DIRECTIONS FOR MODERNIZATION AND SUSTAINABLE DEVELOPMENT OF AGRICULTURAL SERVICE CENTERS IN RURAL AREAS

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Annotatsiya. *Ushbu maqolada qishloq hududlarida agrar xizmat ko‘rsatish markazlarini modernizatsiya qilish va barqaror rivojlantirishning iqtisodiy hamda tashkiliy asoslari tahlil qilinadi. Xizmat markazlarining qishloq xo‘jaligi ishlab chiqarishini qo‘llab-quvvatlash, resurslardan samarali foydalanish, innovatsion texnologiyalarni joriy etish va qishloq aholisining turmush sifatini oshirishdagi roli yoritiladi. Shuningdek, energiya tejamkor infratuzilma, suv resurslarini oqilona boshqarish va raqamli xizmatlarni kengaytirish orqali markazlar faoliyatini samarali tashkil etish yo‘nalishlari asoslab beriladi. Tadqiqot natijalari agrar xizmat tizimini modernizatsiya qilish va hududlarning barqaror ijtimoiy-iqtisodiy rivojlanishini ta’minlashga qaratilgan amaliy tavsiyalarni taklif etadi.*

Kalit so‘zlar: *agrar xizmat markazlari, barqaror rivojlanish, modernizatsiya, qishloq xo‘jaligi infratuzilmasi, resurs tejamkorlik, innovatsion texnologiyalar, qishloq iqtisodiyoti, ekologik samaradorlik.*

Аннотация. *В данной статье анализируются экономические и организационные основы модернизации и устойчивого развития центров сельскохозяйственного обслуживания в сельской местности. Подчеркивается роль центров обслуживания в поддержке сельскохозяйственного производства, эффективном использовании ресурсов, внедрении инновационных технологий и повышении качества жизни сельского населения. Также обосновываются направления эффективной организации деятельности центров посредством энергоэффективной инфраструктуры, рационального управления водными ресурсами и расширения цифровых услуг. Результаты исследования предлагают практические рекомендации, направленные на модернизацию системы сельскохозяйственного обслуживания и обеспечение устойчивого социально-экономического развития регионов.*

Ключевые слова: *центры сельскохозяйственного обслуживания, устойчивое развитие, модернизация, сельскохозяйственная инфраструктура, ресурсоэффективность, инновационные технологии, сельская экономика, экологическая эффективность.*

Abstract. *This article analyzes the economic and organizational foundations of the modernization and sustainable development of agricultural service centers in rural*

areas. The role of service centers in supporting agricultural production, efficient use of resources, the introduction of innovative technologies, and improving the quality of life of the rural population is highlighted. It also substantiates the directions for the effective organization of the centers' activities through energy-efficient infrastructure, rational management of water resources, and the expansion of digital services. The results of the study offer practical recommendations aimed at modernizing the agricultural service system and ensuring sustainable socio-economic development of the regions.

Keywords: *agricultural service centers, sustainable development, modernization, agricultural infrastructure, resource efficiency, innovative technologies, rural economy, environmental efficiency.*

The sustainable development of rural service centres is essential for the long-term economic sustainability and social well-being of rural populations. These centres serve as key points of access to essential services such as agricultural products, financial services, health, education and technology. As agriculture continues to be the backbone of many economies, particularly in developing countries, ensuring the sustainability of these service centres will be essential to promote both economic growth and environmental protection. Sustainable development, in this context, refers not only to the economic efficiency of service centres, but also to their environmental and social sustainability. Such a holistic approach ensures that service centres meet the needs of the rural population today without compromising their availability for future generations.[1]

One of the key pillars of sustainable development in rural service centres is environmental sustainability. Agricultural areas are highly dependent on natural resources, particularly water, soil and energy. Therefore, service centers in these areas should be designed with the efficient use of these resources in mind. Integrating renewable energy sources, such as solar or wind power, into the service center infrastructure can reduce dependence on fossil fuels and reduce operating costs in the long term. In addition, sustainable water management practices should be implemented to ensure that agricultural service centers do not deplete local water resources. For example, rainwater harvesting systems, drip irrigation and water recycling technologies can help service centers operate more sustainably, especially in water-scarce areas.[2]

Another important element of sustainability is the promotion of resource efficiency and circular economy principles. Service centers can contribute to sustainability by facilitating the use of environmentally friendly agricultural inputs, such as organic fertilizers and biopesticides, which help reduce the environmental footprint of farming activities. They can also play a role in promoting waste reduction and recycling practices in rural communities. For example, service centers can collect and reuse agricultural waste, converting it into compost or bioenergy, which can then be used to support further agricultural activities. Such practices not only increase the sustainability of the service center, but also support sustainable agricultural practices in the entire rural area. The

social dimension of sustainable development is equally important in the context of service centers in agricultural sectors. These centres are often hubs of economic and social activity in rural areas, providing employment and improving access to services that are essential for the well-being of local populations. Therefore, the sustainable development of these centres should incorporate strategies to enhance social equity and inclusion. Service centres should be accessible to all segments of the rural population, including women, smallholder farmers and marginalized groups. They should provide affordable services that meet the needs of smallholder farmers who do not have the same resources as large agricultural operations. Inclusive development ensures that the benefits of modern service centres are shared equitably, contributing to the overall sustainability of rural communities.[3]

In addition to providing agricultural products and services, these centers can play a crucial role in knowledge dissemination and capacity building. Sustainable agricultural practices often require technical knowledge and skills that many rural farmers lack. Service centers can bridge this gap by offering training programs, workshops, and demonstrations on sustainable farming techniques. For example, service centers can train farmers on crop diversification, soil conservation, and climate-smart agricultural practices. This educational component is crucial to ensuring that rural farmers are equipped to adapt to the challenges of climate change, which disproportionately affects agricultural regions. By building local capacity, service centers contribute to the long-term sustainability of the agricultural sector.[4]

Another important factor in the development of service centers in agricultural areas is economic sustainability. For these centers to thrive in the long term, they must be financially stable and able to adapt to market fluctuations. This requires sound business models that generate steady income while minimizing operational costs. One way to achieve economic sustainability is to diversify the services offered by these centers. Instead of focusing solely on agricultural products, service centers can include financial services such as microcredit and insurance products, which are essential for managing the risks associated with farming. They can also provide access to modern technologies, including mobile agricultural applications that offer weather information, market data, and farming advice. Agricultural service centers can diversify their services, ensuring their sustainability over time, and be resilient to economic shocks.[5]

Furthermore, the sustainable development of agricultural service centers must take into account the role of technology in fostering innovation. Technological advances in agriculture, such as precision farming, remote sensing, and digital markets, are changing the way farming is done. Service centers can serve as a vehicle for rural farmers to implement these technologies, increasing yields, reducing costs, and minimizing environmental impacts.[6] For example, precision agriculture technologies that use data-driven approaches to optimize planting, fertilization, and irrigation can significantly

improve resource efficiency and crop quality. By making these technologies available to rural farmers, service centers can contribute to the overall sustainability of agriculture.

However, the success of sustainable service centers in rural areas depends on public policies and support for public-private partnerships. Governments play a crucial role in creating an enabling environment for the sustainable development of service centers through regulatory frameworks, financial incentives, and infrastructure development. For example, governments can offer tax breaks or subsidies to service centers that use renewable energy or other environmentally friendly technologies. In addition, public-private partnerships can facilitate the exchange of expertise, technology, and resources between government, the private sector, and rural communities.[7]

Such partnerships can help address some of the challenges associated with the high initial costs of establishing sustainable infrastructure and services in rural areas.

Conclusion

In conclusion, the sustainable development of service centers in rural areas is a multifaceted process that requires attention to environmental, social, and economic sustainability. By promoting resource efficiency, inclusiveness, and the adoption of modern technologies, these service centers can support the long-term viability of rural areas and contribute to the overall development of the rural economy. However, the success of these centers depends on strong government support, sound business models, and active participation of rural communities. By promoting a holistic approach to sustainability, service centers in rural areas can play an important role in improving the livelihoods of rural populations and ensuring the sustainability of the agricultural sector in the face of growing environmental and economic challenges.

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