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China's Rural Vitalization and Agriculture Green Development - Policy Framework and Action Plans

中国乡村振兴与农业绿色发展 - 政策框架及行动方案

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Overview 概述

In 2017, the Chinese government launched the "Rural Vitalization Strategy" (RVS) and regarded it as a national strategy. The ambition of the Strategy is to build rural areas with thriving businesses, pleasant living environments, good social etiquette and civility, effective governance, and prosperity.

To implement the strategy and achieve the ambitious targets, Chinese government published a series of policies and action plans. This SAIN Information Sheet brings together four categories of policies and action plans regarding rural vitalisation and green development in agriculture: the strategic guidelines, development of agriculture and rural industries, agriculture green development, and science, technology, finance and governance support. Figure 1 shows the connections between these policies and plans.

The Strategic Policies

The Strategic Policies include the 19th CPC National Congress Report, the No 1 Central Document in 2018, 2019 and 2020, the Rural Vitalization Strategic Plan (2018-2022); Implementation of Rural Vitalization Strategy, and Accelerating the Transformation and Upgrading of Agriculture. These policy documents outlined the vision and the key targets of the RVS, set the key milestones and priority tasks for the implementation of RVS as well as boosting agricultural and rural development.

Development of Agricultural and Rural Industry

Development of agricultural and rural industry is the foundation for rural vitalization. In May 2019, the government released the Guidelines to Establishing System Mechanism and Policy Framework for Integrated Urban-Rural Development. In June 2019, the State Council went further by releasing the guideline on promoting rural industry vitalization that calls for efforts to develop rural industries with unique local features, and gives full play to the decisive role of the market in allocating resources, conserve natural resources and protect the environment.

The Government issued policies and guidelines for the development of specific sectors of the rural industries, these included the sustainable development of rural tourism, boosting the dairy industry and improving the quality and safety of dairy products, enhancing the development of intensive processing of agricultural products.

China also makes great effort to promote the digitalization of rural and agricultural development and upgrading of agricultural mechanisation.

Agriculture Green Development

China is determined to transform the agricultural production system to raise productivity and economically viability with a minimum of adverse environmental impacts. In China, this transformation is termed "Agriculture Green Development" (AGD). AGD also forms a key part of the rural vitalisation strategy.

In September 2017, Chinese government released guidelines on green development in agriculture, setting goals for resource conservation and environmental protection. The Ministry of Agriculture and Rural Affairs (MARA) and other relevant ministries also produced guidelines and action plans on the specific aspects of the AGD, these include the technology guidelines, action plans, and regulations on resource protection, waste recycling and pollution control.

Science, Technology, Finance and Institutional Support

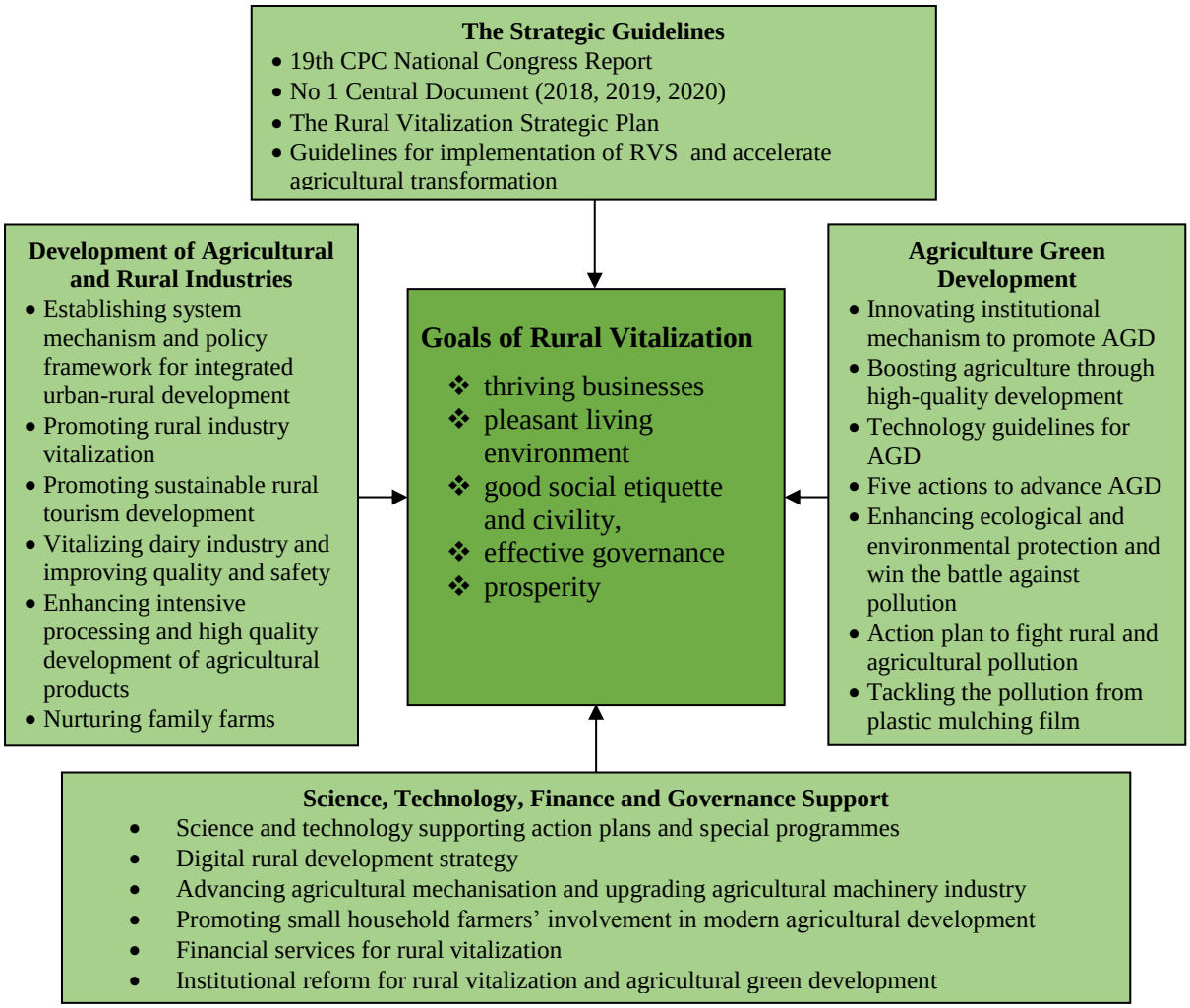
MARA, the Ministry of Science and Technology (MOST), Ministry of Education (MOE) developed policies and specific programmes to provide science and technical support and talent training for the implementation of the RVS.

The Chinese government has developed special finance support policies for the implementation of RVS, these included establishing the appropriate financial service system, expanding rural financial service products, expanding the finance sources for rural vitalisation, and upgrading the finance infrastructure in rural areas.

China is fostering family farms with appropriate scale and training the new generation of professional farmers. However, small holders will play an irreplaceable role in agriculture production and rural development in a long-term, and so it is vitally important to involve the small holders in the process of agricultural modernisation.

In 2018, China undertook a major cabinet reshuffle to make the government better-structured, more efficient, and service-oriented. The newly established Ministry of Agriculture and Rural Affairs is responsible for coordinating the studies and implementation of development strategy, mid-and long term plans and major policies regarding agriculture, farmers and rural issues, coordinating the development of rural public services, cultural, rural infrastructure and governance.

Figure 1. China's Rural Vitalization and Agriculture Green Development: the Policy Framework and Action Plans



The Strategic Policies 战略指导性政策

The 19th CPC National Congress Report 中共十九大报告

In his report at the 19th CPC National Congress, held in October 2017 in Beijing, Chinese president Xi Jinping outlined the vision of the Rural Vitalization Strategy. The key components of the Strategy include:

- Building rural areas with thriving businesses, pleasant living environments, good social etiquette and civility, effective governance, and prosperity.
- Consolidate and improve the basic rural operation system, advance reform of the rural land system, and improve the system for separating the ownership rights, contract rights, and management rights for contracted rural land.
- Establish industrial, production, and business operation systems for modern agriculture, and improve the systems for supporting and protecting agriculture.
- Develop appropriately scaled agricultural operations of various forms (including family farms, cooperatives, agricultural enterprises etc.), cultivate new types of agribusiness, improve specialized agricultural services, and encourage small household farmers to become involved in modern agriculture.
- Promote the integrated development of the primary, secondary, and tertiary industries in rural areas, support and encourage employment and business startups there, and open up more channels to increase rural incomes.
- Train professional rural service personnel who have a good knowledge of agriculture, love our rural areas, and care about rural people.

Click here for the full text

No 1 Central Document (2018) 2018 年中央一号文件

The theme of the No 1 Central Document in 2018 was Rural Vitalization Strategy. The strategy of rural vitalisation was initially published in a report delivered to the 19th National Congress of the Communist Party of China in October 2017. The No 1 Document 2018 further laid out the roadmap and milestones of the Strategy.

The Milestones

A specific timetable and tasks have been set and explained for the rural vitalization strategy:

- By 2020, an institutional framework and policy system should be established for the strategy. By that time, no Chinese people should be living under the existing poverty line, and rural productivity and agricultural supply should improve substantially.
- By 2035, "decisive" progress shall be made, with basic modernization of agriculture and rural areas. All Chinese, either in cities or rural areas, will have equal access to basic public services. Urban and rural integration will improve.
- By 2050, rural areas will experience all-around vitalization.

The Tasks and Actions

To achieve the rural revitalization goals, the No 1 Central Document outlined a comprehensive package of practices grouped under 10 main headings:

Enhancing the quality of agricultural development

- Consolidating agricultural production capacity

- Implementing the agriculture quality promotion strategy
- Constructing the system for integrated development of the first, second and tertiary industries in rural areas
- Creating a new pattern of opening up in agriculture
- Facilitating the smooth connection between smallholder farmers and the modern agricultural development.

Advancing rural green development, to build the harmony between human and nature

- Adopting a holistic approach to conserving nature (mountains, rivers, forests, farmlands, lakes, and grasslands)
- Strengthening comprehensive management of the most pressing environmental problems in rural areas
- Establishing a market-based diversified ecological compensation mechanism
- Increasing the supply of agro-ecological products and services

Encouraging a prosperous and rich rural culture

- Strengthening rural ideological and moral construction
- Inheriting, developing and enhancing excellent rural traditional culture
- Strengthening the development of rural public culture
- Transforming established habits and customs

Establishing a new governance framework to manage rural areas

- Strengthening the construction of rural grass-roots party organizations
- Deepening the practice of villagers' self-governance
- Formulating a rule of law for the countryside
- Enhancing morality of the countryside
- Building safe rural villages

Raising the level livelihood security in rural areas

- Giving high priority to rural education
- Transferring rural labor force and increase farmers' income
- Upgrading rural infrastructure
- Strengthening the development of rural social security system
- Promote the public health in rural areas
- Continuously improving the living environment in rural areas

Winning the battle of targeted poverty alleviation

- Improving the targeted support to impoverished population
- Focusing on the development of destitute-stricken regions
- Inspiring impoverished populations

- Strengthening the responsibility and supervision of poverty alleviation

Promoting institutional innovation and strengthen resource supplies in rural revitalization

- Consolidating and improving basic management systems in rural areas
- Deepening rural land system reform
- Advancing the reform of rural collective property right systems
- Improving the supporting and protecting system for agriculture

Enhancing human capacity building to support rural revitalization

- Energetically foster new types of professional farmers
- Strengthening the development of rural professional personnel
- Displaying the supporting role of technical talents
- Encouraging all sectors of society to devote themselves to rural development
- Innovating the talent training and employment system in the rural areas

Expanding the investment and financing channels for rural revitalization

- Ensuring sustained growth of financial investment
- Broadening channels of fund raising
- Improving financial services

Adhering to and perfecting the party's leadership

- Improving party's leadership system in rural issues
- Studying and formulating the party's rural work regulation
- Strengthening construction of working team for "three rural issues" (agriculture, rural and farmers).
- Enhancing the development of the rural revitalization plans
- Strengthening rule of law for rural revitalization
- Creating good atmosphere for rural revitalization

(For details of the tasks and actions of the No 1 Document 2018, see SAIN Information Sheet No 11)

Click here for the full text in Chinese

No 1 Central Document (2019) 2019 年中央一号文件

The No 1 Central Document in 2019, released on 19th February 2019, prioritized development of agriculture and rural areas. The Document outlined the key tasks to be taken in year 2019:

Decisively win the tough battle against poverty

- To lift all its rural residents out of poverty and eliminate poverty in all poor counties and regions by 2020.

- Focus will be put on providing assistance to areas of extreme poverty, via favourable policies ranging from major projects for resident relocation, finance to the nurturing of talent.

Maintaining supply of agricultural products

- Stabilize grain output. Efforts will be made to ensure that grain planting area remains steady at 1.65 billion mu (110 million hectares) and arable land area is kept above 1.8 billion mu (120 million ha), as well as develop 800 million mu (53.3 million ha) of high-standard farmland by 2020.
- Optimizing agricultural structure. Transforming agricultural production from quantity to quality-driven; rolling out the plans to increase soybean planting; support dairy industry through constructing "dairy bases," upgrading and transforming small and medium dairy farms, and upgrading infant formula production; advancing the marine farm development; improving the food safety and quality supervision, inspection and tracing system; increasing the effort to prevent and control African swine fever and other animal epidemics.
- Speeding up breakthroughs in key agricultural core technologies, and promoting independent innovation in areas including biological breeding, heavy agricultural machinery, smart agriculture and green agricultural inputs.
- Carrying out the strategy for safeguarding the key commodities. Strengthening "top-level design and system planning", coordinating use of domestic and international markets and resources, and scientifically determining the volume of domestic commodity supply that must be maintained, setting up a system to maintain domestic supplies of each commodity. The production of rice and wheat must be protected, maize production needs to be stabilized. Actively expanding the import of agricultural commodities in short supply, diversifying the import channels, nurturing multinational agricultural corporations, supporting agricultural companies "going out" to invest abroad, strengthening agricultural international cooperation, particularly with “Belt and Road” countries. Increasing efforts to control smuggling of agricultural products

Advancing the rural construction, improving rural environment and rural public services

- Carrying out the three-year action plan on improving rural living environment
- Improving rural infrastructure including roads, grids and logistics network
- Improving rural public services, such as education, health care, social security, elderly care and culture.
- Enhancing pollution treatment and environmental protection.
- Strengthening the guidance on rural village planning

Strengthening rural industries, expanding the rural income channels

- Fostering the development of rural industries and diversify channels to increase the income of farmers.
- Speeding up the development of rural industries with local characteristics,
- Making great efforts to develop modern agricultural product processing industry

- Developing new rural services.
- Pushing forward a digital countryside strategy.
- Improving employment services and vocational training to promote the employment of the rural labour force and increase their incomes.
- Encouraging rural migrant workers, college graduates, veterans and urban personnel to make innovations and start businesses in rural areas.

Deeping rural reform, stimulating the rural development momentum

- Consolidating and improving the rural basic operation systems
- Deepening the rural land ownership reform and rural collective property rights reform
- Formulate and improve agriculture support and protection policies, protect farmers' interests and support agricultural development.

Improving rural governance and party leadership

The document also covered policies to improve the rural governance mechanism to maintain rural harmony and stability, strengthen rural primary-level Party organizations, and enhance Party leadership on agricultural and rural affairs.

Click here for the full text in Chinese

No 1 Central Document (2020) 2020 年中央一号文件

The No 1 Central Document in 2020 was released on 5th February 2020, with agriculture, rural areas and farmers' issues remain China's top priorities. The Document pointed out two overarching tasks for 2020 - winning the battle against poverty and strengthening areas of weakness concerning agriculture, rural areas and farmers.

In detail, the document stipulates 27 tasks in 5 categories.

Winning the battle against poverty

- Completing poverty alleviation tasks
- Consolidating poverty alleviation achievements
- Ensuring appropriate assessment, acceptance and publicity in poverty alleviation
- Stabilising poverty alleviation efforts with consistent policy, incentives, responsibilities and supervision
- Planning continued poverty alleviation with the focus shifting from 'extreme poverty' to 'relative poverty'

Overcoming the weakest links in rural infrastructure and public services

- Strengthening rural public infrastructure construction, including rural road improvement, upgrading the rural power grid and communication facilities
- Improving rural water supply and completing the rural safe drinking water projects.
- Improving rural living environment - 'toilet revolution', waste disposal and village cleaning and greening
- Improving rural education quality
- Strengthening rural community health services

- Strengthening rural social security
- Improving rural public cultural services - protecting town and villages with historical and cultural values, and agricultural cultural heritage
- Tackling rural ecological and environmental problems and particularly enhancing the treatment and recycling livestock manures, reducing the application of chemical fertilizers and pesticides, control soil and water pollution.

Ensuring the effective supply of key agricultural product and increasing farmers' incomes

- Stabilise grain production by protecting sown areas - introducing high yield varieties, applying subsidies and incentive policies, controlling fall armyworm and other major pest and diseases, expanding and diversifying food import sources
- Speeding up pig production recovery- increasing the stock number while strengthening epidemic control, speeding up vaccine R&D, promoting standardized pig production and improve the pork processing facilities
- Strengthening modern agricultural facility construction - planning and implementing large modern agricultural programmes and projects, including speeding up high yield farmland construction, launching modern agricultural logistic chain projects, constructing cold chain bases, building agricutural and rural big data centres, speeding up application of IoT, blockchain, AI and 5G
- Developing rural industry – developing the agricultural production chain based on local resource advantages, strengthening green and organic food certification and geographical indication management, expanding rural e-commerce coverage and promoting agricultural products traceability management
- Stabilising the employment of migrant workers – expanding unemployment benefits, increasing the subsidies to skill training, introducing the regulation to protect the payment for migration workers.

Strengthen grassroots governance in rural areas

- Strengthening the Party's leadership
- Improving rural governance system
- Mediating rural disputes and conflicts – continually tackling the activities that hurt farmers' benefits, properly mediating the conflicts caused by land contract, land acquisition, housing demolition and relocation, salary/payment, environment pollution etc.
- Improving rural safety and security

Enabling measures for addressing the weakest links in agriculture and rural areas

- Prioritising the investment in agriculture, farmers and rural issues - central budget continues to prioritise rural and agriculture investment, improving and reforming rural financial services, optimising the allocation of resources from central and local government to address the weakest links
- Ensuring land supply for rural development – adhering the "redline" of protecting basic farm land, improving land use policy and planning

- Promoting and encouraging agricultural talents and entrepreneurs going rural areas to bring more technologies into practices
- Strengthen the development and adoption of agricultural sciences and technologies
- Pushing forward rural reforms on priority issues such as land contract, rural services, and rural property ownership.

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Rural Vitalization Strategic Plan (2018-2022) 乡村振兴战略规划(2018-2022 年)

In September 2018, the CPC Central Committee and the State Council jointly released the Rural Vitalization Strategic Plan (2018-22).

The Plan spelled out the key tasks for the 2018-2022 period including the strategy's overall goal of building rural areas with thriving businesses, pleasant living environments, social etiquette and civility, effective governance, and prosperity.

Table 1. Selected tasks and activities for rural vitalization

Tasks	Activities
Building a new pattern of rural vitalization	Balancing urban and rural development space • Strengthening space use control • Improve the layout of urban and rural areas • Promote urban and rural integrated planning
	Optimizing the layout of rural development. • Making coordinated use of production space • Rationally layout living space • Strictly protects the ecological space
	Wining the Fight Against Poverty • Thoroughly implementing precision poverty alleviation • Focuses on deep poverty • Consolidates the success of tackling poverty
Speeding up the pace of agricultural modernization.	Consolidating the Basis of Agricultural Productive Capacity • Improve the mechanism for ensuring food security. • Strengthening the protection and construction of cultivated land. • Upgrading the level of agricultural equipment and informatization
	Speeding up the transformation and upgrading of agriculture • Optimizing the distributing of agricultural productivity • Pushing forward the adjustment of agricultural structure • Developing characteristic and advantageous industries, be in line with international standards, establishing precision production management and quality control system, adopting internationally commonly accepted good agricultural practices, building modern top brands • Assuring the quality and safety of agricultural products • Raising and enhancing the role of agricultural brands • Setting up a new pattern of agricultural opening to the outside world

	Establishing modern agricultural operation system Consolidating and improving the basic operation system in rural areas • Strengthening the main body of new agricultural management • Developing the new rural collective economy • Promoting the organic connection between the production of small farmers and the development of modern agriculture
	Strengthening the support of agricultural science and technology • Raising the level of agricultural science and technology innovation • Building platforms for agricultural science and technology innovation • Speeding up the transformation and application of agricultural scientific and technological achievements
	Improve the system of agricultural support and protection • Increase investment in supporting agriculture • Deepening the reform of important agricultural products purchase and storage system • Raising the ability to guarantee agricultural risks
Enhancing Rural industry	Promoting further integration of rural industries • Exploring new functions and adding new values • Cultivating new industries and new formats
	Improving the benefits sharing mechanism, • Increasing farmers participation • Innovating revenue sharing mode • Strengthening policy support and guidance.
	Stimulating the momentum on rural innovation and entrepreneurship • Cultivating and expanding innovation and entrepreneurship groups. • Improving the service system for innovation and entrepreneurship. • Establishing an incentive mechanism for innovation and entrepreneurship.
Build a beautiful countryside with ecological liveability	Promoting agricultural green development • Enhancing resources protection and economic utilization • Promoting agricultural clean production • Emphasising on solving the critical agri-environmental problems
	Continuously improving the rural living environment • Speeding up the pace of overcoming the weak links in rural environment • Focusing on improving the villages appearance • Establishing and perfecting a long-term mechanism for rural living environment management
	Strengthening rural ecological protection and restoration

	• Implementation of major ecosystem protection and restoration projects • Improving the protection system of important ecosystems • Improving the compensation mechanism for ecological protection • Bringing into play of the multiple benefits of natural resources

The Plan also outlined the rural vitalization indicator system, which includes 22 specific indicators to measure the progress toward the five goals of rural vitalization.

Table 2. The key indicators of the rural vitalization strategic plan

Category	Key indicators	Unit	2016 baseline	2020 target	2022 target
Thriving businesses	Overall grain production capacity	100 million ton	＞6	＞6	＞6
	Agricultural S&T contribution to agricultural production	%	56.7	60	61.5
	Agricultural labor productivity	10 thousand yuan/person	3.1	4.7	5.5
	Ratio of the value of agricultural products processing industry to the total value of agricultural output	-	2.2	2.4	2.5
	Number of tourists received by leisure agriculture and rural tourism	100 million visits	21	28	32
Pleasant living environment	Livestock and poultry manure recycling rate	%	60	75	78
	Village green coverage rate	%	20	30	32
	Proportion of villages with domestic waste treatment	%	65	90	>90
	Access rate of sanitary toilet	%	80.3	85	>85
Social etiquette and civility	Villages with public cultural services	%	-	95	98
	Proportion of model villages	%	21.2	50	>50
	Proportion of University graduated teachers in the rural compulsory education schools	%	55.9	65	68
	Rural residents expenditure on education, culture and recreation	%	10.6	12.6	13.6
Effective governance	Proportion of villages with planning administration	%	-	80	90
	Proportion of villages with comprehensive public services centre	%	14.3	50	53
	Proportion of villages with party secretary as village leader concurrently	%	30	35	50
	Proportion of villages having village rules and regulations	%	98	100	100

	Proportion of villages have strong collective economy	%	5.3	8	9
Prosperous and well-off	Engel Coefficient of Rural Households	%	32.2	30.2	29.2
	Urban-rural income ratio	-	2.72	2.69	2.67
	Access rate to running water	%	79	83	85
	Proportion of hard surface roads between villages	%	96.7	100	100

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Guidelines for Implementation of Rural Vitalization Strategy and Accelerating the Agricultural Transformation 关于大力实施乡村振兴战略加快推进农业转型升级的意见

In February 2018, MARA announce the "Guidelines for Implementation of Rural Vitalization Strategy and Accelerating Agricultural Transformation and Upgrading". The Guidelines point out that China's agriculture has entered the era of high quality development to transform the agriculture from quantity production to quality production, upgrading agriculture production through quality enhancement, green production and brand building. To achieve the transformation and upgrading, the Guidelines set out 33 activities.

Adhere to quality first, boosting agriculture through quality improvement and branding development

- Promote agricultural standardization. Making and revising 1000 pesticides residues standards, 100 veterinary drug residues standards, and 200 other standards; strengthening the public information and guidance on the application of agricultural standards.
- Consolidate regulation and law enforcement on the safety and quality of agricultural products. Applying strict supervision of agricultural input use, building the basic data platform for pesticides and veterinary medicines, speeding up the construction of tracing system.
- Implementing the brand building and promotion initiatives.
- Upgrading the modern seed industry. Establishing an industry-led commercial breeding system; enhancing the green-oriented breed, creating the new varieties with efficient use of water, fertilizers and pesticides; speeding up the establishment of seed industry big data platform and the national experiment facilities.
- Lifting the performance of controlled-environment agriculture. Upgrading the facilities, promoting new varieties and integrating the new technologies
- Strengthening disease eradication. Continue to pay special attention to the control and prevention of major animal epidemics and zoonotic diseases.

Uphold the principle of optimizing benefits, steadily improving agricultural competitiveness and raising farmers' incomes

- Advancing agricultural mechanization. Accelerating the whole process mechanization of major crops, and overcoming the bottle-necks for maize, rapeseed, sugarcane and cotton harvesting.

- Enhancing the development of agricultural products processing industry, promoting the coordinated development of preliminary processing, further processing, staple food processing and comprehensive utilization processing.
- Implementing recreation agriculture and rural tourism projects.
- Enhancing rural entrepreneurship.
- Nurturing new operation entities, promoting appropriate scale agricultural operation in various types
- Promoting the connection between small farm households and modern agricultural development
- Ensure poverty alleviation through agricultural industry development

Adhere to green-orientation, raising the level of agricultural sustainability

Promoting the methods of agricultural green production, developing the resource-saving and environmentally friendly agriculture, reducing input use and increasing waste recycling, steadily release the pressure on resource and environment, ease the non-point pollution from agriculture.

- Continuing the reduction in agricultural input. Implementing the actions of zero-growth in fertilizers and pesticides use, developing and applying the high efficiency controlled release fertilizers, low toxic pesticides, demonstrating veterinary antibiotics reduction practices.
- Speeding up the recycling of agricultural wastes
- Strengthening agricultural resources protection
- Carrying out actions to protect aquatic organisms with particular emphases on Yangtze River

Adhere to market -orientation, adjust and optimize the agricultural structure

- Consolidating the base for agricultural comprehensive production
- Continuing the crop structure readjustment, moderately reduce the rice planting area, expanding the cereal-beans rotation pilot areas and increase soybeans and pulses planting area.
- Advancing the adjustment of livestock structure, shifting pig production to the areas of feed production with greater Environmental carrying Capacity, increase alfalfa production to boost dairy industry, promote dairy consumption.
- Advancing the structural adjustment of fishery industry, with emphasis on reducing the quantity, increasing the quality and improving the ecological environment of aquaculture
- Promoting the industrial agglomeration of cereal production function zones and major agricultural products production protection zones, as well as to modern agricultural industry parks, agricultural innovation parks and agricultural science and technology parks.
- Strengthening the marketing system development of agricultural products.
- Advancing agricultural informatisation development, including big data application, agricultural and rural data resource systems, and market information platforms.

- Supporting agriculture “go-out”, deepening the agricultural trade and investment relationships with “Belt and Road” countries and regions, support international cooperation on agricultural machinery, seeds, pesticides, fertilizers and agricultural products processes.

Adhere to reform and innovation, fostering the new momentum for agricultural and rural development

Advancing agriculture transformation and upgrading, realize high quality development, continually deepening rural reform, strengthen agricultural technology innovation, improving the production efficiency.

- Fully complete the confirmation, registration and issuance of certificates on the right to the contracted management of rural land, using the registration results to support the appropriate scale operation, award farming related subsidies, as well as loans secured against the management right of contracted rural land
- Advancing the separation of rural land ownership, contracted right and management right.
- Deepening the reform of the rural property rights system
- Advancing the reform of agricultural reclamation sector (state farms)
- Advancing agricultural science and technology innovation, and system reform. Prioritising the research and development of technologies for resource saving, increasing efficiency, safety and quality, green ecology. Deepen the extension system reform, establish the integrated extension system, which combines non-profit services and commercial operations.
- Implementing the professional farmers training programme, enhancing rural talent development
- Improving the protection system supporting the green development in agriculture. Speeding up the establishment of green-oriented subsides system.

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Upgrading and Development of Agricultural and Rural Industries 农业农村产业升级发展

Guidelines for Establishing the System Mechanism and Policy Framework for Integrated Urban-Rural Development 关于建立健全城乡融合发展体制机制和政策体系的意见

The Central Committee of the Communist Party of China (CPC) and the State Council, announced guidelines on the promotion of integrated urban-rural development on May 5 2019.

The Guideline recognised that China has made great headway in advancing urbanization and balancing development between rural and urban areas since the 18th National Congress of the CPC. However, barriers hindering integrated urban-rural development still exist.

The guidelines aim at promoting rural revitalization and speeding up the modernization of agriculture and rural areas.

By 2022, the systems and mechanisms for promoting integrated urban-rural development should begin to take shape. The country will also gradually eliminate restrictions on urban settlement, according to the guidelines.

By 2035, China aims to put in place sound systems and mechanisms for promoting integrated urban-rural development. The urban-rural gap in development and living standards will be markedly reduced.

By the middle of the century, China will meet the goal of realizing the comprehensive integration of urban-rural areas and rural revitalization and basically realize the target of achieving shared prosperity for everyone.

To achieve these ambitious goals, the Guidelines outline a number of activities, which include:

- Breaking down the barriers that restrict the free flow of resources — such as capital, talents, information — between urban and rural areas, and inject new impetus to the countryside
- Deepening household registration reforms, relaxing restrictions on urban settlement except for several mega-cities, promote coordinated development between cities and towns, as well as increase the population carrying capacity and attractiveness of mid- and small-sized cities
- Making cities more inclusive and help migrant workers settle into city life
- Implementing incentive policies to attract talents to work or start businesses in rural areas
- Continuing to deepen and improve rural land reform and allow farmers to turn their land-use rights into shares in farming enterprises or cooperatives
- Improving financial services in rural areas, and support the issuance of government bonds by local authorities to finance public welfare projects on integrated urban-rural development
- Establishing and improving the systems and mechanisms to channel more resources to the rural public services
- Establishing a mechanism to balance the allocation of educational resources and prioritize developing education in rural areas
- Improving the medical and health service system in rural areas, efforts will be made to increase the attractiveness of grassroots medical jobs and training of rural medical workers will be strengthened
- Improving the public cultural service system and channel more cultural resources to rural areas. Cultural workers and volunteers are encouraged to participate in the cultural development in rural areas
- Improving the unified urban and rural social security system, coordinating urban and rural social assistance systems and establishing rural governance mechanisms
- Establishing the institution and mechanism to promote the integrated development of urban and rural infrastructure, with priority given to rural areas

- Promoting diversified economic development in rural area, continuing to protect its agriculture, establishing a mechanism for promoting new industries and build a platform for integrated development of urban and rural industries
- Expanding the channels to raise farmers' income and constantly narrow the gap in living standards between urban and rural residents
- Employment discrimination will be eliminated, more jobs created and business opportunities increased to form an environment for promoting income increase for farmers, according to the guidelines

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Guideline for Promoting Rural Industry Vitalization 关于促进乡村产业振兴的指导意见

On 28 June 2019, the State Council released the guideline on promoting rural industry vitalization.

The document calls for efforts to develop rural industries with unique local features, give full play to the decisive role of the market in allocating resources, conserve natural resources and protect the environment.

The development of whole industrial and value chains should be accelerated, and secondary and tertiary industries depending on rural resources should be supported in rural areas to create profits and jobs for villagers.

Target

- Achieving an increased share of added value of rural primary, secondary and tertiary industries in county-level GDP within five to 10 years,
- Building a complete rural industrial system with an established green production model which widens access to profits for rural residents.

The guidelines focus on:

- Enhancing modern planting and breeding industries, and the special protection mechanisms for permanent farmlands
- Developing plant breeding industries with local characteristics and intensifying the protection of local resources.
- Encouraging major-grain producing regions with distinctive agricultural products to develop their farm product processing industries.
- Promoting rural tourism, the new rural service industry, and Internet Plus modern agriculture with big data.
- The industrial layout of rural areas should be well planned, eligible areas should build township-centric industrial clusters, and urban infrastructures and basic public service should be extended to rural areas, said the guidelines.
- Pledging more funds, technologies and talent for poverty-stricken regions to consolidate and expand industry-based poverty relief.
- Increasing efforts to promote the integrated development of rural industries and an increase in industrial aggregation forces.

- Refining the green quality standard system for farm products, promoting manufacturing standards, fostering agricultural brands and strengthening the protection and use of agricultural resources.
- Work to upgrade innovation and entrepreneurship, and to encourage migrant workers, graduates of vocational colleges, veterans, and technology staffers to return home.
- Improving the fiscal mechanism, financial services, and supply of land and talent to support the revitalization drive.

The Guideline particularly stresses the measures to boost agriculture through improving quality and green development such as:

- Improving green quality standard system. Establishing the national and industry standards for agricultural inputs materials, agricultural products processing, and the emerging rural new industries; establishing unified market access standards for green agricultural products. Participating in international standards development and revision, promoting mutual certification on agricultural products. Encouraging the agricultural enterprises to obtain internationally recognized certifications, and to expand access to international markets.
- Promoting standardised production. Encouraging agricultural operation entities to build standardised production bases. Enhancing the safety and quality management of fertilizer, pesticides, veterinary drug and feed production, advancing the recycling of plastic film and packages waste, promoting healthy ecological breeding. The establishment of quality grading and the mechanisms of places of origin and market access of farm produce shall be accelerated, realising the field-to-folk whole chains supervision of
- Building and upgrading agriculture brands. Establishing the agricultural brand catalogue, enhancing agricultural brand protection and protected geographical indication administration.
- Enhancing resource protection. Promoting resource saving industry which save land, energy and water. Advancing the integrated planting and breeding system, supporting recycling of straws and manures.

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The Guideline for Promoting Sustainable Rural Tourism Development 关于促进乡村旅游可持续发展的指导意见

On 15th November 2018, China's Ministry of Culture and Tourism, the National Development and Reform Commission (NDRC) and 15 other ministries and departments jointly released the Guideline on the Sustainable Development of Rural Tourism

The Guideline points out that rural tourism plays an important role in the integrated rural-urban development, rural incomes generation and rural poverty alleviation. The Guideline outlines the principles of sustainable rural tourism development which include putting the ecology first, being people-oriented as well as development based on actual local conditions.

The Guideline put forward six major measures namely:

- Strengthening planning to achieve coordinated regional development in rural tourism;
- Improving infrastructure and public services to make rural tourism more convenient;

- Enhancing the quality of products and the level of service and management
- Promoting innovation on the marketing of rural tourism;
- Paying more attention to the benefits for rural residents of poverty alleviation via rural tourism;
- Integrating the financial resources, intensifying the guarantees of essential elements

Strengthening planning to achieve coordinated regional development of rural tourism

- Optimising the overall layout of rural tourism regions
- Enhancing the regional coordinated development of rural tourism
- Formulating the rural tourism development plan, incorporating the rural tourism as an important element in the social and economic plan, **territory** development plan, and eco-environment protection plan.

Improving infrastructure and public services to make rural tourism more successful

- Upgrading the basic infrastructure for rural tourism
- Improving the public service system for rural tourism
- Implementing the three-year action plan on "toilet revolution", introducing and disseminating advanced toilet technologies

Enhancing the quality of products and services

- Addressing the cultural specialities of rural tourism, under the condition of full protection with effective utilization of the cultural relics and historic sites, traditional villages and buildings, agricultural heritages and non-material cultural heritages, and developing rural tourism products
- Diversifying the rural tourism products to meet the range of demands such as sightseeing, leisure, recreation, holiday, cultural experiencing.
- Improving rural tourism administration and services

Brand building and marketing

- Building the brand system for rural tourism, consolidating the competitiveness of brand rural tourism products.
- Promoting innovation in the rural tourism operation models

Addressing the benefits for rural residents of poverty alleviation via increased rural tourism

- Exploring and disseminating new development models, and boosting the market through travel agency-village partnership
- Improving the benefits sharing mechanism, ensuring farmers share from the benefits of rural tourism

Integrating the financial resources, strengthening essential elements guarantee

- Improving the financial support mechanism, intensifying the financial support to rural tourism projects

- Ensuring the land supply for rural tourism projects. Incorporating the land use for rural tourism projects as part of territory development plan
- Incorporating rural tourism in the local professional and officials training programme.

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Guideline for Vitalizing Dairy Industry and Improving Quality and Safety of Dairy Products 关于推进奶业振兴保障乳品质量安全的意见

To further expand the milk industry and improve the quality of dairy products, the State Council has released the "Guideline on vitalizing dairy industry and improving quality and safety of dairy products", in June 2018, to guide the milk industry development.

The targets

The Guideline sets the following targets for China's dairy industry development:

- By 2020, progress should be made in building a modernized milk industry, with more than 99 percent of the products up to standard and a 75% recycling rate for livestock wastes.
- By 2025, the whole milk industry should be revitalized, with milk source bases, dairy products processing, quality and competitiveness reaching the world's top levels.

The tasks

To achieve the above targets, the Guideline sets out the following tasks:

- Consolidating the milk source bases. Promoting standard-based dairy cow farming, improving the quality of milk cows through big data and online evaluation platforms, and producing high-quality fodder for the cows.
- Improving the dairy processing and marketing system, integrating dairy enterprises, promoting companies and e-commerce retailers.
- Strengthening regulations and rules on dairy products to ensure compliance along the industrial chain. Ban importing milk powder in bulk and splitting them before sales, while encouraging companies to set up their own milk bases to improve the quality for infants.
- Promoting dairy products consumption. Further expanding the School Milk scheme, increase the milk varieties and quality. Disseminating the nutritional knowledge of milk and dairy products, and encouraging diets which include dairy products.

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Suggestions on Further Invigorating Dairy Industry 关于进一步促进奶业振兴的若干意见

Approved by the State Council, MARA, together with other eight ministries, released the "Suggestions on Further Invigorating Dairy Industry" in December 2018.

According to these Suggestions, China should be able to produce 45 million tons of milk by 2025 through optimising the layout of the dairy industry, innovating dairy development mode, encouraging larger scale dairy production systems as well as boosting consumers' confidence in dairy products.

The Suggestions outlined the key tasks to invigorate China's dairy industry:

- Promoting large scale dairy farms as the mainstream of dairy industry
- Reducing the cost of cow breeding
- Enhancing dairy cow production efficiency
- Enhancing the capability of dairy processing industry
- Advancing the integration of dairy farming and dairy processing
- Improving the quality and safety of dairy products
- Advancing the modernisation of dairy industry in the major dairy production provinces, promoting the consumption of dairy products, particularly the cheese.

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Policy Measures to Enhance Intensive Processing and High Quality Development of Agricultural Products 关于促进农产品精深加工高质量发展若干政策措施的通知

In December 2018, MARA and 14 other ministerial departments jointly announced the policy measures to enhance intensive processing of farm products and high quality development. The policy measures include:

Optimise the industry structure

Coordinate the development of intensive processing, preliminary processing and comprehensive utilization processing; guiding the appropriate processing of staple grain such as rice and wheat, avoiding the resource and nutrition loss due to over processing; advancing the extraction of functional and nutritional elements from fruit, vegetables, fungus, Chinese medicine herbs, livestock products and aquatic products

Speeding up the distribution planning and adjustment of the processing industry

Locate the intensive processing capacity to major grain production areas, privilege production areas of special products, and modern agricultural demonstration zones, encourage add value to agricultural products locally areas. Building international brands, and encouraging leading enterprises on agricultural products intensive processing integrating with international market.

Fostering the intensive processing enterprises

Supporting the enterprises upgrading the technologies and facilities, innovation in operation mode, and moving up to the high end supply chain.

Upgrading technologies and facilities

Implementing science-driven innovation strategy, speeding up the pace to build the R&D organisations on agricultural products intensive processing equipment and manufactural enterprises, establishing courses on agricultural products intensive processing in the high education institutes, upgrading China's technology capability and facilities on agricultural products intensive processing.

Enhancing talent nurturing

Organising nation-wide talent training programme for agricultural products processing industry. Establishing the mechanism attracting the R&D personnel from enterprises participating in the R&D work in the laboratories in academic organisations.

Strengthening the financial support

Encouraging the local government supporting the collection and recycling the by-products from agricultural products processing, as well as the facilities and equipment for energy saving and environment protection.

Strengthening financial services

Encoring financial institutions strengthening the support to the intensive processing enterprises, and the support to the development of production capacity of comprehensive processing and utilization.

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Guideline on Advancing Agricultural Mechanisation and Upgrading and Transformation of Agricultural Machinery Industry 关于加快推进农业机械化和农机装备产业转型升级的指导意见

In December 2018, the State Council released the "Guideline on Advancing Agricultural Mechanisation and Upgrading and Transformation of Agricultural Machinery Industry". The Guideline outlined the targets and main tasks as following.

The targets

The Guideline sets out the targets for year 2020 and year 2025 respectively:

- By the year 2020, the innovation capability of the agricultural machinery industry will be increased in a sustainable manner, with the machines' gross power nationwide exceeding 1 billion kilowatts. Nationwide, the mechanisation rate of ploughing, planting and harvesting reach 70%.
- By the year 2025, basically all types of agricultural machinery will be developed with quality of international level and gross power around 1.1 billion. The overall mechanisation rate of crops planting and harvesting reaches 75%.

The tasks

Speeding up the development of the high quality agricultural machinery industry

- Perfecting the agricultural machinery innovation system
- Stimulating the coordinated development of whole agricultural machinery industry chain
- Optimising the structure of the agri-machinery industry. Promoting the sale of advanced agri-machinery technologies and products overseas, encouraging the participation of leading enterprises in the international cooperation and foreign aid programmes, and supporting the "one belt and one route" initiative.
- Lifting the quality and reliability of agri-machinery. Speeding up the development of of standards of machines for precision agriculture, smart agricultural machines, and green agriculture machines, constructing modern agricultural machinery standards systems.

Advancing the whole production process mechanisation for major crops

- Overcoming the weak links in the whole production process mechanisation. Boost efforts to mechanise rice planting in the double rice areas, mechanise harvesting of

rapeseed in the middle and lower reach of Yangtze River, mechanise harvesting of potatoes, peanuts, cotton and alfalfa in the main production areas.

- Constructing high efficiency mechanised production systems. Making suitability for mechanisation as an objective for plant breeding and selection, land preparation, cultivation system reform and farm products processing, creating the condition for the mechanised scale production.

- **Expansion of the use advanced agricultural machinery and mechanisation technologies**

- Strengthening the demonstration and uptake f green and high efficiency new mechanery and technologies. Applying the machine purchasing subsidy policies equally to home-made and imported machines; give particular support to the demonstration and extension of machines for conservation tillage, straw incorporation, precision seeding, precision fertilizer and pesticides application, fertigation, water-saving irrigation, mulching film collection and recycling, fodder harvesting and processing, safe disposal of fallen stock dead of diseases and manure recycling. Actively develop agricultural aviation, promoting and regulating the application of UAV for plant protection

- Promote smart agricultural demonstration and application. Enhancing the application of IoT, big data, mobile internet, smart control, and global positioning system technologies to agricultural mechanisation and operation. Formulating the high end agricultural machinery technology roadmap, guiding the development of the high efficiency intelligent agricultural machineries

- Raising the capacity of agricultural machinery technology extension. Encourage agricultural machinery research organisations, production enterprises and new type of agricultural operation entities participating in extension

Boosting social services around the agricultural machinery

- Developing the organisations for agricultural machinery social services. Nurture the households specialised in agricultural machinery

- Innovating the mechanism for agricultural machinery social services. Encouraging agricultural machinery service organisations provide cross regions services

Making efforts to facilitate the operation of agricultural machines

- Building high-standard farmlands to make ease for machine operation,

- Improving the accessory facilities, such as construction lands for agricultural operation and agricultural electricity use.

Training the skilled operatives for agricultural machinery

- Establishing and improving the training system for agricultural engineers and machinery operators, encouraging international personnel exchanges and recruiting international experts

- Foresting the skilled practical talents of agricultural machineries

The Guideline also stressed improvement of the system to grow agricultural talent, enhance agricultural engineering discipline, and encourage universities to set up related majors and to focus on training new-type professional farmers.

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Digital Rural Development Strategy 数字乡村发展战略纲要

On 16 May 2019, the general offices of the Communist Party of China Central Committee and the State Council announced the Digital Rural Development Strategy.

The Strategy aims to (i) consolidate the sound progress for agricultural and rural development, capitalize on the role of agriculture, rural areas and rural people as an important foundation for the country; and (ii) significantly accelerate the construction of rural information infrastructure to promote the rejuvenation of the countryside and agricultural modernization.

Strategic targets

- By 2020, to achieve the initial development of digital villages, with 4G internet accessible to more than 98 percent of the administrative villages and the digital economy growing rapidly in rural regions.
- By 2025, significant progress to be made in the construction of digital villages; with the popularization of rural 4G and innovative application of 5G, and a notable reduction in the "digital gap" between urban and rural areas.
- By 2035, the country will basically realize rural and agricultural modernization and ensure that both urban and rural residents enjoy equal public services.
- By the middle of this century, digital villages will be established nationwide to advance rural revitalization.

The key tasks

Speeding up the construction of rural information infrastructure

- Greatly improve the level of rural network facilities
- Accelerate the transformation of rural infrastructure digitization

Developing digital economy in rural areas

- Consolidate the foundation of digital agriculture
- Promoting digitization transformation of agriculture
- Innovate rural logistic service system
- Actively develop new rural industries

Strengthening the supply of scientific and technological innovation in agriculture

- Promoting the intellegentization of agricultural equipment
- Optimizing agricultural science and technology information services

Building smart green countryside

- Promoting green production mode of agriculture
- Enhancing the grade of informatization in rural ecological protection
- Advocating rural green lifestyle

Enriching and developing rural internet culture

- Strengthening the construction of internet culture in rural areas

- Strengthening rural internet culture guidance

Promoting the modernization of rural governance capacity

- Promoting "Internet + party building"
- Enhance the ability of rural governance

Deepening information and benefit the people service

- Further promoting rural education informatization
- Improve information services for people's livelihood security

Stimulate the motivation of rural vitalization

- Support the development of new agricultural business entities and service providers
- Vigorously cultivate new professional farmers
- Activate rural capital, technology, human and logistic resources

Promoting the development of the internet for poverty alleviation

- Help to win the battle against poverty
- Consolidating and enhancing the effectiveness of internet poverty alleviation

Coordinating the integration of urban and rural informatization

- Coordinating the development of digital villages and smart cities
- Targeted promotion of digital rural construction.
- Strengthening the integration, sharing and utilization of information resources

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Agriculture Green Development 农业绿色发展

The Guideline on Innovating Institutional Mechanism and Promoting Agricultural Green Development 关于创新体制机制推进农业绿色发展的意见

In September 2017, the General Office of the Communist Party of China Central Committee and the General Office of the State Council jointly released the “Guidelines on Innovating Systems and Mechanisms and Promoting Agricultural Green Development”.

The Guideline set out the following targets as the foundation for support the agricultural green development:

- More efficient use of land and water resources. Total arable land area should not be less than 124 million hectares and farmland quality should be improved by 0.5 grade on average by 2020 (China grades its cultivated land quality on a scale of one to ten compared with the five grades in the UK covering both arable and permanent pastures). This target includes prevention of excessive exploitation of groundwater and improved irrigation efficiency;
- Cleaner production environment. Zero growth by 2020 in the amount of chemical fertilizers and pesticides used on major crops ; straw, animal waste and agricultural plastic film should be fully recycled;

- By 2020 forest cover should increase to over 23 percent, and the wetland area should not fall below 53 million ha;
- The comprehensive production capacity of grains should be stabilized at or above 550 million tonnes by 2020, with the quality of farm produces markedly improved.

The Guideline also outlined the following specific activities to promote the agriculture green development.

Optimizing the main function and spatial layout of agriculture

- Establishing agricultural functional area system
- Establishing agricultural productivity layout system
- Establishing agricultural resource and environment regulating and control system
- Establishing green, low-carbon, circulating mechanism for agricultural production
- Establishing green development mechanism for agriculture in impoverished regions

Enhancing resource conservation and protection

- Establishing farmland rotation and fallow systems
- Establishing efficient water use and saving systems
- Establishing the mechanism for agricultural bio-resource protection and utilization

Advancing protection and management of environment in agricultural producing areas

- Establish mechanisms for prevention and control of industrial and urban pollution transferred to rural areas
- Establish the mechanism for reduction in the use of agricultural inputs
- Establish the mechanism for utilization of straw & stalk, livestock & poultry manures
- Establish the mechanism for recycling of plastic film and pesticide package wastes

Conserving and restoring agricultural ecosystems

- Building the agricultural landscape ecological system
- Promoting innovation in grassland protection mechanisms
- Improving the aquatic ecosystem protection and restoration system
- Improving protection and restoration system of forests and wetlands

Improving the innovation-driven and incentive mechanisms

- Establishing the S&T innovation system to support agricultural green development
- Improving agro-ecological subsidy systems
- Establishing green agriculture standards
- Improving laws and regulations system for green agriculture
- Establishing monitoring and early-warning mechanisms for the health of agricultural resources and the environment

- Upgrading the personnel training system in agricultural

Supporting measure

- Establishing government accountability system
- Launching a national agricultural green development campaign
- Building performance-based reward and punishment mechanisms

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The National Strategic Plan for Boosting Agriculture through High-Quality Development (2018-2022) 国家质量兴农战略规划 (2018-2022)

In February 2019, seven governmental departments including MARA and National Development and Reform Commission (NDRC) jointly issued the National Strategic Plan to Boost Agriculture through High-Quality Development (2018-22).

The strategic plan sets out a clear timetable and road map for rejuvenating agriculture through quality development.

- By 2022, an institutional framework for the high-quality development of agriculture should be in place and the goals of high product quality, high industrial benefit, high production efficiency, high practitioner quality and strong international competitiveness should be met.
- By 2035, the modernization of agriculture and rural areas should be basically achieved.

The Strategic Plan set out five objectives regarding high quality agriculture, and for each objective, a number of measurable indicators are proposed, see the table below:

Table 3. Objectives and indicators for high-quality development in agriculture

Objectives	Indicators	2017 base value	2022 target value
High quality products	Overall pass rate for agricultural products' routine safety inspection（%）	97.1	>98
	Annual increase in registration of green, organic, local specialties and good agricultural practice certified products (%)	6	6
High profit industry	The ratio between output value of farm product processing industry and agricultural overall output value	2.2：1	2.5：1
	Proportion of large scale livestock farms (%)	58	66
	The proportion of healthy aquaculture demonstration area (%)	55	65
High efficient production	Agricultural labour productivity (10 thousand Yuan/eperson)	3.4	5.5
	Land productivity (yuan/mu, 1ha = 15 mu)	3200	4000
	The comprehensive mechanization rate of tillage, planting, and harvesting (%)	66	71
	Irrigation water use efficiency	0.548	0.56
	Pesticides use efficiency for major crops (%)	38.8	41

	Fertilizer use efficiency for major crops (%)	37.8	41
High quality operators	The number of nationally certified demonstration farmer cooperatives	6284	10000
	Number of trained professional farmers (10 thousand person time)	100	100
Strong international competitiveness	Annual increase in the value of farm products export (%)	3.5	3

The Strategic Plan set out the key tasks and the implementation measures to improve the quality of agricultural products and the whole production chain.

The tasks include:

- Speeding up agricultural green development. Adjusting the distribution of agricultural production capacity, efficient use of soil and water resources, proper use of agricultural inputs, strengthening the environment protection in agricultural production areas.
- Advancing agricultural standardization. Improving the performance standards system for the full agricultural production chain, introducing and adopting advanced international agricultural standards, promote standardized agricultural production.
- Advancing the integrating of agricultural production chains. Advancing the integration of production, processing and marketing; strengthening the establishment of local agri-marketing systems; speeding up the establishment of cold-chain facilities for storage and logistic; innovating the product circulating mechanisms; promoting the development of new agri-industry and business models.
- Agricultural brand building and upgrading. Building the brand system for agricultural products; improving the brand development mechanism; strengthening brand promotion; developing internationally prestigious brands.
- Improving quality and safety of agricultural products. Strengthening the quality inspection and supervision on quality and safety of farm products; reinforcing the food-safety law; strengthening the agricultural product quality risk assessment and warning system.
- Enhancing science and technology innovation in agriculture. Development of high-quality production technologies; upgrading agricultural machines, facilities and equipment; promote green production technologies and facilities; speeding up the development of digital agriculture.
- Fostering high-qualified human resource agriculture. Fully implement the demonstration role of the new agricultural operation entities; supporting the development of innovative professional farmers; strengthening the capacity and competence of agricultural service providers and organizations.

To ensure the fulfilment of the above tasks, the Strategic Plan outlined the following implementation measures.

- Improving and completing the policy system for quality agriculture. Enhancing the support to green and high efficiency agricultural production; ensuring land supply for quality agriculture

- Establishing the evaluation system for quality agriculture. Establishing the methods and indicators for quality agriculture monitoring and evaluation to reflect the aspects of products quality, industry profits, production efficiency, quality of operators and international competitiveness; strengthening data collection and third party evaluation.
- Establishing quality agriculture performance assessment and working systems. Improving incentive systems and strengthening coordination and leadership.

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Technology Guidelines for Agriculture Green Development (2018-2030) 农业绿色发展技术导则（2018—2030 年）

In 6 July 2018, MARA published the "Technical Guidelines for Agricultural Green Development". The Guidelines outlined the priority technology systems which need research and development, integration and demonstration, dissemination and application.

The guidelines will shift the focus of scientific and technological to focus on quality and green, promote the development of rural economy, achieve quality revolution, efficiency revolution and dynamic revolution, and lead and support the modernization of rural agriculture and comprehensive revitalization.

The "Guidelines" declared that constructing the technical system for agricultural green development is the essential pathway to promote the structural reform of the agricultural supply side and improve the competitiveness of China's agricultural products and the sectors efficiency. It is the basic solution to realise the sustainable development strategy and tackle the resource and environmental constraints to China's agricultural and rural development. It is also the inevitable choice for implementing the rural revitalization strategy. Constricting the technical system is urgently needed for the implementation of the innovation-driven development strategy, and fostering the new momentum for agricultural green development.

Construction of the technology should promote the "three transformations", eg. from focusing on the volume of output to quantity and quality efficiency; from focusing on the volume of production to production and ecological function; from focusing on improving single factor productivity to improving total factor productivity.

The Guideline set out the following key tasks for technology R&D, integration and demonstration.

R&D on Green Input Products

- Development of new varieties with high efficiency, high quality and multiple resistance
- Introduction of high efficiency and environmentally friendly fertilizers, veterinary medicines and biologic drugs
- Energy-saving, low cost, smart agricultural equipment

R&D on Green Production Technologies

- Technologies for land quality improvement and conservation
- Technologies for rain-fed dry farming and agricultural water conservation
- Technologies for improving the efficiency and reducing application of fertilizer and pesticides

- Technologies for agricultural wastes recycling
- Technologies for prevention and control of agricultural non-point pollution
- Technologies for prevention and remediation of heavy metal pollution
- Technologies for safe and green poultry and aquatic production
- Technologies for high efficiency and green production of forage and livestock

Development of the post-harvest value-adding technologies

- Technologies for low carbon and low pollution farm products processing
- Smart technologies for intensive processing of agricultural products

Innovation in the green and low carbon technology models for crop cultivation and animal farming

- Green technologies for increasing crop production and efficiency
- The recycling technologies for integrated farming and processing

Technologies and models for the integrated rural green development

- Smart agricultural technologies
- Technologies for rural habitat environment management

Strengthening the basic research for agricultural green development

- Research on the fundamental basic scientific issues
- Research on the disruptive frontier technologies

Perfecting Green Standard Systems

- The standard for agricultural resource accounting and ecological function assessment
- The technical standards for the quality of agricultural input products
- The technical standards for agricultural green production
- The technical standards for safety testing and assessment of agricultural products
- The technical standards for agricultural resource and the environment f agricultural production areas

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Five Actions to advance Agriculture Green Development 农业绿色发展五大行动

In May 2017, MARA launched Five Actions to advance the green development of agriculture. The Five Actions aim to contribute to:

(i) stimulating agricultural sustainable development by advancing waste recycling in agricultural production, reducing the intensity of resource consumption, and mitigating non-point pollution;

(ii) transforming conventional agricultural production by reducing the over use of chemicals, optimising the production environment, improving the quality of agricultural products and ensuring the supply of high quality green products; and

(iii) improving the rural living environment by reducing waste and pollutant emission.

Action 1: Livestock and poultry wastes recycling and utilization

Pay equal attention to production and environmental protection and the construction of integrated crop-animal production systems. Pilot livestock waste recycling and utilization in the major livestock production counties, demonstrate and disseminate the livestock wastes recycling technologies and operation models.

Action 2: Substituting chemical fertilizers with organic fertilizers in fruit, vegetables and tea plantations

Develop the ecological circular agriculture and improve the quality and efficiency of fruit, vegetable and tea production. In the major vegetable, fruit and tea production regions, promote the technologies for substituting chemical fertilizers with organic fertilizers. In 2017, select 100 demonstration counties to support and advise farmers on applying organic fertilizers.

Action 3 Increasing crop straws treatment in the Northeast provinces (Heilongjiang, Jilin, Liaoning, Inner Mongolia)

Vigorously promote the utilization of straws as fertilizer, fodder, fuel, raw material and base material. Enhance the R&D of new technologies as well as new facilities for comprehensive utilization of the straws. In 60 major maize production counties in the Northeast provinces, carry out pilot projects on comprehensive straw utilization, including the technologies for incorporating straw in the field, fodder preservation, zero pollution incineration and heating supply. Formulate subsidy policies for incorporating straw in soil, straw collecting, transporting and processing.

Action 4: Greater plastic film collection and recycling

With the focus in northwest China on cotton, maize and potatoes as priority crops, to promote the application of thick film and mechanized picking, professional collecting, and recycling of the plastic mulching film as resources.

Establish 100 pilot counties in Gansu, Xinjiang and Inner Mongolia Province and Autonomous Regions to demonstrate the comprehensive use of the thick film.

Establish the recycling mechanism which include old film trade-in, farm operators hand-in, professional organisations and processing enterprises recycling, pilot the "producers recycling" extended producers' responsibilities. Complete the monitoring network on residues plastic film pollution, incorporating the residues plastic film collection and recycling in the non-pollution prevention assessment.

Action 5: Aquatic biota protection, particularly in Yangtze River

Taking ecological protection as the priority, start the fishing-ban in the aquatic biota protection zones, and gradually achieve the comprehensive fishing ban in Yangtze River basin. Establishing demonstrations of healthy aquaculture, advancing marine ranch development. Strengthening marine fish stock management, perfecting the fishing moratorium and fishing ban system. Rescuing the rare and endangered species, upgrading the protection of aquatic biota habitat, establishing gene bank for the rare and special species in the Yangtze River basin.

Click here for the full text in Chinese

Soil Pollution Control and Prevention Law 土壤污染防治法

China's soil pollution and control law, passed by the China's top legislature on 31 August 2018, went into effect on 1 January 2019.

- National standards for soil pollution risk control will be set by the environmental authority of the State Council based on soil contamination status, public health risks and ecological risks, among others, according to the law.
- A nationwide soil condition census should be conducted at least once every 10 years.
- A network of monitoring stations should be established nationwide, with data and other information collected and shared among authorities in environmental, agricultural, natural resources, housing, water resources, health and forestry and grassland sectors, it said.
- Environmental and health authorities of the State Council are required to conduct screening and evaluation of toxic and harmful substances in the soil and make a public list of them.
- The central and provincial-level governments should establish funds to prevent and control soil pollution.
- Farmland polluters are required to make rehabilitation plans, put them on government record, and carry out the plans. Upon completion, polluters should entrust professional institutions to evaluate the effects and report the results to local governments.
- Environmental departments of governments at or above the provincial level should summon leading officials at or above the municipal level for admonitory talks on problems in their jurisdiction, such as serious soil pollution, inadequate prevention and control measures, and strong public discontent over pollution.
- Manufacturing and operating companies and land use rights holders must take effective measures to prevent and reduce soil pollution and bear liability for the soil pollution they cause.
- If any survey, monitoring or inspection indicates potential pollution of construction land, the land use right holder will be required to investigate the status of soil pollution.
- If the investigation reveals pollution in excess of relevant standards, the party responsible for the pollution and the land use right holder must complete and file a risk assessment report on the soil pollution.
- MEE will be primarily responsible for supervising and administering soil pollution work, other authorities, such as the Ministry of Natural Resources and the Ministry of Agriculture and Rural Affairs will also play a role.
- MEE is required to establish national standards for soil pollution risk control according to soil contamination status, public health risks and ecological risks. Local governments are authorized to develop additional, stricter standards. These will be mandatory standards.

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Guideline to Comprehensively Enhance Ecological and Environmental Protection and Win the Battle Against Pollution 关于全面加强生态环境保护 坚决打好污染防治攻坚战的意见

In June 2018, the Central Committee of the Communist Party of China (CPC) and the State Council, announced the Guideline for Comprehensively Enhance Ecological and Environmental Protection and Win the Battle against Pollution.

The Guideline specified the targets of pollution prevention and control that the country expects to achieve by 2020 and beyond.

By 2020, cities with low air quality standards should see their PM 2.5 levels, a key indicator of air pollution, fall at least 18 percent from 2015 levels, while cities at prefecture level and above should see the number of good-air days reach over 80 percent annually.

Emissions of sulphur dioxide and nitrogen oxides should drop at least 15 percent from 2015 levels, while chemical oxygen demand and emission of ammonia nitrogen should decrease by over 10 percent, according to the plan.

For water quality improvement, the country will continue to implement the action plan on fighting water pollution in rivers and lakes.

China aims to see over 70 percent of its surface water to be drinkable by 2020, while the share of polluted surface water should be lowered to under five percent. Meanwhile, about 70 percent of the country's offshore area water should be of good quality.

To address soil pollution, China will comprehensively implement the action plan with specific measures taken to control soil pollution and restore polluted soil, promote classified disposal of waste and enhance prevention and control of solid waste pollution.

By 2020, about 90 percent of the polluted farmland should be utilizable safely while over 90 percent of the contaminated land will be able to be used safely.

To tackle the agricultural and rural pollution, China will reduce fertilizer and pesticides use; formulate and apply of the strictest quality standards for fertilizers and pesticides; strictly control the use of high toxin and high risk pesticides; substitute chemical fertilizers by organic fertilizers, substitute the chemical control on pests by green prevention and control, recycle agricultural plastic films. Promoting integration of arable and livestock production, and the disposal of livestock wastes locally. Locate the aquaculture production in a sound way and promote healthy aquaculture. By 2020, nation-wide livestock waste recycling rate should reach at least 75%, and over 95% of the large scale livestock farms should be equipped with waste treatment facilities.

The Guideline also calls for the adoption of the green development model and green life style, and the promotion of the low carbon green circular economy; for comprehensive soil pollution control and remediation, and the strict prohibition of food crop production on heavy metal contaminated soils; conserve and restore the ecosystem, and establish the natural protection system based on the national parks.

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Action Plan to Fight Rural and Agricultural Pollution 农业农村污染治理攻坚战行动计划

In November 2018, and with the approval of y the State Council, the Ministry of Ecology and Environment, and Ministry of Agriculture and Rural Affairs released the "Action Plan to

Fight Rural and Agricultural Pollution" to control rural and agricultural pollution as part of efforts to promote rural vitalization. The Action Plan points out that the pollution control work in rural areas is an important task in the Rural Vitalization Strategy.

By 2020, the Action Plan aims to achieve the following targets:

- Protecting rural drinking water sources, securing the drinking water safety
- Treating the domestic wastes and sewage, releasing the clean and tidy village
- Reducing fertilizers, pesticides and water use in agriculture
- Improving the quality of the water affected by non-point pollution, increasing agricultural wastes recycling, lifting the environment supervision capability, and raising rural residents' participation.

The Main Tasks

Protecting drinking water sources

- Survey and assess of rural drinking water sources and set the boundary of protection
- Strengthen drinking water quality monitoring and risk reduction

Speeding up rural domestic wastes and sewage treatment

- Establishing long-term effective rural waste treatment systems

Placing greater emphasis on tackling livestock pollution

- Advancing the clean production and ecological industry model, demonstrating and upgrading standard livestock and poultry operation, driving livestock green development. Strictly regulate the production and application of veterinary drugs and food additives,
- Advancing livestock wastes recycling, encouraging third party professional wastes processing companies to carry out collecting and process activities for livestock farms. By 2020, 75% of the nation's livestock wastes will be recycled.
- Strengthening the monitoring and supervision of the environment of the large scale livestock farms. By 2020, over 95% of the large scale livestock farms should be equipped with waste treatment facilities

Effectively control pollution from crop production

- Further reduce fertilizers and pesticides use, and increase the use efficiency, to realize the target of negative growth in fertilizers and pesticides use By 2020
- 85 percent of stubble and straw left over at harvest time should be recycled and utilised; 80 percent of plastic mulching films should be recycled;
- Total amount of irrigation water for agriculture should be restricted to below 372 billion cubic meters

Lifting capability for monitoring and supervision of the rural and agricultural environment

- Strictly observe the ecological redline, establishing the negative list for agricultural industry, and clarify the cropping and animal breeding intensity limits.

- Enhanceg the law enforcement and supervision capabilities, using remote sensing, big data, APP and other tools, to discover the agricultural and rural environmental problems in a timely manner.

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Guideline on Preventing and Control the Pollution from Plastic Mulching Film 关于加快推进农用地膜污染防治的意见

In July 2019, MARA, Ministry of Environment and Ecology (MEE) and four other ministerial departments announced the "Guidelines on Speeding up Pollution Prevention and Control of Agricultural Mulch Films".

The Guideline outlined the main targets and key measures

Targets

- By 2020, the working mechanism and recycling systems should be established, with 80% of film recycled, and zero growth in film mulched farmland areas.
- By 2025, all agricultural mulch film should be recycled with negative growth in film residues, and white pollution significantly controlled.

Key measures

- Accelerating the development of laws and regulations. Strengthening the management of film production, marketing, utilization, recycling and reuse.
- Establishing a local accountability system. Clarifying the responsibilities local government.
- Establishing the monitoring and statistics system. Developing standard methods of surveying and residues measurement, and improving the residues monitoring network.
- Establish the performance appraisal system. Incorporate film pollution control into the local government's green development performance targets
- Promote use reduction and improve efficiency
    - promote film collection with ag machinery and improve collection timing
    - encourage use of degradable films
    - promote joint purchasing by government

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Priorities in Agricultural and Rural Green Development in 2019 2019 年农业农村绿色发展工作要点

On 2 April 2019, MARA released the priority work programme for agricultural and rural green development in 2019. The overall objective is to upgrade the level of agricultural and rural green development, fulfil the leading role of green development in rural vitalization.

The priorities in 2019 in agricultural and rural green development include the following tasks.

Promoting agricultural green production by:

- Optimizing arable and livestock structure
- Promoting standardized production

- Promoting ecological healthy breeding
- Enhancing the supply of green and high quality farm products

Intensifying agricultural pollution control by:

- Continuing to advance fertilizer use reduction and improve use efficiency
- Continuing to advance pesticides use reduction and increase use efficiency
- Advancing livestock waste recycling
- Carrying out straw recycling
- Implementing the action on agricultural plastic film recycling
- Enhancing the remediation and control of farmland soil pollution

Improving rural living environment by:

- Enhancing appropriate demonstration programmes
- Implementing the rural living environment improvement action
- Actively developing the rural tourism industry

Enhancing coordination and demonstration

- Advancing green development in the Yangtze River Economic Zone
- Evaluation and designation of second batch of national agricultural green development pioneer zones
- Consolidate the foundational work for agricultural green development
- Enhancing implementation and coordination

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Guideline for Speeding up Aquaculture Green Development 关于加快推进水产养殖业绿色发展的若干意见

In January 2019，MARA and nine other ministries, including MARA, MEE, Ministry of Natural Resources, NDRC, Ministry of Finance, MOST, jointly released the "Guideline for the Speeding up Aquaculture Green Development"

The Guideline calls for boosting the fishery industry through quality development, adopting the green development approach in the aquaculture development, promoting the healthy aquaculture system.

Transforming the farming methods

- Promoting ecological and health farming, disseminating improved vaccination and bio-control measures, reducing the medicine use in aquaculture
- Upgrading the aquaculture facilities, promoting smart aquaculture and incorporating the IoT, big data and AI technologies, demonstrating digital fishery
- Fostering the appropriate scale for business entities, such as family fish farms, cooperatives, and leading (*dragon head*) enterprises

Improving the breeding environment in aquaculture

- Better standards for laying out the net cage and net fence, prohibiting the net cage and net fence breeding in the protected areas and buffering zones
- Carrying out tail water treatment wastes collection and recycling

Strengthening the production supervision

- Regulating the fish seed, improving review and evaluation indicators and procedure for new varieties
- Strengthening the control of epidemic disease, appropriately regulating the evaluation and approval of aquaculture vaccines
- Intensifying the supervision on safety and quality of aquaculture, promote standard production and quality certification of aquatic products

Opening up the development space

- Promoting primary, secondary and tertiary integration and coordinated development.
- Strengthening international exchange and cooperation, encouraging universities and research organisations to disseminate the technologies to overseas countries, nurturing large-scale aquaculture enterprises, encouraging the enterprises obtaining international certifications, promoting international trade.

Policy Support

- Expanding financial inputs from multiple sources, exploring the effective financial services models for green aquaculture, incorporating aquaculture facilities into the subsidy categories
- Intensifying the scientific and technological support, strengthening the R&D of green and safety aquaculture medicines, supporting the development and dissemination of green and environmental friendly feed and breeding models, training new generation of professional fish farmers

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Science and Technology Support for Rural Vitalisation and Green Development 科技支撑

Science and Technology Supporting Action Plan 乡村振兴科技支撑行动实施方案

In September 2018, MARA released the science and technology action plan to support the implementation of the rural vitalization strategy. The overall purpose of the action plan is to significantly increase the total factor productivity of agriculture, improve the rural living environment, fully develop the rural human resources and upgrade the professional and socialised technology services.

Key tasks and priority areas

Enhance the research on fundamental and frontier technologies

- High efficiency crop breeding
- Long-lasting effective green control of harmful organisms
- High efficiency utilization of agricultural resources
- Quality and safety of agricultural products

- Whole genome selective breeding technologies of major livestock animals
- Agricultural synthetic biology technologies
- Agricultural big data integration technologies
- Agricultural nano technologies
- Agricultural AI technologies

Speeding up the research and development of the core technologies

- Breeding new crop and animal varieties which are more productive , have better quality outputs, are more resource efficient , and are suitable for mechanisation
- Developing cultivation and breeding technologies to increase the quality and productivity of varieties
- Technologies for regulating soil physical and chemical properties
- Technologies and facilities for regulating soil nutrients and improving fertigation
- Technologies for high efficiency and healthy aquaculture production
- Technologies for high value-added utilisation of fishery bio-resources
- Technologies for high efficiency, low toxic and low residue chemical and biological pesticides, as well as the improved mechanization of spraying
- Technologies and products for alternatives for veterinary antibiotic
- Technologies for better storage and transportation of fresh produce
- Upgrading the technologies for non-thermal processing, green energy-saving drying, high efficiency separating and extracting, long acting sterile packing and clean production
- Recreation agriculture and agricultural tourism,
- Cloud platform for agricultural and rural data collection, fusion and data mining technologies.

Consolidating the technology integration and demonstration

- Technology integration and demonstration on major agricultural products, with focus on the technical models for green production and quality improvement for rice, wheat, maize, soybean, rapeseed, potatoes, cotton, vegetables, sugar crops, rubber, dairy cow, sheep, hog, ducks and aquatic products
- Technology integration and demonstration on regional special agricultural products, with focus on the technical models for green production and quality improvement for fruit trees, vegetables, tea, forage, tobacco, Chinese medicine, and herbs
- Technology integration and demonstration in special ecological regions, with focus on sustainable green development models.

Establish 1000 technology-driven rural vitalization demonstration villages

- In alliance with agricultural high-tech demonstration zones, establish the technical-driven rural industry transformation demonstration villages

- In alliance with sustainable development demonstration zones, establish the technical-driven agricultural green development demonstration villages
- In alliance with the state modern agricultural demonstration zones, establish the technical-driven rural industry prosperity demonstration villages

Fostering the new type of agricultural operation entities and training the leading farm managers

- Implementing training schemes for farming business leaders, young farm managers, and skilled operators

Enhancing the institutional innovation and stimulate innovation and entrepreneurship

- Establishing knowledge based distribution mechanism, encouraging the researchers take paid part-time role in enterprises and other academic institutes.
- Promoting the commercialisation of research findings and technologies

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Special Programme for Innovation-Driven Rural Vitalization (2018-2020) 创新驱动乡村振兴发展专项规划（2018—2022 年）

In January 2019, the Ministry of Science and Technology (MOST) released the Special Programme for Innovation-Driven Rural Vitalization (2018-2020).

The programme set out the target of the key indicators for the innovation-driven rural vitalization.

Table 4. The key indicators and targets for the special programme for innovation-driven rural vitalization (2018-2020)

Main indicators	Unit	2016 baseline	2020 target	2022 target
Contribution of agricultural S&T progress	%	56.7	60	61.5
Mechanisation rate of ploughing, planting and harvesting	%	65.2	70	>70
Agricultural labour productivity	10,000 yuan/person	3.1	4.7	5.5
State technology innovation centre		-	70	80
State agricultural high-tech demonstration centre		2	10	20
National agricultural science and technology park		246	300	>300
Agricultural high-tech enterprises		6800	11000	15000
Pesticides use efficiency for major crops	%	38.8	40	>40
Fertilizer use efficiency for major crops	%	37.8	40	>40
Specially assigned technology specialist	10,000	84.5	85	>85
Innovation county/city		0	50	100
Rural innovation hub		638	3000	>3000

The Programme outlined eight main tasks, including:

- Strengthening the supply of agricultural and rural technology innovations. Accelerate the development of modern seed industry; accelerate the R&D on machinery for cash crops and livestock in hilly areas; accelerate the R&D on ecological fertilizers and pesticides suitable for various soil conditions and crops; accelerate the R&D on internet+ agricultural technologies.
- Coordinate the development of the agricultural and rural technology innovation bases.
- Strengthening the agricultural and rural technology talent development.
- Enhance the development of the agricultural high-tech industry.
- Winning the battle for more focused poverty alleviation through science and technology support
- Enhancing the agricultural and rural technology transformation
- Deepening the international cooperation on agricultural and rural science and technology. Establishing and implementing a number of flagship agricultural cooperation programmes; recruit high-end agricultural talent from overseas; support international training of agricultural and technical professionals; establish overseas agri-tech demonstration parks, R&D organisations, and experiment and demonstration baes.

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Higher Education Institutions Science and Technology Innovation Action Plan for Rural Vitalization (2018-2022) 高等学校乡村振兴科技创新行动计划（2018—2022 年）

In December 2018, the Ministry of Education (MoE) announced the Science and Technology Innovation Action Plan for Rural Vitalization (2018-2020). The Plan outlined the seven actions:

Supporting scientific research

- Raising the level of frontier science and technology. Building up new strengths in the competitive areas of agricultural genomes, as well as biological breeding
- Advising cross-disciplinary integration and innovation
- Enhancing the research on rural vitalization strategies

Technology innovation

- Achieving breakthroughs on key technologies and facilities， particularly on high efficiency plant and animal breeding, agriculture standardization, agricultural big data, smart agriculture machinery, and food processing.

Capacity building

- Supporting the role of universities and participate in the development of national research bases and platforms
- Establishing coordinated innovation platforms, connecting governmental extension organisations, academic research institutes, public organisations and agricultural operation entities.
- Support the universities establishing rural development academies

Talent nurturing and quality improvement

- Supporting the integration between agricultural disciplines and life sciences, information sciences, and social sciences. Speeding up the development of new disciplines such as biological technologies, smart agriculture, sharing farms, internet agriculture, as well as agricultural new energy and new materials
- Strengthening talent training as well as training of local grass-root professionals

Research dissemination and transformation

- Speeding up technology transformation, supporting universities to establish technology transformation service centres and incubation platforms
- Overcoming technology transformation barriers, support all kinds of social forces participating in agricultural technology dissemination
- Support rural innovation and entrepreneurship

Supporting poverty alleviation actions

- Carrying out the formulation and demonstration of new approaches to poverty alleviation

Upgrading international cooperation

- Consolidate high level international cooperation by supporting universities to carryout joint research and exchanges on food security, policies, seed resource exchanges, technology extension, and agricultural investment with the universities in the B&R countries
- Promote talent exchanges. Introducing international leading scholars; encourage domestic students to study in agriculturally advanced counties; increase cooperation with international academic organisations, and organise major international academic conferences.

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Subsidies and Incentives 强农惠农政策

The Guideline on Financial Services for Rural Vitalization 关于金融服务乡村振兴的指导意见

In February 2019, five Chinese ministerial government departments, include the Central Bank, MARA and Ministry of Finance jointly issued a guideline to improve financial services for rural vitalization. The Guideline encourages local governments to issue special bonds to support projects in the countryside; support qualified agriculture companies to go public; strengthens monetary policy support and use differentiated reserve requirement tools to support rural areas.

Targets

By 2020

- Financial support for targeted poverty alleviation to be intensified
- Financial resources to rural and agriculture will be increased
- Rural financial services improved

- The governance and service ability of financial institutions enhanced.

By 2035

- A financial service market, organizational and product-based systems established
- The financial service for rural and agricultural development satisfied.

The tasks

Reforming rural finance and establishing the appropriate financial service system to support rural vitalization

- Encouraging the development of policies and financial institutions to provide medium- and long-term credit loans to support rural vitalisation
- Strengthening the commercial banks' support to rural vitalisation
- Enhancing the main force role of the small and medium financial organizations

Focusing financial support on priority areas

- Consolidate the financial support to targeted poverty alleviation
- Strengthening the financial services needed for the country's food security through supporting land quality improvement and technology progress
- Advancing the integration of primary, secondary and tertiary industries
- Focusing on providing financial services to small holders and new agricultural business entities
- Providing good financial services to the rural property rights reform

Strengthening innovation in financial products and service methods to meet the diversified financial needs for rural vitalisation

- Actively expanding the scope of collateral in rural area, promoting the formation of a comprehensive and diversified pledge of rural assets in accordance with laws and regulations
- Promoting the application of new technologies in rural financial services, such as internet finance, big data and block chain
- Improving the green financial products and service systems for agriculture, farmers and rural areas

Establishing multichannel funding supply systems, expanding the financial sources for rural vitalisation

- Intensifying the support to the multilevel capital market
- Developing new financing instruments and products for bond markets, supporting the issuance of government bonds by local authorities to finance public welfare projects.
- Unleashing the functions of price discovery and risk diversification of the futures market, speeding up the development and listing of futures products
- Continuously raising the level of assurance for agricultural insurance

Strengthening the construction of financial infrastructure, creating a favourable environment for rural finance

- Upgrading the payment services in rural areas, promoting mobile payment systems
- Speeding up the construction of rural credit system
- Protecting consumer rights in rural finance service

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Subsidy Policies to Strengthen Agriculture in 2019 2019 年财政重点强农惠农政策

In April 2019, MARA and Ministry of Finance (MoF) jointly announced the subsidies scheme for 2019.

Agricultural production and marketing subsidies for:

- Arable land protection
- Agricultural machinery purchase
- Development of industries with distinctive local features and special advantages
- Modern agricultural industrial parks
- Demonstration of towns with strong agricultural industry
- Province-wide demonstration on information into villages and households
- Dairy industry revitalization action
- Dissemination of improved livestock varieties
- Major crops high quality, high efficiency and green production
- Socialized services for agricultural production
- Deep plough and land preparation
- Pilot on fallow and rotation
- Reward to major grain producing counties
- Reward to live pig (sheep and cattle) exporting counties
- Subsidies to maize, soybean and rice growers in Liaoning, Jilin, Heilongjiang provinces and Inner Mongolic Autonomous

Protection and utilization of agricultural resources

- Subsidies to reward grassland ecological protection
- Fish restocking
- Boats scraping, disassembling and renewal
- Compensation to fishing ban in the key areas in Yangtze River Basin
- Substitute of chemical fertilizers with organic fertilizers in fruits, vegetables and tea plantations
- Piloting on crop straw recycling
- Livestock waste recycling
- Recycling of plastic mulching film

- Control of over-extraction of groundwater over drafting
- Comprehensive remediation of heavy metal contaminated arable land

Arable land development

- Development of high-standard cropland
- Black soil protection in Northeast China

Agricultural science and technology talent support

- Capacity building for farmer cooperatives and family farms
- Agricultural credit guarantee services
- Training of new type of professional farmers
- Reform and construction of grass-root agricultural technology extension system

Agricultural disasters relieve and prevention

- Disaster relief in agricultural production
- Animal diseases prevention and control
- Subsidies to agricultural insurance

Rural development

- Improving rural living environment
- Rewarding outstanding counties for their in living environment improvements
- Village promotion of "rural toilet revolution"

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Guidelines on Implementing the Plan for Fostering Family Farms 关于实施家庭农场培育计划的指导意见

In August 2019, the Office of Central Rural Work Leading Group, the Ministry of Agriculture and Rural Affairs, together with other nine ministerial department of the government, jointly released the "Implementation Guideline for Fostering Family Farms".

The targets outlined in the Guideline include:

- By 2020, the policy system supporting the family farm development established, and the number of family farms increase steadily;
- By 2022, the policy system and administration regime should be improved and the production capability of family farms upgraded.

The Guideline outlined the following tasks:

Improving the registration and catalogues administration system

- Determining the reasonable size of family farms to achieve the best scale benefits
- Improving the registration services
- Improving the family farms catalogue system

Enhancing the role of demonstration

- Establishing demonstration family farms and demonstration counties

- Enhancing the leading role of demonstration through dissemination of successful experience and models
- Encouraging all kinds of talents needed to establish family farms, training family farmers
- Encouraging the formation of family farms cooperatives, establishing family farms associations or alliances

Establishing and improving the policy supporting system

- Ensuring the land management rights of family farms
- Consolidate the basic infrastructure
- Improve the public services for family farms
- Improving the training regimes targeted for family farm managers
- Ensuring the land supply for family farm facilities
- Improving the financing and tax policies
- Strengthening the financial and insurance services
- Supporting the development of "internet plus" family farms
- Exploring the social security policies suitable for family farms

Safeguarding measures

- Strengthening the leadership
- Strengthening the coordination between different government sectors
- Strengthening promotion and guidance
- Advancing the legislation on family farms

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Guideline for promoting small household farmers' involvement in modern agricultural development 关于促进小农户和现代农业发展有机衔接的意见

In February 2019, the general offices of the Central Committee of the Communist Party of China and the State Council, jointly released the Guideline to enhance small household farmers' involvement in modern agricultural development. The Guideline aims to assist small household farmers to become t involved in modern agriculture, speed up development of modern agriculture and rural areas and facilitate the strategy to revitalize rural areas.

The measures pointed out in the Guideline include:

Upgrading smallholders' capability of development

- initiate the plan to foster the family farms
- raise smallholders' capabilities and encourage smallholders to participate in technology training
- developing and disseminating appropriate machineries and facilities suitable for smallholders
- improving the basic production infrastructure for smallholders

Encouraging the cooperation between smallholders

- Support joint operation and joint purchases on machines and other production materials to reduce the production costs
- Promote innovation in the cooperation mechanisms suitable for smallholders
- Fulfil the demonstration and lead role of the leading enterprises

Expanding income sources for small holders

- Support smallholders to grow high quality and distinctive local agricultural products
- Support smallholders to develop new businesses

Improving the public services for smallholders

- Developing diversified and multi-level services for agricultural production
- Speeding up the farming management services to manage the farming production on behalf of farmers households
- Enhancing the marketing services for smallholders
- Initiating the "internet plus smallholder" programme to facilitate smallholders application of modern information technologies

Improving policy incentives

- Strengthening and improving land policies for smallholders
- Improving the subsidy policies and financial services targeted to smallholders
- Expanding the farming insurances for smallholders

See the full text in Chinese

The Institutional Reform for Rural Vitalization and Agricultural Green Development 乡村振兴和农业绿色发展的机构改革

Establishment of the Ministry of Agriculture and Rural Affairs 成立农业农村部

According to the State Council Institutional Reform Plan, released on 21 March 2018, a new ministry, the Ministry of Agriculture and Rural Affairs (MARA), was formed to push forward the development of the agricultural sector and the rural areas.

MARA integrated the responsibilities of the Office of the Central Rural Work Leading Group, Ministry of Agriculture, Agricultural Investment Projects of the National Development and Reform Commission (NDRC), Agricultural Comprehensive Development Projects (formerly administered by the Ministry of Finance, MOF), Farm land Renovation Projects (formerly administered by the Ministry of Land and Resources, MLR), Farm Land Water Conservancy Construction Projects (formerly administered by the Ministry of Water Resources, MWR).

MARA studies and implements strategies, plans and policies on agriculture, rural areas and rural people, regulates crop farming, livestock husbandry, fishery, agricultural reclamation, agricultural mechanization, quality and safety of farm produces, and agricultural investment administration.

Fishing boats inspection and supervision is now under the administration of Ministry of Transport.

The Ministry of Agriculture (MoA) was dismantled.

The Roles of Relevant Ministries 相关部委职能

The Institutional Reform in 2018 also significantly reorganised the ministries and agencies that comprise the State Council, China's cabinet. Consequently, the roles of the ministries and agencies are also reshuffled. The following table highlights the roles of some ministries relevant to the rural vitalization and agriculture green development.

Table 5. The Role of Relevant Ministries

Ministries	Departments	Relevant responsibilities
NDRC	Department of Rural Economy	Responsibility covers agriculture, forestry, water conservancy and meteorological services sectors. • Propose the strategies for rural economy and ecological development, policy recommendations for system reform, coordinate the major initiatives; • Coordinate the development plans for agriculture, forestry, water conservancy, metrological service, ecology, and rural infrastructure; • Propose and supervise the implementation of major projects.
Ministry of Ecology and Environment	Department of Nature and Ecology Conservation	• Coordinate and supervise the ecological conservation and restoration efforts; • Supervise wildlife conservation, wetland ecological and environmental protection; • Protect biodiversity, biological species resources, and bio-safety; • Implement relevant international conventions.
	Department of Water Ecology and Environment	• Oversee the ecological environment of surface water; • Formulate and implement policies, programs and plans, laws, administrative regulations, standards and specifications on water ecology and environment; • Provide support in guiding the prevention and control of agricultural non-point source water pollution.
	Department of Climate Change	• Take the leading role in addressing climate change and greenhouse gas emission reduction; • Initiate the formulation and the implementation of China's major objectives, policies, programs and plans, and institutions on the control of greenhouse gas emissions; • Provide guidance to other governmental departments, industries, and local governments in such implementation • Carry out China's role in the UNFCCC and work with relevant governmental departments to participate in international negotiations and conferences; • Promote the bilateral, multilateral, and South-South cooperation and exchanges on climate change.
	Department of Soil Ecology and Environment	• Supervise and administer the prevention and control of soil and ground water pollution as well as the ecological conservation of soil and groundwater;

		• Formulate and implement relevant policies, plans, laws, regulations; • Provide guidance in the rural ecological and environmental protection; • Supervise and guide the control of non-point source pollution in the agricultural sector.
Ministry of Natural Resources	Department of Cultivated Land Protection and Monitoring	• Implement the most strict arable land protection system; • Formulate and implement arable land protection policies; • Improve the offset cultivated land used for other purposes.
The State Administrative of Forests and Grasslands		• Forest resource administration; • Grassland administration; • Wetland administration; • Desertification control; • Wild animal and plant protection; • Natural reserve protection.
Ministry of Water Resources	Department of Soil and Water Conservation	• Guide rural water conservancy and water-saving irrigation; • Guide the reform of rural water conservancy; management system and operation system • Administer the water and soil conservation of the country and coordinate the comprehensive prevention of the water and soil erosions; • Formulation of water and soil conservation policies and regulations.
Ministry of Finance	Department for Agriculture and Rural	• Responsible for the budget and expenditure on agricultural and rural affairs, metrology, water conservancy, and poverty alleviation; • Responsible for budget for the implementation of rural vitalization strategy.
State Administration of Market Regulation		• Trademarks and patents infringement; • Food production and marketing safety; • Coordinate cross government food safety activities • Drug administration; • Quality inspection, certification, and accreditation.
General Administration of Customs of the People's Republic of China (GACC)	Department of Animal and Plant Quarantine	• Formulate rules and procedures on inspection and quarantine for entry-exit animals, plants and their products; • Inspection, quarantine and supervision on entry-exit animals, plants and their products; • Inspection and quarantine of entry-exit genetically-modified organisms and their products as well as bio-species resources.
	Bureau of Import and Export Food Safety	• Formulate rules and procedures on safety control, inspection and quarantine on imported and exported food and cosmetics;

		• Legally registers import/export food establishments and manages inspection, quarantine and supervision on imported and exported food and cosmetics; • Carry out risk analysis and emergency precautions as per division of work; • Perform obligations on exported food in line with bilateral and multilateral agreements.
	Department of Commodity Inspection	• Formulate rules and procedures on statutory inspection and supervision over import/export commodities; • Risk assessment, pre-warning and rapid response of commodity imports; • Authentication of license-required commodity imports; • Supervision on the authentication of quantity and weight of the commodities subject to statutory inspection; • Perform obligations on commodity exports in accordance with bilateral and multilateral agreements.

(End)

Annex - SAIN Information Sheet List

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China's Agriculture and Food Policies

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Policies on Agricultural Production System and Food Safety Supervision System Reform

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英国农业技术战略简介 UK Strategy for Agricultural Technologies – Summary

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China's 13th Five Year Plan on Science and Innovation

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China's Innovation Driven Development Strategy

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China's Agricultural Modernization - Policy Framework

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China's Agricultural Transition in 2017 - Policies, Actions and Progress

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绿色未来: 环境改善 25 年规划 (A Green Future: Our 25 Year Plan to Improve the Environment)

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健康与和谐：绿色脱欧的未来食品、农业和环境 (Health and Harmony: the future for food, farming and the environment in a Green Brexit)

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