

# Organic Combination of New Quality Productivity and Land Engineering

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## ABSTRACT

New quality productivity is the fundamental driving force to achieve high-quality development. The organic combination of new quality productivity and land engineering is an important way to promote social development and ecological governance. The rational use of land engineering can realize the rational use and sustainable development of land resources, but the means of land engineering are relatively backward and cannot give full play to its role. It is necessary to use the new quality productivity to promote the development of land engineering, accelerate the construction of a new development pattern, and realize the efficient use of land resources in the aspects of technological innovation, optimizing resource allocation, promoting industrial upgrading, promoting sustainable development, policy support and personnel training.

## KEYWORDS

New-type productivity; Land Engineering; High-quality development.

## 1. DEFINITION AND CHARACTERISTICS OF NEW-TYPE PRODUCTIVITY

New-type productivity is a modern advanced productivity that is spawned by revolutionary technological breakthroughs, innovative allocation of production factors, and deep industrial transformation and upgrading[1]. It is a contemporary advanced productivity with the leapfrogging of workers, labor means, labor objects, and their optimized combinations as its basic connotation, and a significant increase in total factor productivity as its core marker[2]. New-type productivity is the Chinese innovation and practice of Marxist productivity theory, and the fundamental outcome of technological innovation, cross-integration, and breakthroughs[3].

## 2. DEFINITION AND SIGNIFICANCE OF LAND ENGINEERING

Land engineering is a subject field that comprehensively uses engineering principles and methods to plan, design, transform and manage land[4]. It mainly converts unused land into usable land, or makes efficient use of previously underutilized land[5], the basic elements of which include land resource investigation and evaluation, land planning and utilization, land renovation and protection, etc. The rational use of land engineering can realize the rational use and sustainable development of land resources and provide a solid material foundation for the high-quality development of economy and society.

### **3. ORGANIC INTEGRATION OF NEW-TYPE PRODUCTIVITY AND LAND ENGINEERING**

The key to the organic integration of new-type productivity and land engineering lies in technological integration and innovation.

#### **3.1. Technological innovation leadership**

New-type productivity emphasizes the core position of scientific and technological innovation, and can use remote sensing technology, geographic information system (GIS) and other modern scientific and technological means[6] to accurately evaluate land resources and provide scientific basis for land planning and utilization. At the same time, in land engineering, intelligent agricultural technologies can be introduced[7], such as intelligent water and fertilizer integration system, to improve the utilization rate of water and fertilizer, reduce labor costs, and improve crop quality. In land development and consolidation projects, BIM technology can also be used to achieve synchronous delivery of engineering entities and digital models[8] to improve management efficiency and accuracy.

#### **3.2. Optimizing resource allocation**

New-type productivity can optimize the utilization of land resources through innovative allocation of production factors. In land engineering, intensive and efficient use of land can be achieved through reasonable planning to improve the utilization efficiency and value of land resources[9]. It can also realize the diversified utilization of land resources and improve the added value of land resources by developing ecological agriculture, ecological tourism and other industries.

#### **3.3. Promote industrial upgrading**

The development of new-type productivity can give birth to new industries, new models and new momentum, and provide impetus for the transformation and upgrading of land engineering. Combined with the characteristics of new-type productivity, the development of related emerging industries, such as green buildings, intelligent agriculture, etc., to promote the transformation and upgrading of land engineering. Through scientific and technological innovation, we can cultivate new kinetic energy for the development of new-type productivity and provide impetus for the sustainable high-quality development of land engineering.

#### **3.4. Promoting sustainable development**

The new-type productivity emphasizes the quality of high quality, high efficiency and sustainable productivity, which is consistent with the ecological management goals of land engineering. In land engineering, environmental protection and sustainability are emphasized, and means such as environmentally friendly materials and energy-saving technologies are adopted to realize green development and utilization of land resources and promote the protection and sustainable development of ecological environment[10]. In the process of land development and consolidation, attention is paid to ecological protection to ensure the stability and integrity of the ecosystem.

#### **3.5. Policy support and personnel training**

The government should introduce relevant policies to encourage and support the combination of new-type productivity and land engineering, and provide financial and technical support. Strengthen the cultivation and introduction of talents, cultivate a group of compound talents who understand both land engineering and new-type productivity, and provide talent security for the combination of the two.

## 4. CONCLUSION

The organic combination of new-type productivity and land engineering is an important way to promote the efficient utilization and sustainable development of land resources, and can promote the in-depth development of high-quality social development and ecological governance. Through multiple approaches such as technological innovation guidance, resource optimization and allocation, ecological environmental protection, and policy support and guidance, the deep integration and coordinated development of the two can be achieved, the efficient use of land resources and the protection of the ecological environment can be achieved, and the sustainable development of the economy and society can be provided with strong support.

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