local government should also give seeding financial support for clean production demonstration projects in key sectors. The fund for the construction, operation and regulation of air quality monitoring stations should be included in the local financial budget at every level.

Based on the enforcement of environmental law and rational pricing mechanism, central government will plan and integrate the special projects of major pollution reduction, set air pollution control special fund, and implement “substitute subsidies with rewards” according to the control effect in key regions; The support from central investment should be increased for air pollution control in key regions.

7. Improve Law and Regulation System. Carry on Supervision and Management Based on Law

(22) Improve the law, regulation and standard system. Accelerate the revision of the air pollution prevention and control law with special focus on total emission control, emission permit system, emergency and warning, and legal responsibility system. Conduct researches on the penalties for enterprises and responsible persons that maliciously pollute or pollute causing major damage. Penalties for violations shall be increased. Establish and enhance a sound environmental public interest lawsuit mechanism. Launch the research and draft of environmental tax law. Speed up the modification of the environmental protection law. Issue the motor vehicle pollution control and discharge permit management regulations as soon as possible. Regions can publish local air pollution prevention and control law and regulations according to local conditions.

Speed up the establishment (revision) of the emission standards in key industries and fuel consumption standards, oil products' standards, heat metering standards, etc.. Industrial pollution prevention and control technology policies and clean production evaluation index system shall be improved.

(23) Improve environmental regulation capacity. Environment monitoring system at national, regional and enterprise level shall be improved. Strengthen the supervision of the local governments' implementation of the environment law, regulation and polices. Increase capacity building on environment monitoring, information, emergency plan and supervision to meet the requirements of standardized construction.

Establish national air quality monitoring network characterized by integrated municipal stations, background stations and regional stations. Monitoring data quality management shall be strengthened which will objectively reflect air quality condition. Online monitoring system for key pollution sources shall be strengthened; Environmental satellite application shall be promoted. Monitoring platform at national, provincial and municipal level should be established. Fine particulate monitoring stations and national regulated monitoring stations will be built in all the cities by 2015.

(24) Strengthen the environmental protection law enforcement. It is necessary to promote mechanisms such as joint law enforcement, regional law enforcement and cross-area law enforcement. Clarify the priorities, increase the enforcement, and fight against illegal activities. Illegal polluters shall be forced to be shut down according to the law. For the environmental criminals, the criminal responsibility will be retrieved. Fulfill enforcement responsibility is necessary. Actions such as deficiency of the governmental supervision, poor enforcement, bent the law for selfish ends shall be investigated for the responsibility by the supervisory organ.

(25) Implement environmental information disclosure. A List often cities with best and worst air quality will be published monthly. Provinces (autonomous regions and municipalities) shall publish the urban air quality ranking within their respective jurisdictions. Cities shall publish their air quality monitoring information through local media.

Various levels of the environmental protection departments and enterprises shall disclose the environmental information such as new project EIA, pollutant emission and discharge, pollution treatment facilities operational information, etc., subject to public supervision. Construction projects that are relevant to social benefits shall seek public opinions. Mandatory information disclosure system shall be built for heavy polluting industries.

8. Establish the Regional Coordination Mechanism and the Integrated Regional Environmental Management

(26) Regional coordination mechanism. Beijing-Tianjin-Hebei and Yangtze River Delta regional cooperation mechanism shall be established which provincial government and relative departments of the State Council will participate to coordinate significant regional environment problems, organize the implementation of major measures such as the EIA, joint law enforcement, information sharing, early warning and emergency, etc., report regional air pollution prevention and control work progress, study and determine periodic work requirements, priorities and major tasks.

(27) Allocate goals and tasks. The State Council shall sign “the air pollution prevention and control targets and responsibilities documents” with the provincial governments, which will allocate the targets to the local governments and enterprises. Fine particulate matter standards in key areas and particulate matter in non-key areas shall be considered as the social economic development compulsory/binding indicators. The compliance evaluation system shall be established with the aim to improve environmental quality.

The State Council shall establish the evaluation rule and assess the task compliance of the provinces (autonomous regions and municipalities) in the previous year at the beginning of the each year. Mid-term evaluation and adjustment shall be taken in 2015. Final evaluation of the implementation of the action plan will be taken in 2017. Evaluation result will be published to the public after the approval of the State Council, and simultaneously submitted to the departments in charge. Regulations such as “Opinions on Building Evaluation Mechanism for the Party Leadership and Leading Cadres to Promote Scientific Development”, “Comprehensive Evaluation Methods for Local Party Leadership and Leading Cadres (Trial)”, “Opinions on Carrying out Government Performance Management Pilots” shall be important basis for the comprehensive evaluation of party leadership and leading cadres.

(28) Strict accountability. Those entities who do not pass the annual inspection, environmental protection department together with the organization department, the supervisory organ, etc., shall question the provincial government and officials, propose correction opinions and urge the accomplishment.

The relevant supervision body will investigate entities who fail to cope with heavy pollution due to bad performance or functional vacancy, who miss the annual targets, and who intervene or make up monitoring data. Environment protection departments shall limit project approvals in these regions and enterprises, and cancel the environment protection awards.

9. Establish Monitoring and Warning System. Cope with Pollution Episodes

(29) Establish the monitoring and warning system. Ministry of Environmental Protection shall strengthen its cooperation with the meteorological departments to set up heavy pollution weather monitoring and early warning system. The Beijing-Tianjin-Hebei, Yangtze River Delta, the Pearl River Delta regions shall build up their regional, provincial, and municipal heavy pollution weather monitoring and warning system by 2014. Other provinces and provincial capitals shall complete by the end of 2015. Well conduct the trend analysis of heavy pollution weather process, improve the consultation and judgment mechanism, improve the accuracy of monitoring and early warning, and publish monitoring and warning information in time.

(30) Emergency plan. Cities with air quality below the standard shall formulate and improve their episode plans and publish them to the society. It is needed to identify main responsibility body, clearly define the emergency organizations and their responsibilities, set up procedures for early warning, forecasting mechanism and response, implement emergency treatment and safeguard measures, etc. According to different pollution levels, the decision will be made to limit production or shutdown the enterprises, control motor vehicles and dust, close primary and secondary schools and feasible meteorological intervention measures. It is also necessary to carry out the heavy pollution weather emergency drill.

Beijing-Tianjin-Hebei, Yangtze River Delta and Pearl River Delta regions shall establish sound heavy pollution weather emergency response systems which coordinate the whole region. Provincial and urban plans shall be submitted to the Ministry of Environmental Protection by the end of 2013.

(31) Take emergency measures in a timely manner. Heavy pollution weather emergency response shall be incorporated into the emergency management system of local government, and implement principal responsibility mechanism. Emergency plan shall be rapidly launched according to the warning level of heavy pollution weather, instruct the public to have health protection.

10. Clarify the Responsibilities of the Government, Enterprise and Society. Mobilize Public to Participate in Environmental Protection

(32) Clearly define the responsibility of local governments. The local governments at various levels shall be responsible for the air quality within their jurisdictions. They shall keep in accordance with the nation's overall deployment and control targets, and formulate the detailed implementation rules for their region, determine the priority tasks and annual control indicators, improve policies and measures, and disclose them to the public. They shall continue to intensify supervision, ensure clear tasks and financial support.

(33) Strengthen the coordination between departments. All relevant departments shall cooperate closely, unify the action, and form a strong force for air pollution prevention and control. Ministry of Environmental Protection shall strengthen its guidance, coordination and supervision. The relevant

departments shall establish supportive policies for air pollution prevention and control such as investment, fiscal, finance, taxation, pricing, trade, science and technology policy, etc., and carefully carry out the relevant work in their respective fields.

(34) Strengthen enterprises' activities. The enterprises are the main entities to treat air pollution. They shall keep in accordance with the environmental regulation requirements, strengthen internal management, increase capital investment, utilize advanced production technologies and management technologies, and ensure the emissions within the limits, or even achieve "zero emissions". The entities shall conscientiously fulfill their social responsibilities of environmental protection and accept the supervision from the society.

(35) Widely mobilize social participation. Everybody is responsible for environmental protection. Actively carry out various forms of communication and education to spread the scientific knowledge of the prevention and control of air pollution. Strengthen professional training on the air quality management. Advocate more civilized, energy-efficient and greener consumption living styles, guide the public to start with themselves and start from simple actions. Cultivate the behavior principle "fight together for the same air we breathe" in the whole society, and improve air quality together.

Our country is still at the Primary Stage of Socialism. Air pollution prevention and control task is arduous. We need to have firm confidence, comprehensively control pollution, highlight priorities, and progress gradually. We need to emphasize on enforcement and seek practical results. All regions, related departments and enterprises should follow the requirements of this action plan, based on local realities, forcefully implement the control measures and ensure the air quality targets to be achieved as expected.

CAAC

Clean Air Alliance of China (CAAC), initiated by 10 key Chinese academic and technical institutions in clean air field, aims at providing an integrated clean air collaboration platform in China for academic and technical institutions, provinces and cities, non-profit organizations and enterprises. The overarching goal is to improve air quality in China and mitigate the negative impacts on public health due to air pollution. The members of CAAC include academic institutions, provinces & cities, as well as other nonprofit organizations and enterprises that care about clean air.

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