

Rural Settlements in the Form of Eco-Farms in the Context of the Global Economic Crisis

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ABSTRACT: The article is devoted to the study of the economic phenomenon of eco-farms as one of the most progressive and innovative forms of rural settlements that exist within the framework of the regional, national and world economy. The author's interpretation of the concept of eco-economy was introduced, the organizational and economic features of eco-settlements were thoroughly studied. The importance of eco-farms for the development of the economy, ecology and society of rural settlements is shown. The research was carried out in the framework of research work of the educational and scientific laboratory of regional Economics of cooperation and integration, agriculture, rural development of the Belgorod state agrarian University named after V. Ya. Gorin, scientific supervisor-R. V. Kapinos (under agreement no. 6.9.30 of March 28, 2018.) within the internal grant of the Belgorod state agrarian University (order no. 202-3 of 18.04.19), by decision of the scientific and technical Council OF the Belgorod state agrarian University, minutes of the meeting no. 4 of December 19, 2019, within the internal grant "Economic efficiency of the ecological management system (for example, ecodiversity of the Belgorod region)", scientific supervisor-R. V. Kapinos.

Keywords: Rural Settlements, Eco-Farms, Economy, Ecology, Definition, Pandemic, Economic Efficiency, Social Efficiency.

INTRODUCTION

During the global economic crisis caused by the coronavirus pandemic, the capitalist economy, with its principles:

1. Private property.
2. Private enterprise.
3. Competition.
4. Monopolization - as the inevitable consequence of competition.

5. Colonization and imperialism - the desire to seize foreign territories, even entire States - as an inevitable consequence of the consistent application of the principle of private property, which seeks to expand indefinitely – shows its low social and economic efficiency.

Thus, low social efficiency was demonstrated by the USA, Italy, Spain, Great Britain, and Germany:

1. the disease spread at an Extremely rapid rate.
2. there Was no continuous mutual assistance between countries or even within individual countries.
3. restrictions on self-isolation were Weak-the majority of the population regularly violated it.

Economic efficiency was also low:

1. against the background of rumors about the spread of the epidemic, the national and global economy immediately collapsed.
2. the main way to support the US economy and other capitalist economies was the printing and injection of money into the economy – large-scale emission.
3. Enterprises in none of the capitalist countries have coped with the sharply increased demand for antiseptics, personal protective equipment and artificial ventilation devices.
4. At the same time the following economic systems proved to be the most socially and economically effective:
 - a) Socialist economy – China, North Korea.
 - b) Village economy.
 - c) Military economy – 16 major hospitals were built in 15 regions in the Russian Federation during the month.
 - d) Religious economy – economy of monasteries and parishes.
 - e) Ecological economy-kibbutzim of Israel, family estates and eco-villages of the Russian Federation (Villalobos, 2018) .

Latest research and publications analysis

Roman V. Kapinos (2006, 2014, 2018, 2019) investigated the influence of various factors on the economic behavior of economic entities, and it was proved that in the long term, economic activity is not influenced by economic incentives, but by cultural, moral, and confessional-ideological motives. At the same time, these kinds of cultural and moral factors eventually, approximately every 100-200 years, lead to radical changes in society through revolutionary transformations, usually beginning in agriculture, and then covering the entire economic, and then social and political systems. Such cyclical changes are called super-long economic waves. First of all, the relationship and interdependence of cultural and economic processes can be seen in the most specific farms located mainly in rural settlements – for example, in religious farms such as monastic economy, or in eco-farms such as eco-villages, kibbutzim or family estates. On the basis of this research, in the course of further scientific work, the scientist thoroughly investigated the phenomenon of various eco-settlements as an integral part of the regional and world economy. The study was based on theoretical developments in the field of development of world, national and regional farms by M. ya. Lemeshev (2013), O. S. Akupyan (2018, 2019), A. I. Dobrunova (2017, 2018, 2019), A. F. Dorofeeva (2019), N. I. Chovgan (2018, 2019), D. P. Kravchenko (2018, 2019), S. M. Yagutkina (2017, 2019) and V. Megre (1996, 1997, 1999, 2000, 2002, 2005, 2006, 2010).

The purpose of the research

Clearly define the place, significance and specific features of eco-farms in the economy of the region, country, and world economy.

Key results of the research

Eco-economy is one of the most stable forms of economic life organization, primarily in rural areas. This stability is explained by specific methods of organization and management, which implement the General principle of relative self-isolation and allow stable existence in any global and regional crises. Eco-farming villages in which people reside on a permanent basis (year-round), engaged in agriculture at the expense of personal work and the work of members of his family, strive to get rid of harmful effects of production on

- 1) The surrounding inorganic and organic nature;
- 2) Human society;
- 3) Your own body.

The latter definition focuses on

1) The form of living in an eco-settlement – on a permanent basis, i.e. dacha plots with a summer season of life and work, even if they strive for organic farming, we will not refer to eco-settlements;

2) The nature of labor – own labor of the owner and members of his family, without the use of hired labor – in this case, large agricultural enterprises that produce organic products, but widely attract workers from outside, will not be treated as eco-settlements;

- 3) Rejection of harmful effects on 5 "worlds":
 - a. mineral;
 - b. vegetable;
 - c. animal;
 - d. human;
 - e. the inner world of the employee.

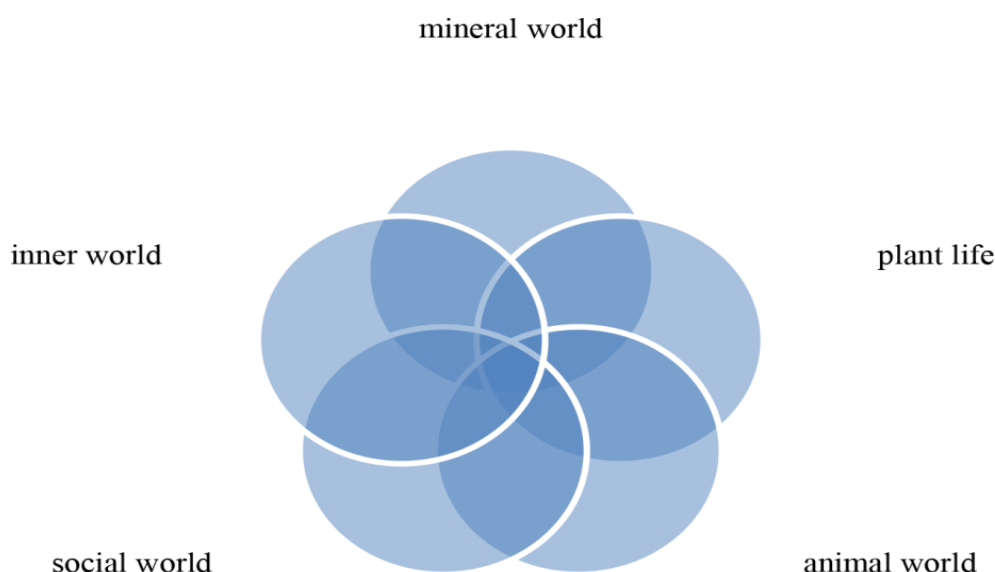


Figure 1. Ecology of 5 worlds

At the same time, the concept of "harm" in relation to the human world should be understood as widely as possible, it can be a negative (infringing) influence on the:

- physical;
- psychological;
- moral;
- social;
- the economic condition of an individual or collective.

Thus, we can talk about at least 10 forms of harm to the environment, for example, a physical negative impact on an individual – or a moral negative impact on the collective.

However, there may be a negative impact in terms of frequency

1. One-time and random;
 2. Periodic;
 3. Permanent and long-term;
- In terms of intensity of influence:
1. Increasing;
 2. Decreasing.

From the point of view of the object of influence

1. One-way;
2. Multi-sided – for example, both on the physical and moral state of a person;
3. Combined-when the same household in one case has a negative one-time physical impact on one person, in another – a multiple negative physical, psychological and moral impact on the whole team. In the end, the forms of harm to the environment expand to 100 or more species.

Thus, the next possible definition of an eco-settlement is a populated area that has minimal harmful physical and moral impact on the surrounding world. At the same time, we must always proceed from the immutable fact that it is impossible for any economy to completely get rid of harmful effects on the surrounding world. In terms of following the economic tradition, eco-settlements are divided into:

1. Traditional-a classic example is monastic farming.
2. Innovative-an example is the moshavs of Israel.
3. Traditional-innovative-combining at first glance incompatible, old traditions and new approaches, as an example-ancestral estates of the Belgorod region, kibbutzim of Israel.
4. Among small agricultural organizations, along with eco-settlements, farms have become the most widespread, replacing and replacing traditional peasant farms and communities - Anichin V. L. (2017), Akupiyon O. S. (2018, 2019), Dobrunova A. I. (2017, 2018, 2019), Dorofeev A. F. (2019), Kravchenko D. P., (2018, 2019), Kapinos R. V. (2018, 2019), Chovgan N. I. (2018, 2019). A comparative analysis shows how different these two types of agricultural enterprises are from the point of view of the ideas pursued (see table 1).

As we can see, only one goal is the same for eco-settlements and farms – which makes it impossible for them to cooperate widely at the moment. At the same time, a global trend is becoming the transition of farms to the principles of eco-settlements, especially with the growing fashion for organic farming. Under these conditions, cooperation and integration between farms and eco-villages, as can be assumed from

current trends, will become more widespread in the future – up to the full integration and transformation of many farms and farmers' cooperatives into eco-settlements.

Table 1. Comparative analysis of eco-settlements and farms

Nº	Main goals of eco-settlements organization	Main goals of farms organization
1	reviving traditional crafts	maximizing profits
2	healthy natural lifestyle	winning the competition
3	family self-sufficiency	to provide for the family
4	self-organization on a national confessional basis	taking the maximum market share

At the same time, from the point of view of organization, cooperative farms are much closer to eco-settlements than individual farmers. The table below provides a comparative analysis of cooperative farms and eco-settlements.

Table 2. Comparative analysis of eco-settlements and agricultural cooperatives

Nº	The main objectives of the organization ecovillages	Main purpose of the organization of agricultural cooperatives
1	revival of traditional crafts	providing a decent income for all members of the cooperative
2	healthy natural lifestyle	economic advantages over large farms
3	family self-sufficiency	providing for the families of cooperative members
4	the establishment of close informal, friendly contacts between settlers	establishing close informal contacts between members of the cooperative
5	the rejection of a strict chain of command and formal leadership	the rejection of a strict chain of command and formal leadership
6	self-organization on a national confessional basis	access to national and international markets

At the same time, there are specific management principles that are specific to agricultural enterprises, and yet, due to their features, they are practically not applicable to eco-settlements – or only to eco-settlements, and not applicable to other agricultural enterprises (see table 3). As you can see, in contrast to the previous example, there are already several goals – the 3rd, 4th and 5th – that almost coincide in eco-settlements and cooperatives. At the same time, in the 5th goal, both cooperatives and eco-settlements strive to implement the same management principles – they try to get away from the rigid management vertical and formalized management (see Fig. 2).

Table 3. Specific features of agricultural management and organization of agricultural labor

Nº	Management principles	Explanation of the principle
1	Possibility of in-kind payment for labor	Payment for employee's labor products
2	High seasonal pay	The main earnings fall on July-September
3	Collective forms of remuneration	The work of the team is paid, and then the earnings are distributed among each of the employees
4	Financial incentives for new settlers	Allocation of houses and land plots for new specialists
5	Providing basic agricultural labor and life through non-agricultural labor	Getting a basic income from non-basic work outside of agriculture and outside of the village, often in an urban environment

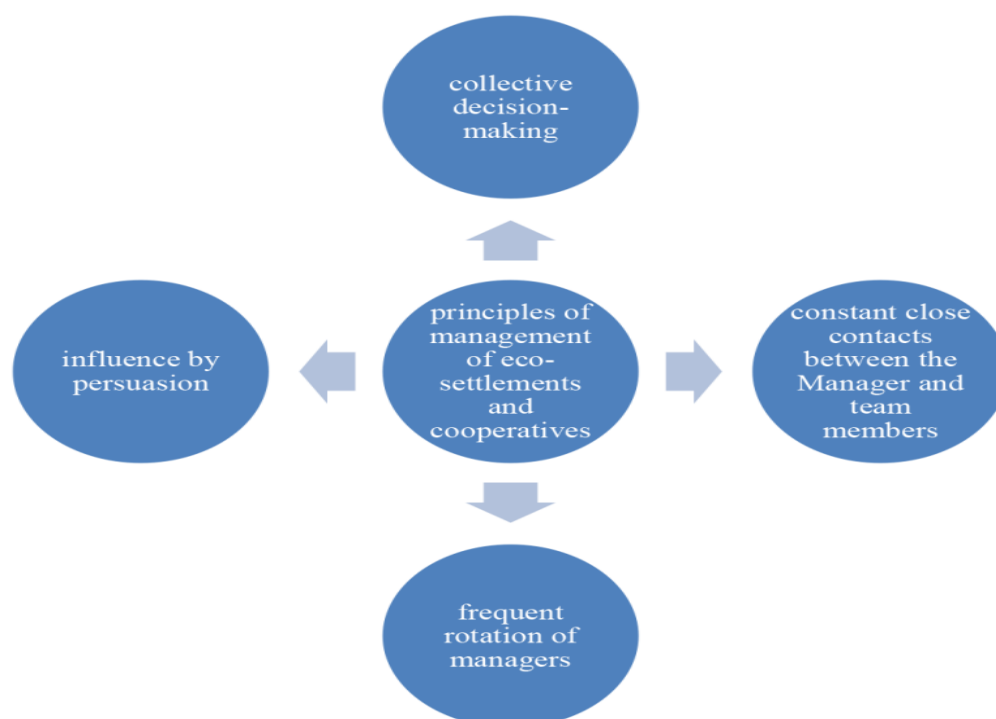


Figure 2. Principles of management of eco-settlements and cooperatives

The most commonly implemented in practice, modern eco-settlements principle Russia – fifth, due to the fact that the majority of such farms, although there are already 10-20 years, and sometimes are the same age as modern Russia, are still only at the beginning of its development. The first three principles are not applied in most eco-settlements, since they usually do not use hired labor, the fourth principle is often applied by the state in relation to eco-settlers – for example, in the Belgorod region thanks to the

long-term efforts of the Governor Yevgeny Savchenko. Among collective agricultural farms, along with eco-settlements, monastic and ecclesiastical parochial farms have always been widespread in all regions of Russia. A comparative analysis of eco-settlements and agricultural farms in terms of their main goals shows both significant similarities and significant differences between them (see table 4).

Table 4. Comparative analysis of the main strategic and tactical goals of eco-settlements and monastic farms

Nº	Main strategic goals of ecovillage organization	The main strategic goals of the organization of monastic farms
1	healthy and natural lifestyle	the assertion of religious ideology
2	self-organization on a national confessional basis	self-improvement of farm members
3	family self-sufficiency	full self-sufficiency of the economy
4	the establishment of close informal, friendly contacts between settlers	establishment of close informal, kinship, contacts between members of the economy
5	the rejection of a strict chain of command and formal leadership	a strict, hierarchical chain of command and spiritual form of leadership
6	revival of traditional crafts	revival of traditional crafts and the most archaic forms of farming, tools and material support for workers

In the table, goals are arranged by their importance for each type of farm. Among the strategic goals, the 2nd goal of eco-settlements and the 1st goal of monastic farms almost coincide, but they occupy different places in terms of importance: the establishment of confessional ideology is a priority goal for monastic farms, and it is more secondary for eco - settlements. Among the tactical goals, the 4th and 6th goals are completely the same even in terms of importance, the 5th goal is diametrically opposite: for example, eco-settlements are built on democratic principles of governance, monasteries-on strict theocracy, the 3rd goal differs in that eco-settlements strive for self-sufficiency of each family, in the monastery economy - the entire economy as one single large family. Among the main problems associated with the organization of modern eco-settlements should be mentioned (see table 5):

Table 5. Main problems in the organization of modern eco-settlements

Nº	Main problems of eco-settlements	Characteristic of the problem
1	complexity of searching for environmentally friendly land plots	Top 10 environmentally dirty urban settlements of the Russian Federation looks like this: 1. Norilsk; 2. Dzerzhinsk; 3. Magnitogorsk; 4. Cherepovets; 5. Asbestos; 6. Lipetsk;

		<p>7. Omsk; 8. Angarsk; 9. Novokuznetsk; 10. Moscow.</p> <p>The cities listed have been actively polluted since the mid-fifties of the last century. Industrial giants have been built on their territories, and they continue to work without slowing down. Along with the development of industry, megacities also expanded, the number of inhabitants and waste products increased.</p> <p>Human waste in the Russian Federation for 2009-2019 increased by 1/3 compared to the same previous period. Garbage has become one of the country's main pollutants in recent years. A significant part of the waste does not decompose. Currently, such accumulations amount to billions of tons in all regions of the country.</p> <p>Among the most harmful industries, thermal power plants and Central boilers should be singled out. Using organic minerals as fuel: coal and peat, as well as recycled fuel oil-CHPP and CC saturate the air with solid particles and greenhouse gases. This leads to thermal pollution. As a result, acid rain can fall over nearby territories, making a crushing contribution to the change of the microclimate of the region.</p> <p>In each subject of the Russian Federation, many unauthorized dumps are organized, the number of which continues to grow rapidly. Chaotic waste storage makes fertile land unusable. At the same time, landfills are growing not only from household waste, but also from industrial waste, which can be radioactive.</p>
2	significant initial investment	<p>Building a house in Russia as of 2019 on average costs from 3 to 7 million rubles.</p> <p>So, the house in Belgorod region with dimensions: 10 10 m, number of floors – 2, the height of the cap is 1 m, the</p>

		height of the floor is 2 m, the height of the ridge 1 m, respectively, at the perimeter, m/RM 40, bearing walls m/RM 50, square base – 100, the total area – 200 square pediment – 10, roof area of 102 square external STN at the finish – 170, the area of the supporting wall 210, the area (length) of the inner wall 120, square (for finishing) internal walls – 600, square surface. under the region of the plinth-40-the cost will cost 4,555,950 rubles.
3	the need to create a Union of like-minded people	any combination, even of two individuals in a household, with all the differences of interests, is always extremely difficult. And in the case of eco-settlements, this Association should be as close as possible. Usually the unity of thoughts is possible only for a short time
4	a combination of collective spirit and freedom	it is either impossible to combine the opposite principles, or it is possible only as an unstable unity
5	the need to give up most of the usual benefits of civilization	it is extremely difficult to give up long-term habits: television and computer entertainment, fast food semi-finished products and microwave ovens
6	maximum personal manual labor, especially in the first years after the settlement was established	it should be taken into account that a significant part of modern eco-settlers in Russia and, in particular, in the Belgorod region, are people of retirement and old age, and a significant part are people of intellectual labor who are not used to significant physical exertion
7	the need for dialogue with local authorities	often, settlers position themselves as anti-globalists, a society outside of modern urban civilization, and thus try to minimize their contacts with the state
8	the need for cooperation with local residents	many settlers define themselves outside of modern Mercantile and technical civilization, thus trying to reduce their relations with the adherents of modern progress to zero
9	creating and maintaining your own site resource-with minimal use of all technical devices	multipage corporate site development time: 5 days hosting for 1-year domain for 1-year, convenient mobile browsing, with individual design

		Russian-speaking project management system with no monthly fees, the installation of the analytical system Yandex Metrika, installing and configuring the security certificate on business online, check business resource in the main search engines (Yandex, Google, Mail, etc.), installing additional systems from hacking and system additional backup will cost 35,000 rubles.
10	the creation of the annals of the settlement	requires: years of hard work by one or two enthusiasts
11	organization of General celebrations	organizing just one holiday costs an average of 10,000 rubles (rural settlement) to 200,000 rubles (corporate event).

Sources: List of the cleanest cities in Russia to live in 2019 [Electronic resource] – mode of access: <https://visasam.ru/russia/goroda/ekologiya-gorodov-rossii.html>; home construction Calculator [Electronic resource] – mode of access: <http://belgorod.ruplans.ru/services/calculator/>; turnkey Business project [Electronic resource] – mode of access: <https://cbsystems.ru/tseny/biznes-sajt-podklyuch?yclid=5448844131485125118>; Price list, event management services [Electronic resource] – mode of access: <http://www.apvisit.ru/price/>; Zarechenskoye rural settlement [Electronic resource] – mode of access: <http://www.adm-zsp.ru/>.

At the same time, it should be borne in mind that eco-settlements in most cases are organized on a voluntary basis:

- 1) Natural economy;
- 2) Full self-sufficiency;
- 3) And at the same time – extended reproduction-when the surplus usually does not come true, but goes to further expand production and settlement (Mendoza Velazco & Rivero Padrón, 2019).
- 4) All these features of the organization of eco-settlements create considerable difficulties not only during their organization, but also for a number of years after their creation. However, after overcoming these problems, they allow them to successfully function in any social and economic conditions, using the principle of self – isolation.

CONCLUSIONS

The conducted research allows us to draw the following principal conclusions:

1. Eco-farms initially always implement the principle of maximum self-isolation in their economic and organizational activities.
2. The Principle of self-isolation does not mean that all business and cultural communications with society and the national economy are severed.
3. The Principle of self-isolation is applied by eco-farms of all types, from family estates to confessional farms.
4. The Principle of self-isolation of eco-farms means compliance with the following sub-principles: Self-Sufficiency-economy with all necessary spheres of activity and consumer goods; Self-Financing-the economy at the expense of its own financial sources; Self-Organization-minimal management of the economy and its employees from

the outside; Self-Sufficiency – the creation of a value greater than the money spent, but at the same time – the rejection of the categories of profit and wages, and the desire only to provide for the family and help other families.

The Principle of self-isolation of eco-farms allows them to exist for a long time. The Principle of self-isolation of eco-farms allows them to survive in the most adverse external conditions, including the current pandemic in 2020. The Effectiveness of the principles of organization and management of eco-settlements allows us to recommend them as an economic model for other farms, especially in the context of global and regional economic crises.

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