

**Czech University of Life Sciences Prague**

**Faculty of Economics and**



**Bachelor Thesis**

**Impact of landscape on people's well-being**

**Sopkina Arina**

## BACHELOR THESIS ASSIGNMENT

Arina Sopkina

Business Administration

Thesis title

**Psychological impacts of landscape on human well-being**

---

### Objectives of thesis

Identifying quantifiable landscape attributes that affect health is seen as an important factor in enabling future landscape design to benefit human health. The main focus of the work will be to concentrate on mental health and well-being through the connection with landscape and nature.

The work will cover objectives and points like: an understanding of biophilia, how landscape impacts peoples' well-being, mood, and motivation, how the landscape is connected with stress, and how nature makes us less brooding.

### Methodology

The methodology will consist of a lithe thesis literature review about research studies that illustrate the mechanism through which landscape serves as a resource for people's health-promoting activities. The result will be divided into three subsections focusing on mental, physical, and social well-being.

The work will also provide an overview of the existing knowledge about the relationship between health and landscape and required further research. Based on the literature review, the hypothesis for the practical part of the work will be formulated.

In the practical part of the work, data will be collected from literature, and a survey applied personally or online. The work will analyse the collected data, description of results, and conclusions related to the defined hypothesis.

## The proposed extent of the thesis

30-50 p.

## Keywords

well-being, landscape, mental health, peoples mind, impact on people

---

## Recommended information sources

- Bratman, G. N., Anderson, C. B., Berman, M. C., Cochran, B., de Vries, S., Flanders, J., et al.. (2019). Nature and mental health: An ecosystem service perspective. *Science Advances*, 5
- Dzhambov, A. M., Hartig, T., Tilov, B., Atanasova, V., Makakova, D. R., & Dimitrova, D. D. (2019). Residential greenspace is associated with mental health via intertwined capacity-building and capacity-restoring pathways. *Environmental research*, 178, 108708.
- Guite, H. F., Clark, C., & Ackrill, G. (2006). The impact of the physical and urban environment on mental well-being. *Public health*, 120(12), 1117–1126.
- Russell, R; Guerry, AD; Balvanera, P; Gould, RK; Basurto, X; Chan, KMA; Klain, S; Levine, J; Tam, J (2013). Humans and nature: How knowing and experiencing nature affect well-being. *Annual Review of Environment and Resources*, 38. pp. 473-502.
- 

## Expected date of thesis defence

2021/22 SS – FEM

## The Bachelor Thesis Supervisor

Ing. Diana Surová, Ph.D.

## Supervising department

Department of Humanities

Electronic approval: 15. 11. 2021

**prof. PhDr. Michal Lošťák, Ph.D.**

Head of department

Electronic approval: 24. 11. 2021

**Ing. Martin Pelikán, Ph.D.**

Dean

Prague on 15. 03. 2022

## **Declaration**

I declare that I have worked on my bachelor thesis titled "Impact of landscape on peoples well-being" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break any copyrights.

In Prague on 15.03 \_\_\_\_\_



## **Acknowledgement**

I would like to thank my supervisor Surova Diana and all other persons, for their advices and support during my work on this thesis.

# Impact of landscape on people's well-being

## **Abstract**

The focus of the work will be to concentrate on mental health and well-being through the connection with landscape and nature.

The work cover objectives and points like how landscape impacts peoples' well-being, mood, and motivation, how the landscape relates to stress, and how nature makes us less brooding and more productive. In the practical part, I use the survey method to collect information about the dependence of people and their condition on the landscape and environment.

**Keywords:** well-being, landscape, mental health, physical health, peoples mind, impact on people

# Table of content

<b>1 Introduction .....</b>	<b>7</b>
<b>2 Objectives and Methodology.....</b>	<b>8</b>
2.1 Objectives .....	8
2.2 Methodology.....	8
<b>3 Theoretical Part .....</b>	<b>9</b>
3.1 Well being .....	9
3.1.2 Common model of landscape system .....	15
3.1.3 Components of landscape .....	17
3.1.4 Classification of natural resources.....	18
3.2 Mental well- being .....	19
3.2.1 Attention restoration.....	19
3.2.2 Emotions and feelings .....	20
3.2.3 Types of emotions .....	21
3.2.4 Recovery from fatigue .....	22
3.3 Physical well-being.....	23
3.3.1 Productivity of people .....	27
<b>4 Practical Part .....</b>	<b>29</b>
4.1 Methodology.....	29
4.1.1 Key factors for questionnaire .....	31
4.2 Results .....	32
4.3 Analytics.....	40
4.4 Conclusion.....	43
<b>5 Results and Discussion .....</b>	<b>46</b>
5.1 Environment for life and work .....	46
5.2 Landscape and other components .....	47
5.3 Assessment of environmental and health impacts .....	48
5.4 Discussion .....	48
<b>6 Conclusion .....</b>	<b>50</b>
<b>7 References .....</b>	<b>52</b>
<b>8 Appendix .....</b>	<b>55</b>

Table 1. Age of target audience.....	32
Table 2.types of employment.....	33
Table 3. Type of work.....	34
Table 4. Place of work .....	35
Table 5. Importance of nature in the work .....	36
Table 6. Feelings about work in the city.....	37
Table 7. Opportunity to change work on freelance.....	37
Table 8. Fresh air affecting the mood .....	38
Table 9.dependence of motivation on landscape .....	39
Table 10. Changing the work near the nature .....	40

# 1 Introduction

All processes in the biosphere are interconnected. Mankind is only a small part of the biosphere, and man is only one of the types of organic life - Homo sapiens (reasonable man). Reason singled out man from the animal world and gave him great power. For centuries, man has sought not to adapt to the natural environment, but to make it convenient for his existence. (1, p. 56). Now we have realized that any human activity has an impact on the environment, and the deterioration of the biosphere is dangerous for all living beings, including humans. A comprehensive study of a person, his relationship with the outside world led to the understanding that health is not only the absence of disease, but also the physical, mental, and social well-being of a person. (1, p.58). Health is a capital given to us not only by nature from birth, but also by the conditions in which we live. Therefore, the purpose of my work will be to find out the definitions of each term and to identify a clear connection and dependence of a person and his life on the landscape and the environment.

## **2 Objectives and Methodology**

### **2.1 Objectives**

The main objective of my work is to identify the interconnections of people and their dependence on the environment and landscape. The study focuses on 3 levels of interconnectedness between people and their environment: psychological, physical, and emotional. (3, p. 17).

### **2.2 Methodology**

The methodology of my work consisted of a brief review of the research literature illustrating the mechanism by which the landscape serves as a resource for people's health promotion activities and their livelihoods. The result was divided into three sub-sections dedicated to the mental, physical and social well-being of the individual.

The paper presented an overview of the current knowledge on the relationship between health and landscape and the need for further research. Based on the literature review, a hypothesis was formulated for the practical part of the work.

In the practical part, data were collected from the questionnaire, which was applied online in the Instagram social network. In the course of the work, the collected data, description of the results and conclusions related to a certain hypothesis were analysed.

## 3 Theoretical Part

### 3.1 Well being

Well-being is a characteristic of the socio-economic conditions of life and satisfaction of the needs of the population. (18, p.2)

According to the UN recommendations, welfare is a system of several elements: health, including demographic conditions, food, clothing, consumption, and savings funds; working conditions, employment, labor organization; education, including literacy; housing; social Security; human freedoms. (22, p.45)

For international comparison of the standard of living (well-being), the UN uses the so-called "human development index", which includes the converted national income per capita, life expectancy, education.

The main element of well-being is the level and differentiation of incomes of the population.

The level of income is the result of the development of the country's economy and the availability of natural resources in it.

Income differentiation is formed under the influence of economic, demographic, and social factors and is measured by the ratio of the level of material security of 10% of the most and 10% of the poorest groups of the population (decile coefficient). Exactly economic factor is important in well-being of people, but I want to focus only on mental, physical, emotional, and social parts of well-being. (18, p.22).

Well-being is a positive result that is important for people and for many parts of society, because it tells us that people perceive that their lives are going well. Comfortable living conditions (e.g., housing, employment) are fundamental to well-being. Tracking these conditions is important for public policy (17).

However, many indicators that measure living conditions fail to measure what people think and feel about their lives, such as the quality of their relationships, their positive emotions and resilience, the realization of their goals, or their overall satisfaction with life—is their “well-being.”

And changes in ecosystem services affect all components of human well-being, including

basic material needs for a normal life, health, normal social relations, security, freedom of choice and action. Humans are completely dependent on the Earth's ecosystems and the services they provide, such as food, clean water, disease regulation, climate regulation, spiritual improvement, and aesthetic enjoyment. The relationship between ecosystem services and human well-being is mediated by access to produced human and social capital. (2, p.34).

Human well-being depends on ecosystem services, as well as on the resources and quality of social capital, technology, and social institutions. These factors mediate the relationship between ecosystem services and human well-being in ways that are still controversial and not fully understood. The relationship between ecosystem services and human well-being is not linear.

When ecosystem services are available in abundance relative to the demand for them, marginal increases in ecosystem services tend to make only a small contribution to human well-being. (18, p. 27). But when ecosystem services become relatively scarce, a small decrease in them can significantly reduce human well-being.

Researchers of Bohnke P and Kohler U. (1, p. 20) from different disciplines have examined different aspects of well-being that include the following:

1. Physical well-being.
2. Social well-being.
3. Development and activity.
4. Emotional well-being.
5. Psychological well-being.
6. Life satisfaction.
7. Domain specific satisfaction.
8. Engaging activities and work.

Human welfare includes:

5 main components: basic material needs for a good life, health, good social relationships, security, and freedom of choice and action. This last component is influenced by other components of human well-being (as well as other factors, especially education) and is also a prerequisite for achieving other components of well-being, regarding equity and equity.



Human well-being is a continuum, ranging from extreme poverty to high achievement or a sense of well-being. Ecosystems are the foundation of human well-being through the provision of supporting, provisioning, regulating and cultural services (20, p. 13).

Welfare also depends on the supply of services, technology, and institutions

And all off these types are highly connected with each other and, they have the common dependence. Dependence on landscape and environment around people.

They involve the ability to have secure and adequate sources of livelihood, including income and necessary property, shelter, a constant and sufficient supply of food and water, the ability to obtain energy for heating and cooling and access to benefits. Changes in provisioning services such as food, water and firewood greatly affect the adequacy of conditions for a normal life. Access to such materials is strongly mediated by socio-economic conditions.

Local changes in ecosystems may not affect the access of wealthy people to material goods that can be purchased elsewhere, sometimes at artificially low prices, if governments provide subsidies (17) (For example, for water supply).

Changes in regulatory services affecting water supply, pollination, food production and climate, have a very strong impact on human well-being. They can also be mediated by socio-economic conditions, but to a lesser extent. Changes in cultural services have relatively little effect on the material elements of well-being. The role of changes in supporting services is relatively large due to their impact on provisioning and regulating services.

The degradation of ecosystem services represents the loss of the capital stock of a modern economy. Both renewable resources such as ecosystem services and non-renewable resources such as mineral reserves, soil nutrients, mineral fuels are capital assets. At the same time, traditional national budget systems do not include indicators of resource depletion or degradation of non-renewable resources.

As a result, a country can cut down its forests and deplete its fish resources, and this will be reflected as a positive increase in GDP, despite the loss of fixed assets. Moreover,

ecosystem services are available free of charge to those who use them (fresh water in an aquifer, for example, or the use of the atmosphere to release pollutants into it), and thus degradation is again not considered in standard economic indicators. (22, p. 38).

When estimates of the economic losses associated with the depletion of natural resources are included in the economic indicators of the total wealth of nations, they significantly change the national balance of countries whose economies are highly dependent on natural resources.

The degradation of ecosystem services causes significant harm to human well-being. The available information needed to assess the implications of changes in ecosystem services for human well-being is relatively limited. Many ecosystem services are not monitored, and it is difficult to assess the relative impact of changes in ecosystem services in relation to other social, cultural, and economic factors that also affect human well-being. However, the following facts demonstrate that the detrimental impact of the degradation of ecosystem services on livelihoods, health, local and national economies is significant. The influence of the environment on human health is quite significant. Many diseases arise from air pollution, poor drinking water, consumption of chemically processed foods.

Health is 50% dependent on lifestyle, 20% on the impact of the environment and the development of technology, 20% is affected by poor heredity, and only 10% is dependent on the level of health care. (21, p. 3)

Environmental factors affecting human health:

- Air
- Water
- The soil
- Noise
- Nutrition

The impact of air on human health:

- Polluted air irritates the respiratory tract for the most part, causing bronchitis, asthma, allergic reactions, the general state of human health worsens headaches, nausea, a feeling of weakness, reduced or lost ability to work.

It has been established that production wastes such as chromium, nickel, beryllium, asbestos, and many pesticides cause cancer (23).

The impact of air on human health:

If a person lives in a city and, especially, near busy highways and industrial enterprises, he should use every opportunity that allows him to breathe clean air. In houses, it is necessary to close windows more tightly, and use various technical means to purify the air

Effect of noise on the human body. Constant exposure to strong noise can lead to a decrease in hearing sensitivity, and cause other disorders - ringing in the ears, dizziness, headache, increased fatigue, reduced immunity (24, p.33).

### **3.1.1 Social sphere**

There are several definitions of the social sphere.

The social sphere of society is a system organized to meet material and spiritual human needs (32, p. 2).

Thus, thanks to numerous organizations, the social sphere of public life provides working and rest conditions, takes care of the physical development of a person, his health, education.

According to another approach, the social sphere represents demographic groups of the population that differ in age, gender, and personal characteristics. In this case, the social sphere of society includes: the elderly, children, adolescents, men, able-bodied citizens, women, pensioners (32, p. 7)

The social sphere is engaged in the upbringing and education of the younger generation, provides for the needs of a person in housing, food, clothing, and medical care.

Tasks, goals of the social sphere: the arrangement of favorable social relations between groups, individuals regarding their position, place and role in society, way of life and way of life.

The implementation of these goals is carried out based on social technology - algorithms and procedures for implementing the actions of social practice.

The main direction in the social sphere is the creation of optimal living conditions for each person, his health, education, work, and social justice for all segments of the population. Depending on the stage of development of the socio-cultural sphere of the country, one can get an idea of the well-being of the citizens of the country.

It is in this area that all industries that are important for the quality of life of people are located:

- healthcare.

The quality of free medical care and the number of free hospitals and clinics compared to paid medical care are important.

- education.

What matters here is the availability and level of free school and higher education for all segments of the population.

- social security.

These are social programs that are aimed at helping poor people or large families

- culture.

Visiting cultural sites with objects of the heritage of the people should be available to all segments of the population. Here it is also important to protect the intellectual property of cultural figures and decent remuneration for their work and creativity.

- sports and physical education.

The main task in this area is to maintain health and beauty, increase the life expectancy of the population.

Thus, if the social sphere occupies one of the leading places in the domestic policy of the state, then we can say about the prosperity of the country's population. (34, p.3).

Currently, human economic activity is increasingly becoming the main source of pollution of the biosphere. Gaseous, liquid, and solid industrial wastes enter the natural environment in increasing quantities. Various chemicals that are in the waste, getting into the soil, air, or water, pass through the ecological links from one chain to another, eventually getting into the human body.

It is almost impossible to find a place on the globe where pollutants would not be present in one or another concentration. Even in the ice of Antarctica, where there are no industrial facilities, and people live only at small scientific stations, scientists have found various toxic (poisonous) substances of modern industries. They are brought here by atmospheric flows from other continents. Substances polluting the natural environment are very diverse.

Depending on their nature, concentration, time of action on the human body, they can cause various adverse effects. Short-term exposure to small concentrations of such substances can cause dizziness, nausea, sore throat, cough. Ingestion of large concentrations of toxic substances into the human body can lead to loss of consciousness, acute poisoning and even death. An example of such an action can be smog formed in large cities in calm weather, or accidental releases of toxic substances into the atmosphere by industrial enterprises.

The body's reactions to pollution depend on individual characteristics: age, gender, health status. As a rule, children, the elderly and sick people are more vulnerable (31).

### **3.1.2 Common model of landscape system**

The landscape is a generalized concept that characterizes the natural conditions of a certain area and its ecological state.

Landscape is the main part of all environments.

The environment is usually considered as part of the environment that interacts with a given living organism (human, animal, and so on), including objects of animate and inanimate nature (43, p.21).

The phrase environment is usually used to describe the natural conditions on the surface of the Earth, the state of its local and global ecosystems and their interaction with humans. In this sense, the term is used in international agreements.

In the modern era, human activity has covered almost the entire geographical shell, and its scale is now comparable to the action of global natural processes, which negatively affects the state of the environment (25, p.12). The environment is the habitat and activity of mankind, the whole world surrounding a person, including both the natural and anthropogenic environment.

To build a general model of a person and his environment, it is necessary to determine some basic methodological approaches to the implementation of this procedure. Moreover, it is necessary to axiomatically accept some of the initial assumptions laid down in the desired model.

We proceed from the fact that there is a certain subject (or a person) endowed with consciousness (9, p.10). Due to the presence of consciousness, this subject can build various kinds of models, including the most general model of reality, denoted by the concept of "world". Each person has his own world, conditioned and characterized by specific features of the subjective perception of objective reality.

The beginning of the construction of the mentioned model should be preceded by the following rather important, in our opinion, methodological provision. We assume the existence of an objective reality, which includes the person himself. The study of this objective reality is a function of various concrete sciences.

In the future, mainly consider not objective reality proper, but only a part of it - various forms of reflection of this reality in the human mind. We accept the assumption that the person himself and his consciousness are included in what we call objective reality (9, p.14). We do not assume opposition of human consciousness to objective reality.

Initially, we will model objective reality by introducing the most general concepts. Having accepted a certain set of initial concepts, then having performed the initial logical operations, we are able to obtain the most general model of a person and his environment. After that, we will be able to concretize this model by highlighting its various forms.

As already noted, use the concept of "world" as the most general model of objective reality. This is the most general concept, covering everything that exists and reflects this existence in the human mind. All subsequent presentation refers to models that are built within the framework of this very general model of objective reality.

### **3.1.3 Components of landscape**

Natural environment (- a set of components of the natural environment, natural and natural-anthropogenic objects (9, p.4).

Components of the natural environment - earth, bowels, soils, surface and underground waters, atmospheric air, flora, fauna, and other organisms, as well as the ozone layer of the atmosphere and near-Earth outer space, which together provide favorable conditions for the existence of life on Earth.

A natural object is a natural-ecological system, a natural landscape that has retained its natural properties, unchanged in the process of human activity.

A natural-anthropogenic object is a natural object that has been modified because of economic or other human activities, having a recreational or protective effect (reservoir, nature reserve).

An anthropogenic object is an object created by man to meet his social needs and does not have the properties of a natural object (cultural heritage object).

As an object of nature: natural origin, being in a natural ecological system.

Legal regulation of natural resource relations should consider the requirements of environmental legislation (14, p.15).

As an object of management: The components of the natural environment are natural resources, i.e., they are used in the implementation of economic activities as energy sources, they have consumer value (22). The use of natural resources is the exploitation of natural resources, their involvement in economic turnover.

#### **3.1.4 Classification of natural resources**

- exhaustible (water),
- relatively renewable (soil, air),
- inexhaustible (sun),
- non-renewable (mineral resources),
- social sphere and impact on people.

The social sphere is a set of industries, enterprises, organizations that are directly related and determine the way and standard of living of people, their well-being, consumption.

The social sphere covers the entire space of a person's life - from the conditions of his work and life, health and leisure to social class and national relations (19, p. 56).



## **3.2 Mental well- being**

Mental health is defined by the World Health Organization as a state of well-being in which a person can fulfil their own potential, withstand the normal stresses of life, work productively and productively, and contribute to their community (40, p.28).

This is the successful performance of a mental function, the result of which is productive activity, establishing relationships with other people and the ability to adapt to change and cope with adverse circumstances.

Mental health and mental illness are two continuous concepts. People with optimal mental health can also have mental illness, and people who don't have mental illness can also have poor mental health (40, p.34). Mental health problems can arise from stress, loneliness, depression, anxiety, relationship problems, death of a loved one, suicidal thoughts, grief, addiction, various mood disorders or other mental illnesses of varying degrees and learning disabilities.

### **3.2.1 Attention restoration**

Attention can be defined as the ability to select and focus on relevant stimuli (26). In other words, attention is a cognitive process that allows us to target relevant stimuli and process them to respond appropriately (5, p.39). This cognitive ability is important because we use it daily. Fortunately, we can improve our focus with an adequate regimen of cognitive training.

attention is divided into the following phases:

- **Awakening:** refers to our level of activation and readiness, depending on how sleepy or energetic we are.
- **Focused attention:** refers to the ability to focus attention on a relevant stimulus.
- **Sustained, sustained, or unrelenting attention:** the ability to respond to a stimulus or activity over an extended period.
- **Selective or selective attention:** the ability to respond to a particular stimulus or activity in the presence of other distracting stimuli.

- Switched attention: the ability to change the focus of attention between two or more stimuli.
- Divided attention: can be defined as the ability of our brain to respond to different stimuli or actions at the same time.

Brain plasticity is the basis for the rehabilitation of attention and other cognitive abilities. The brain and its neural connections are strengthened using those functions that depend on them. Thus, if attention is regularly trained, the neural connections of the brain structures involved in this process will be strengthened.

### **3.2.2 Emotions and feelings**

Feeling is a complex and constant emotional experience of a person, relatively stable and long-lasting. Feeling includes a wide range of emotions (29, p.65).

Feelings are peculiar only to people; they are socially conditioned. Self-esteem, shame, and pride can only be experienced by a person.

Higher feelings in psychology are a special group of feelings that reflect a person's emotional attitude to the reality of society. It is customary to distinguish:

Moral feelings are what a person experiences when perceiving reality, in comparison with generally accepted social norms.

Aesthetic feelings are experiences associated with the attitude of the individual to the beautiful (or ugly).

Intellectual feelings are associated with emerging experiences in the process of cognitive activity (30, p.17).

Emotion is a simpler, subjective reaction of an individual to external and internal stimuli, associated with the satisfaction or dissatisfaction of a particular need. Emotions, unlike feelings, are short-lived, experienced by a person “here and now”.

The primary impression is always emotional in nature, being a reaction to some stimulus.

### **3.2.3 Types of emotions**

Emotions are usually divided into simple and complex. The first includes emotions associated with the satisfaction of primary needs. They can cause pleasure or, on the contrary, displeasure, be pleasant and unpleasant (30, p.20). The second group includes those experiences that, during the individual's life, have become more complex and are associated with awareness, understanding of their significance.

Complex fundamental emotions include:

- Joy.
- Astonishment.
- Suffering.
- Anger.
- Disgust.
- Shame.

Forms of manifestation of emotional states:

Affects are strong, short-term emotional experiences of an individual that arose unexpectedly. Affects are accompanied by sharp, uncontrolled changes in heart rhythms, respiration, dysfunction of the secret glands, etc.

Stress is a psychological overstrain, the body's reaction to adverse effects and a violation of the emotional calm of a person.

Mood is a relatively long-term state that colours the course of mental processes in a certain period (27, p.12).

Passion is a stable and dominant experience associated with the desire for an object, which can be either a person or an object or idea. This is a complex emotion, closely related to the volitional qualities of a person.

Scientists around the world have long been talking about the link between spending time outdoors and improving mood (27).

An organism is a whole that is included in the larger whole from which it originates; our human organism is a child of nature and necessarily retains and intensively uses the physical laws of nature, that is, the organism exists only in the natural environment, in the process of systematic exchange of products with the natural environment, and there is a deep, fundamental connection between our organic existence and nature. And the function of the psyche consists, in fact, in displaying, retaining, reproducing, and developing this unity of all the essential forces of nature.

The fact that our body and its psyche are included in the universal connection of world processes and somehow retain nature in general implies a significant direct influence of this whole on our psyche, the influence of natural pulsations and rhythms on our body and our mental states.

### **3.2.4 Recovery from fatigue**

About 17 million people worldwide suffer from chronic fatigue syndrome (CFS). According to experts, the same number of people have not been diagnosed with the disease. Symptoms - constant loss of strength, headaches, insomnia, frequent muscle spasms (5, p.1).

Its main symptom is unreasonable and persistent fatigue, which reduces efficiency by almost half. In addition, patients complain of headaches, memory impairment, insomnia, nausea, and more (5, p.8). Due to the variety of symptoms, the disease is quite difficult to diagnose.

Scientists from Queen Mary University of London (8, p.26) have found that the best remedy for chronic fatigue is outdoor sports, only the load should be moderate. For three months, doctors monitored the health of two hundred volunteers diagnosed with CFS. The

subjects, in addition to drug treatment, daily performed a set of physical exercises and by the end of the study felt much better than those who did not go in for sports.

If you don't have the time to grow outdoors, the easiest and healthiest way to spice up your home is to turn it into a rainforest. Well-heated apartments are ideal residences for many tropical plants: palms, cacti, focuses and subtropical flowers.

And plants also have several unconditional health benefits and one completely obvious plus for mood: they can distract from the gray and cold half of the year.

### **3.3 Physical well-being**

People tend to attribute their illnesses to radiation and the harmful effects of other environmental pollutants. However, the impact of ecology on human health in the world today is only 25–50% of the totality of all influencing factors. And only in 30-40 years, according to experts, the dependence of the physical condition and well-being of people on the environment will increase to 50-70%.

The lifestyle they lead has the greatest impact on the health of Russians (50%). Among the components of this factor (13, p.23):

- food character,
- good and bad habits,
- physical activity,
- neuropsychic state (stress, depression, etc.).

In second place in terms of the degree of influence on human health is such a factor as ecology (25%), in third place is heredity, which is as much as 20%. The remaining 5% is in medicine (13, p.25). However, there are cases when the action of several of these 4 factors of influence on human health are superimposed on each other.

The first example: medicine is practically powerless when it comes to environmentally dependent diseases. There are only a few hundred doctors specializing in diseases of chemical etiology - they will not be able to help all those affected by environmental pollution. As for ecology as a factor influencing human health, when assessing the degree of its influence, it is important to consider the scale of environmental pollution:

-global environmental pollution is a disaster for the entire human society, but for one individual it does not pose a particular danger.

-regional environmental pollution is a disaster for the inhabitants of the region, but in most cases, it is not very dangerous for the health of one person.

-local environmental pollution - poses a danger both to the health of the population of a particular city / region, and to each specific inhabitant of this area.

Following this logic, it is easy to determine that the dependence of human health on the air pollution of a particular street on which he lives is even higher than on the pollution of the area. However, the ecology of his home and workplace has the strongest impact on human health. After all, we spend about 80% of our time in buildings (35, p.11). And indoor air, as a rule, is dry, it contains a significant concentration of chemical pollutants: in terms of the content of radioactive radon - 10 times (on the first floors and in basements - perhaps hundreds of times); in terms of aerogenic composition - 5–10 times.

Thus, for human health it is extremely important:

- what floor does he live on (the first floor is more likely to be exposed to radioactive radon).
- what material his house is built of (natural or artificial).
- what stove does he use (gas or electric).
- what is the floor in his apartment / house covered with linoleum, carpets.
- what the furniture is made of (SP-contains phenols)
- whether there are indoor plants in the dwelling, and in what quantity.

Atmospheric air is one of the main vital elements of our environment. During the day, a person inhales about 12-15 m<sup>3</sup> of oxygen, and emits approximately 580 liters of carbon dioxide.

Dust containing silicon oxides causes a severe lung disease - silicosis. Large air pollution with smoke and soot, lasting for several days, can cause fatal poisoning of people. Atmospheric pollution has a particularly detrimental effect on a person in cases where meteorological conditions contribute to stagnation of air over the city (41, p.52).

Harmful substances contained in the atmosphere affect the human body upon contact with the surface of the skin or mucous membranes. This happens when a sweaty person (with open pores) walks along a gassed and dusty street in the summer. If, having reached the house, he does not immediately take a warm (not hot!) Shower, harmful substances have a chance to penetrate deep into his body.

Along with the respiratory organs, pollutants affect the organs of vision and smell, and acting on the mucous membrane of the larynx, they can cause spasms of the vocal cords. Inhaled solid and liquid particles with a size of 0.6-1.0 microns reach the alveoli and are absorbed in the blood, some accumulate in the lymph nodes (23, p.87).

Polluted air mostly irritates the respiratory tract, causing bronchitis, emphysema, and asthma. The irritants that cause these diseases include SO<sub>2</sub> and SO<sub>3</sub>, nitrogen vapors, HCl, HNO<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub>, H<sub>2</sub>S, phosphorus and its compounds (23, p.89).

Signs and consequences of the action of air pollutants on the human body are manifested mostly in the deterioration of the general state of health: headaches, nausea, a feeling of weakness, reduced or lost ability to work.

It can be concluded that the greatest number of pollutants enters the human body through the lungs. Indeed, most researchers confirm that daily with 15 kg of inhaled air more harmful substances enter the human body than with water, food, dirty hands, through the skin. At the same time, the inhalation route of pollutants entering the body is also the most dangerous.

In all countries of the WHO European Region (46), the state has recognized that physical activity in the context of cities must be given priority. Member States have adopted a physical activity strategy that highlights the importance of using the built environment to help encourage physical activity as part of everyday life (20, p. 23). WHO would like this to inspire readers and serve as a guide for different cities in different contexts and at different stages of their development in using the planning tool to encourage their residents to be more physically active in everyday life. Physical activity is extremely important for health and human well-being. It is one of the key determinants of energy expenditure as it has a significant positive effect on energy balance and body weight regulation. Regular physical activity is therefore essential in the context of the high prevalence of overweight and obesity throughout the Region.

The relationship between levels of physical activity and the physical environment in cities has been explored in many different studies, often focusing on individual elements of the urban environment (20, p.25).

Or key aspects of the built environment that may influence levels activities such as parks, bike paths, and public transportation systems. These studies have consistently found that the built environment influences populations' physical activity levels; thus, a wide field is opened for activities to use the urban environment to increase opportunities for physical activity. In this regard, WHO and other organizations have recommended that the theory and practice of urban planning should consider the needs of the population in relation to physical activity.

Consideration of the built environment is limited to open, outdoor public spaces such as places where people can congregate (plazas, markets) and intermodal/traffic spaces and highways such as roads, sidewalks and building edges (32, p. 11). The publication does not address the issue about how individual buildings are designed to provide conditions for physical activity, and the design of enclosed spaces is not considered, such as workspaces, schools, and sports facilities.

Focus on physical design and built environment planning directs our attention



on the infrastructure or “hardware” that underpins the operation of the city rather than on the “software” or non-infrastructure measures such as car parking policies, charging tolls on congested streets and campaigns to raise public awareness.

While such measures are extremely important (27) and can encourage physical activity by changing patterns of use of modes of transport or by creating more favorable conditions for active mobility

### **3.3.1 Productivity of people**

Efficiency is the ability of a person to perform a specific activity within given time limits and performance parameters (25, p.44). It reflects, on the one hand, the possibilities of the biological nature of a person and serves as an indicator of his capacity, on the other hand, expresses his social essence.

Basis special knowledge, skills, certain mental, physiological and physical characteristics. For successful activity, such personality traits as ingenuity, responsibility, conscientiousness are of great importance; a set of special qualities required in a particular activity (42, p.78).

Efficiency also depends on the level of motivation, the goal, adequate to the capabilities of the individual.

At each moment, performance is determined by the influence of three main groups of various external and internal factors (individually and in combination):

1 - physiological nature - gender, health status, cardiovascular, respiratory system, and others;

2 - physical nature - working conditions, convenience of the workplace, the degree and nature of the illumination of the room, air temperature, the presence of harmful factors, the mode of work and rest, and others;

3 - mental nature - well-being, mood, motivation, endurance, emotional stability

The main characteristics of human performance:

- the ability to quickly get involved in the work and perform it in the best possible way, receiving moral satisfaction from this;

- volitional quality, which certainly accompanies success in life;
- active life position, responsibility in relation to the task assigned and high creative potential of a person.
- the investment of creative, physical, mental strength of a person in the performance of the assigned work.

Being a social being, a person, his body cannot avoid the impact of the environment, environmental factors, the influence of generally accepted patterns. Scientific and technical progress and social development have led to a qualitative change in the content of the process of biological adaptation of man to the environment. In the past, the nature of the pathology was determined by pathogenic natural influences, now - by the influences from the habitat, nature transformed by the man himself (45, p.21).

Depending on the types of work, individual abilities, health status, the duration, alternation, and severity of individual stages may vary up to the loss of some of them. The ratio of the duration of the stages of performance is one of the indicators of the organization of the process of activity (28, p.1).

Labour is a process that takes place between man and nature, in which man regulates and controls the metabolism between himself and nature by his own activity.

A person, his health, emotions, creativity, performance - all these are interrelated factors. Only a person who is spiritually and physically healthy can create, invent, and devote himself entirely to work (46, p.12).

## **4 Practical Part**

### **4.1 Methodology**

The Internet made it possible to explore data obtained from various, including constantly updated sources of information, integrating research results with decision-making processes (Joel R. Evans, 2005).

The cost of creating technical conditions for conducting an online survey was a one-time cost, while the cost per respondent tended to zero. The resource saving factor has become decisive for me in choosing the method of collecting information.

Interest in high-quality online research has been stimulated by the development of various forms of network communication. With the advent of Instagram, Internet users have more opportunities to share information. And the infrastructure and technical support of social networks made it possible to use their user content as a source of valuable and detailed information (Anil Mathur, 2005).

The reduction in material costs made it possible to increase the sample size to several thousand and even tens of thousands of people, which increased the accuracy of statistical conclusions by reducing the magnitude of the random measurement error and makes it possible to study groups whose proportion in the sample is small.

The Internet has helped to conduct global and regional research in the shortest possible time. If in a traditional survey, subject to the effective work of the interviewers, the data came in evenly, and the number of questionnaires linearly depended on the time spent, then in the online survey, about 70% of all answers were received during the first day, and during the first four days - about 95%.

That is why I chose the survey method through the social network Instagram.

My main task was to formulate the questions and the goal that I would pursue by collecting information from different people.

After analysing the target audience by key characteristics, I identified 3 focus groups:

1. Workers in permanent employment - 25 years of age or older who already have a full education and work in a permanent job with a fixed salary (considering office or general food sector)

2. Students who work part-time - students from 18 to 25 years old who are in the process of studying at a university or college, but at the same time work in temporary jobs as part-time jobs and are not tied to a specific place, like an office

3. Freelancers and those who work from home - 18 to 45 years old, self-employed, who work for themselves and do not belong to any place of work. Most often they work from home, but they can also go to cafes, co-working spaces, or even change countries for residence.

The 1st stage of the survey is to obtain data on the age of the groups that participated in the survey. There are supposed to be 3 possible answers to the question:

- 1) under 18-year-old
- 2) 18–25-year-old
- 3) 25+ year old

I decided to focus on them, since their main difference is the place and format of work, based on this - the way of life, desires, preferences, feelings. But my main goal is to understand how their life and work relate to the surrounding landscapes and to confirm my hypotheses about the importance of connection with the place where you work. Not only physical, but also psycho emotional.

A feature of this method can be called its anonymity (the identity of the respondent was not recorded, only his answers were recorded).

By the number of respondents, I can say that I chose the group survey method, when the survey went to a general audience, where several people from each focus group participated.

By type of contact with respondents - remote survey through the publication of a survey on the social network Instagram - online survey.

Several sites provide a free opportunity to create an online questionnaire and collect data.

I used Google Forms to create a survey with questions I wanted answered and posted it on my Instagram.

#### **4.1.1 Key factors for questionnaire**

Close question

Each question should be logical and separate.

It is forbidden to use rare, obscure words and special terms.

Questions should be short.

If necessary, the question may be accompanied by an explanation, but the wording itself should remain concise.

Questions should be specific, not abstract.

Questions should not contain a hint. If possible, answers are mentioned in it, then their list should be given complete.

The wording of the question should prevent you from getting formulaic answers.

The question should not force respondents to give unacceptable answers.

The language of questions should not cause disgust (for example, be too expressive).

Questions of a suggestive nature are unacceptable.

All these points for quotes help me to get clear and independent answers from the target audience.

I used next questions in my quote:

1. Your age
2. What are you doing?
3. What kind is your job?
4. Does your job in the city?
5. Is it important for you to work near the nature?
6. Do you feel good when you work in the city centre?
7. If you will have a chance to change your job on freelance, will you, do it?
8. Does fresh air and beautiful landscape affect your mood?
9. Does beautiful landscape motivate you?
10. If you will change the place of work to nature, but your position remains the same, will you work more productive?

## 4.2 Results and Discussions

On the Table 1 there is a diagram that shows the distribution of votes by age. The chart was created using the Google Forms survey analytics.

Based on the results, we obtained data that:

85.7% of the group are people between the ages of 18 and 25, and only 14.3% are people over the age of 25.

0% is occupied by people under the age of 18.

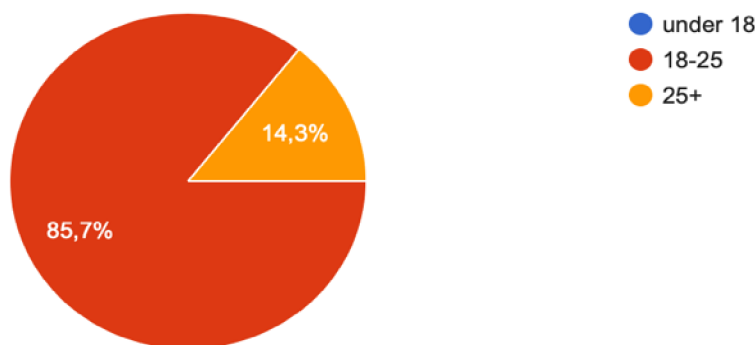


Table 1. Age of target audience

The 2nd question of the questionnaire - what type of employment do you have?

The majority (42.9%) work in a home office or freelance. There is no attachment to the workplace, country, or city.

35.7% of those who voted are university or college students who have no education and cannot work in a permanent job.

But at the same time, they have a temporary job or part-time job.

The rest are those who have a permanent job with a fixed salary and a normalized schedule.

There was an option in the survey - a student without any work, but 0% of voters chose this option, which means that each student either has a temporary job / part-time job or is freelancing.

Data obtained from Table 2, which shows a diagram with the distribution of people by type of employment. The chart was created using the Google Forms survey analytics.

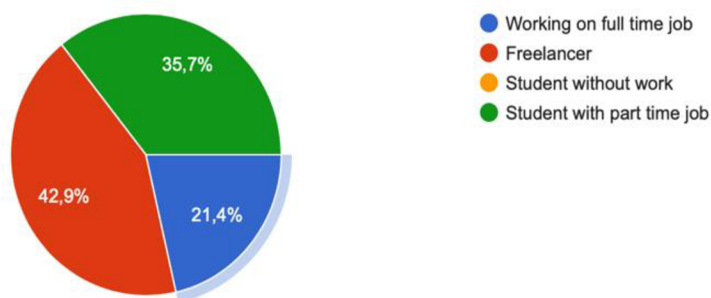


Table 2.Types of employment

The 3rd question in my questionnaire was to identify the type of employment my focus groups have and the place where they work.

To further identify their status depending on the type of work and location.

Table 3 shows the types of work for the target audience. Separation of votes by type of work, depending on where the workplace is located.

The majority (exactly 50%) are freelancers or work on a paid site (Home offices due to the pandemic). That is, their workplace is not tied to a specific object. Most often, this is a house / apartment, sometimes co-working and cafes, as well as a general change of scenery in the form of a change of residence.

25% of those who voted on the Table 3 work in an office or permanent place of work. Constant work with a schedule and a stable location.

Also, 6.3% work in catering on a permanent or temporary basis.

And the remaining 18.6% have various part-time jobs without a specific job. Their place of work depends on the task, day, goal, etc. the type of work they do.

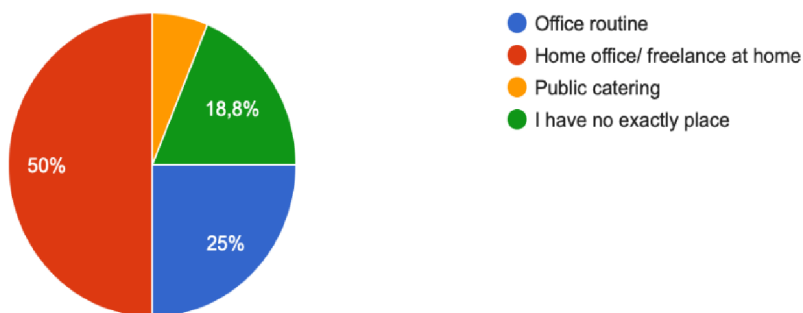


Table 3. Type of work

After the question about the type of employment and the nature of the work, it is necessary to find out the location of the permanent job for those who have a permanent job. The main task for Table 4 is to show where the workplace of the audience is located. Reveal in the city or outside the city is a job.



75% of those who voted at Table 4 noted that their office (the place of work is located within the city). That is in the center of the city.

The remaining 25% answered on the Table 4 that they work outside the city. Office, base outside the city.

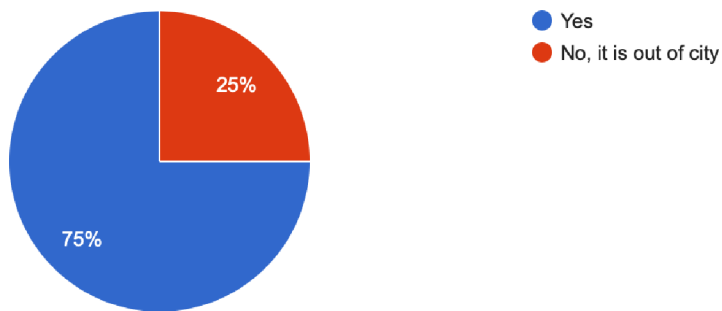


Table 4. Place of work

Before researching human well-being in relation to location and scenery nearby, I decided to add a question to all focus groups in my survey about whether a place of work close to nature or a beautiful view is important to them.

Table 5 shows a chart with answers about the importance of nature for work. A summary of the audience's responses and their decisions about the scenery next to the work is provided.

Survey data of Table 5 showed that for 56.3% landscape and nature. next to the workplace improve the condition and this is great, but not the most important part.

For 25%, the place and type of work is irrelevant. And in the survey, they noted that it does not matter to them at all.

And the remaining 18.8% noted that inspiring landscape and nature nearby is very important for them and their condition in general. For this, percentage of those who responded at Table 5 are very eager and they would like the opportunity to be close to nature to become a reality.

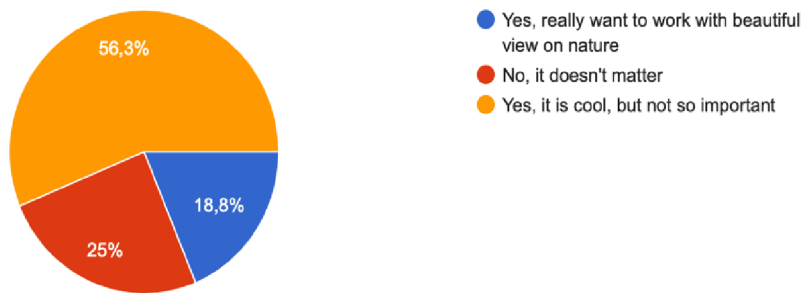


Table 5. Importance of nature in the work

Based on the data of the previous question about the importance of working close to nature, I decided to ask a counter question about human well-being

Do people feel good working in the city center?

Table 6 shows a diagram showing the percentage division of votes in the question about working in the city and the emotions and feelings associated with it.

Most (62.5%) on the Table 6 answered that they are often annoyed by traffic jams and noises in the city and outside the window. But in general, they feel fine. The 50/50 option was chosen by these 62.5% of those who voted.

37.5% of those working in the city noted that everything is fine with them, the city and the view do not affect their well-being in any way, and they feel great regardless of city noise, traffic jams and external factors that can cause irritation, fatigue, apathy, and migraine. The answers were completely different (Table 6), and in order not only to build my own hypothesis about the influence of species and nature on human well-being, but also to make sure of this, I added a question about changing jobs to the survey.

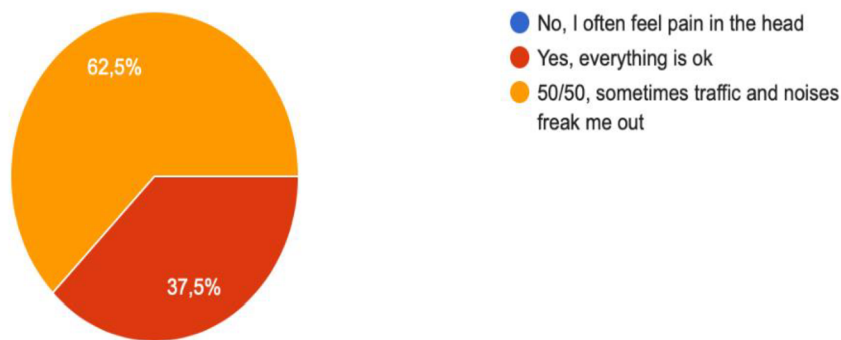


Table 6. Feelings about work in the city

I invited the voters to dream up and asked if they want to change jobs to freelance? Table 7 shows a clear division of votes for and against changing jobs to freelancing. As I thought, 87.5% of the respondents answered that they would like not to depend on the place of residence and permanent work (Table 7). Therefore, change your job to freelance / work from home. The voters also noted that for them it is a dream and a strong desire.

A minority (12.5%) said they didn't like the idea of "staying at home" and working from home (Tale 7), so they didn't want to work for themselves and freelance. They are more suitable for constant work with a schedule.

Only 0% chose the option that they would not want to change the look of their job and love their real job now.

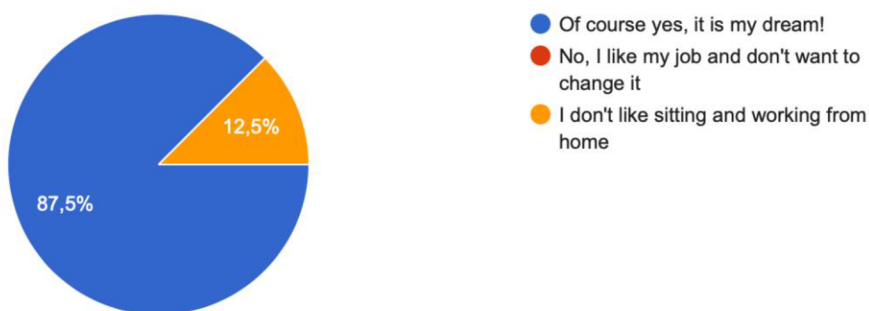


Table 7. Opportunity to change work on freelance

I also think that the question about ecology is very important and asked it in an easy way

"Does fresh air affect your condition and mood?"

In Table 8, we clearly see most votes for the fact that the fresh air has an influence on people's mood. And a very small part answered that the fresh air does not matter to them. Obviously, almost all (93.8%) believe that fresh air directly affects their mood and general condition (Table 8).

And only for 6.3% the freshness of the air and nature does not matter, and they chose the option "nothing special".

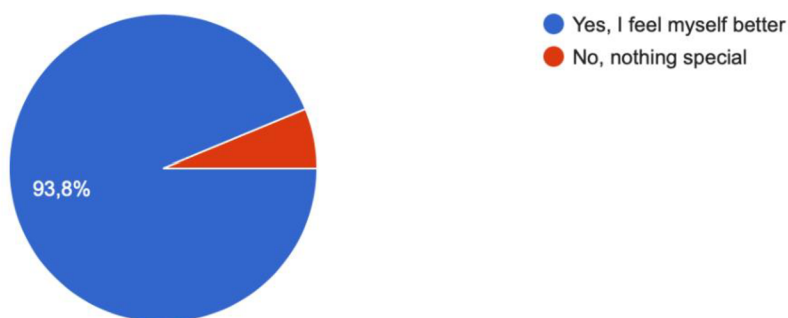


Table 8. Fresh air affecting the mood

Immediately after, I asked a question about the role of landscape in human life (Table 9). I structured my question like this:

"Does the landscape inspire and motivate you?"

On the Table 9 we see a diagram that shows the division of votes into those who are motivated and inspired by the beautiful landscape and those who do not play any role. The majority of those who responded positively

68.8% gave a positive answer. They are motivated by the beautiful landscape and the beauty of nature nearby (Table 9).

For 31.3%, this turned out to be an unnecessary factor that does not affect anything. And also, the landscape does not affect the motivation and inspiration of the voters.

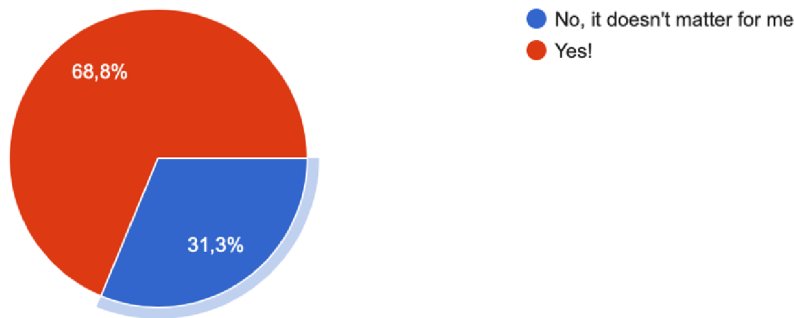


Table 9. Dependence of motivation on landscape

My last question was about role reversal for the people (Table 10) who took the survey.

I suggested this to them events:

"Do you think that if you left your work position the same, but moved your workplace closer to nature, to fresh air / countryside or to another country of your choice, would you work more productively and with pleasure?"

In Table 10, we see a chart that shows a strong division of votes into those who are ready to change jobs closer to nature and those who are not ready or simply don't care where to work. All the same, the majority answered in the affirmative about changing jobs closer to beautiful landscapes and fresh air.

62.5% answered YES. They think that given the beautiful landscape and the comfortable conditions of nature and climate nearby, they could work in pleasure and, as a result, more productively.

25% think that even with a change in working conditions, everything would remain unchanged (Table 10). That this factor will not affect the motivation and productivity of work. But at the same time, they are not sure that this will be the case. They question this fact, although they tend to answer that nothing will change.

While the remaining 12.5% believe that if the working environment is changed to a more comfortable and healthier one, they will not work more productively and enjoy it.

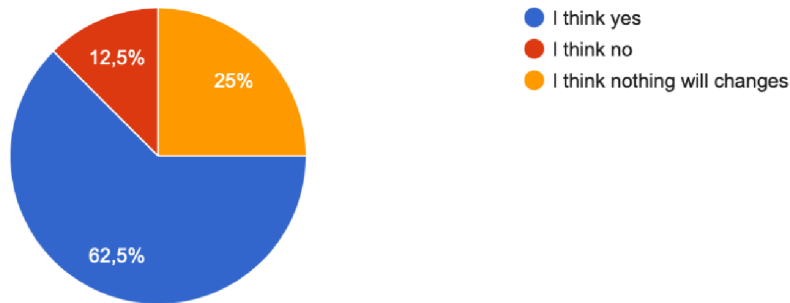


Table 10. Changing the work near the nature

### 4.3 Analytics

Man, considered as a system that is an element of a wider natural system, does not lose his special position. On the contrary, system analysis confirms and substantiates this special position of a person, while overcoming the contradictions of religious, philosophical and scientific ideas.

If we consider our ideas as a system, then the most general, well-established ideas about reality, including philosophical ones, are the conservative part, and the more active, changeable ones are the ideas that are more closely connected with the activity of developing thinking in understanding and cognizing the constantly changing reality. Such ideas include scientific ideas, the change and accumulation of which from time to time requires a rethinking of more general, philosophical ideas, including those about a person and his place in the surrounding reality. This systematic consideration serves as a methodological justification for assessing scientific knowledge and philosophical ideas in the event of contradictions between them.

The ideas of the natural sciences, as well as philosophical ideas, are based on the assertion of a special position of man in nature, but unlike philosophical ideas that oppose man to nature, scientific ideas proceed from their unity. The idea of the origin of man as a result of the evolution of nature has become generally accepted not only in science, but also in society.

Based on all the data I have collected; I can analyse and conclude that:

The interaction between man and nature contains several possible options, which are successive stages in the development of the "human - nature" system:

1. Lack of interaction, as the absence of a person as a subject of interaction, due to his underdevelopment.
2. Human's dependence on nature.
3. Dependence of nature on man.
4. The unity of man and nature.

The acquisition by a person of a level of quality that distinguished him from nature is associated with the transition from the adaptive nature of development to the adaptive one, from adaptation to the requirements of the environment to its active adaptation to one's own needs, to overcoming the hierarchy of the external over the internal.

As the stages of this process of changing the level of interaction with the environment, we can consider: the exit of primitive man beyond the limits of the ecological niche that nature originally determined for him, the constantly expanding development and improvement of tools, the domestication of animals, the development of cattle breeding and agriculture, and the associated complete settlement of the planet.

The internal sources of human development turned out to be higher than determined by the pressure of the environment. Human not only withstood the struggle for survival, but began to develop further. Quality is inextricably linked to the level of relationships. Within the framework of biogeochemists, the relation - the requirement of biogeochemist, determined the level of human quality, but the quality of man, which increased above the level of requirements of biogeochemist, singled him out from nature and became decisive in relations with it.

The second stage is the stage when a person has surpassed the level of biogeocenosis requirements, he has won the struggle for survival and, having begun to develop abstract thinking, is aware of both his special position and his weakness before natural forces, as a painful dependence on an uncontrollable element, on heat or cold. , from rain and drought,

from harvest or crop failure, etc. A person no longer merges with wild nature, he is the subject of interaction with it, but he still feels dependent on it - this is a hierarchy of the external over the internal. A person expresses this dependence on nature in ideas about the dominance of forces external to him, naturally considering the subject, who decides the fate of the world, outside himself.

At this stage, the independent role of consciousness as a system of ideas that determines the reactions and behavior of a person is clearly manifested. Consciousness at the first stage performed only the role of a more flexible adaptation to the environment, the definition of the psyche is quite consistent with this role of consciousness, that it provides a more flexible adaptation of organisms to the environment, allowing them to respond to its changes by promptly changing behavior instead of slowly changing structures.

The third stage is the domination of man over nature. A person's awareness of himself as a subject of cognition, a creative, active transforming force, and nature as an object of his activity. This awareness occurs after a person has actually reached this level of relationship with nature. And the level of relationships indicates a new level of quality. Quality and relationships, according to general systems theory, are interrelated and interdependent opposites. The hierarchy of interaction with nature becomes reversed, internal sources of development over external ones are dominant. The system of representations becomes even more independent of the requirements of the external environment, moreover, it becomes demonstratively independent.

The fourth stage is the stage of the unity of man and nature, which we are currently experiencing. In the mass consciousness, the idea of the unity of man and nature is already deeply rooted and is reflected in social practice, in the formation and improvement of environmental legislation. But overcoming the opposition of man and nature will become final and systemic when the dualism of the previously established system of ideas is overcome, when ideas about the unity of man and nature will be based on a single picture of the world as a system.



This is no longer the unity that was at the first stage of complete merging with nature, this unity becomes a systemic, external and internal, conscious unity. Consciousness of unity with nature is a new quality of a person, which is associated with a new level of relations with nature that is currently being formed. This level of relations with nature corresponds to the systemic thinking that is currently being formed, overcoming contradictions, recognizing the interdependence, mutual determination and unity of opposites, including man and nature.

#### **4.4 Conclusion**

The most important conclusion of the conducted systematic analysis of the development of man as a species is the hierarchy of the internal over the external, which has developed in the historical period of human development. It means that the level of development of society to a decisive extent depends not on external forces (natural selection, God or the objective course of history), but on the internal state of the human system as a species. In the "man and nature" system, formed after a person has overcome the level of biogeochemists requirements, a person is the most changeable and active element, determining not only his own level of development, but also the state of the entire system.

Development is a hierarchical system of quality levels, each level of which is associated with a change in the level of relations, as internal with external. The change in the level of relations between man and nature, the emergence of the "man and nature" system itself and its development is the result of the evolution of man, as an active element of this system, indicates that man has reached a new level of quality. This level of quality is associated with a change in the ratio of elements in the "man" system and in the "man as a species" system, with the acquisition by consciousness of greater independence from the environment and greater significance in determining human behavior. Human behavior is largely determined by his consciousness, his ideas, and not by the pressure of the environment, this is the development of the principle of autonomy by a person, which leads to the emergence of human individuality. The individuality of a person is directly related to

the formation of the "consciousness - bodily organization" system, in which consciousness acts as an independent element that determines human behavior.

The development of an individual entails the improvement of relations in the species system, the initial rallying under the pressure of the environment of the primitive herd of anthropoids with the development of relations also acquires a new quality, knowledge and experience become a common property, their quantitative accumulation inevitably entails qualitative changes in the consciousness of individuals, which entails is a further development of relations - the principle of association, which led to the formation of human society. The formation of society is directly related to the formation of a common dominant system of ideas, reflecting the accumulated experience and knowledge, with the formation of a system: the dominant system of ideas is social practice.

The internal driving force behind the development of man as a species is the interaction of the individual and the plural, in this interaction the individual is the bearer of the transformation, which is subjected to selection in interaction with the plural - with the primitive collective, then with society. The requirements of biogeocenosis, which in relation to primitive man played a dominant role, determining the direction of development, in the process of overcoming dependence on nature are increasingly being replaced by a system of ideas created by man. The hierarchy of requirements of biogeocenosis external to a person over his internal system has been replaced by a reverse hierarchy.

The dominance of necessity in the form of the threat of starvation receded, and a person faced the problem of choice, as a manifestation of a higher level of freedom.

But the hierarchical relations of internal and external are replaced by dialectical unity with the overcoming of dualistic ideas about the opposition of man and nature. In this case, the hierarchy of the internal over the external, as an ever-increasing gap between the requirements of biogeocenosis and human capabilities, remains, but it is stabilized by a system of ideas, consciousness of the unity of man and nature and, consequently, the need to preserve it and treat it with care. In this system of ideas, a person builds a reverse hierarchy, in which he is even ready to limit his own selfish interests for the sake of preserving nature.

Human is the most active and changeable element of the "man and nature" system, and his level of development determines the state of the entire system. Awareness of this dependence determines the responsibility of man before nature.

## **5 Results and Discussion**

### **5.1 Environment for life and work**

In recent years, the issue of indoor and outdoor air pollution has become increasingly prominent on the global health agenda. Today it is the largest environmental public health risk, resulting in 6.5 million premature deaths worldwide each year.

and 620 000 cases in the WHO European Region. Thus, improving air quality can bring sustainable health benefits: reducing air pollution means reducing premature death and morbidity from stroke, heart disease, lung cancer, and chronic and acute respiratory diseases, including asthma. Strategies to reduce emissions of air and climate pollutants can bring several co-benefits.

for health, such as reducing road traffic injuries, increasing levels of physical activity and reducing noise levels.

The spectrum of chemicals that adversely affect human health is wide and constantly expanding. The WHO European Region has the highest production and consumption of chemicals in the world: 11 of the top 30 chemical producing countries are European countries.

An analysis of the costs associated with the burden of disease attributable to endocrine disrupting chemicals (EDCs) showed that they amounted to 163 billion euros per year. Despite significant progress in chemicals management, urgent action is needed to protect the health of children at an early stage of development to improve the prospects for a healthy life at all subsequent stages.

In Europe, environmental noise pollution is considered one of the main environmental hazards affecting somatic and mental health and well-being.

Excessive noise causes great harm · to health and interferes with people in their daily activities in

school, work, home, and leisure time. Today, scientific research points to an even stronger association between noise exposure – especially from traffic, trains, and aircraft – and negative hearing loss.

and non-auditory effects on human health. As a result, it is estimated that each year in Western Europe approximately 1.6 million healthy life years are lost due to exposure to environmental noise due to illness, disability, or early death.

## **5.2 Landscape and other components**

Climate change affects public health in Europe through rising temperatures and changing weather patterns. It is steadily becoming one of the most formidable threats that the population will have to face in the coming decades, and therefore urgent action is needed. A WHO assessment concluded that between 2030 and 2050, 250,000 additional people will die each year due to climate change worldwide.

Climate has a major negative impact on health, so adaptation and mitigation measures need to be taken to reduce the current burden of disease and the additional burden that climate change will bring.

Overall, there is a need to strengthen core public health functions and health care services as generally understood in order to build communities that can withstand the adverse impacts of climate.

Water-related diseases caused by unsafe drinking water, poor sanitation and poor hygiene are placing a heavy burden on public health in the WHO European Region. Scaling up efforts to achieve universal and equitable access to safely managed water and sanitation services that protect public health and the environment and take into account the impacts of climate change remains a priority throughout the Region. In the WHO European Region, the main policy instrument for achieving country-level implementation of regional and global commitments, such as the Sustainable Development Goals and targets for water,

sanitation and health and the commitments stemming from the Ostrava Declaration on Environment and Health is the Protocol on Water and Health.

### **5.3 Assessment of environmental and health impacts**

My hypotheses are that by 2030 more than 80% of the European population will live in cities. However, while urban living conditions continue to offer many opportunities, including potential access to better health care, jobs and education, today's urban environment can be a focus of health risks and new hazards. Therefore, urban planning decisions made by local and territorial authorities play a key role both in promoting and protecting the health and well-being of citizens, and in ensuring equal access to urban services for all population groups.

Improper waste management and illegal transportation and dumping of waste can cause soil, water and air pollution and have negative impacts such as on the environment and on public health. In addition to the industrial waste currently generated and collected in contaminated landfills for a long time, a significant proportion is municipal waste. In all European countries, waste management is complex and of great importance for human health and well-being, environmental conservation, sustainable development and the economy. Thanks to a clear strategic direction and strong EU legislation, notable progress and significant growth has been achieved in several countries share of municipal waste recycled. However, it is known that in many cases Informal, uncontrolled or poorly organized practices and outdated waste management technologies cause negative health impacts.

### **5.4 Discussion**

We live on a very close planet where everything is interconnected. A person is only now beginning to realize his responsibility for its future. The environmental agenda is getting louder every year, and governments, corporations and schoolchildren from different

countries join the voices of a few activists. Green technologies and environmental awareness are becoming part of our daily lives.

We use the resources of the planet as if they belong to us.

We do not appreciate what nature offers us. We deny that beautiful landscapes and views can inspire and motivate us to work more productively, become more energetic and most importantly, healthier. Many are not even ready (Practical part, Table 10) to change their place of work to one that is closer to nature and fresh air because they do not see any difference between working in an Office in the city.

Even if there is no opportunity to be close to nature, then you can appreciate it and try to introduce it into your routine in a big city and adapt it to

The larger the city, the more valuable the nature in it. Therefore, it is very important to saturate the urban space with elements of wildlife, while introducing and maintaining as much as possible the diversity of plant components. This gives not only an aesthetic, but also a great environmental effect. The more complex the biocenosis, the closer it is to the natural and more viable. Due to the green zones, oxygen is restored, and a favorable microclimate is formed.

The choice of the characteristic geometry of green surfaces allows you to create a unique look of open space. It is advisable to include fragments of landscaping in the intervals between lanes of heavy pedestrian traffic. To form island zones from plant materials as a delimitation of areas of open spaces of a static and dynamic nature of use. It is important that the aesthetic qualities of the placement of vegetation are supported by no less important environmental conditions: fixing the soil layer, restraining the process of soil erosion, creating noise curtains near highways, as well as visually delimiting pedestrian zones. All this contributes to a significant improvement of the natural environment in the city.

## 6 Conclusion

We humans are part of nature. Culture is a separate nature, created only by man or in harmony with nature (for example, valuable cultural landscapes).

However, on the basis of this study, it seems that..... it is currently difficult to imagine the existence of people outside the true nature. We are always connected with natural phenomena and cycles. Even if a person finds himself in the space of a metropolis full of concrete and asphalt, far from forests, fields and rivers, he is also affected by various influences of nature and natural cycles.

For example, our body is governed by the cycles of sunrises and sunsets and much more. It is human nature to be a part of nature, that is, the rest of the space of matter.

Nature plays a vital role and we must remember and protect it. Each of us, by planting at least one tree, will contribute to its enrichment and preservation.

What is the base in the pyramid of human needs for us? Physiological aspect.

The following major components are affected here: air, food, sleep and water. We must realize the real role of nature in our life, because the basis of human needs is 99% dependent only on nature.

Plants produce clean air. Food also depends on plants, because one way or another, the meat of any animal was grown on natural raw materials. Another aspect is the fish, it is given to us by lakes, rivers, oceans, etc., which once again proves the vital necessity of nature. Healthy and sound sleep depends on human health, which in turn depends on the environment and human activities, that is, nature plays a huge role here. We get water from natural sources, so this need does not even need to be justified.

The economic situation of each country depends precisely on its character. The country can be famous for its fertile soils, which significantly increases its financial level.

As I mentioned earlier, nature plays a huge role in human health. What air we breathe, what food we eat and what water we drink - it all depends on the purity of natural areas.



A person always has a need for spiritual rest. What does he do in this case? He tries to retire with nature, in this case, nature has not a physical influence, but already a spiritual one. Seeing off the sunset or meeting the dawn, watching the lightning on the horizon or the clouds - all this has a healing effect on the soul and the person and his balance.

Every person needs nature, so you should protect it and plant greenery in new corners of our planet.

## 7 References

1. Bohnke P, Kohler U. Well-being and Inequality. WZB Discussion Paper No. SP I 2008–201; 2008.
2. Bellani L, D'Ambrosio C. Deprivation, social exclusion and subjective well-being, *Social Indicators Research*, 2011
3. D'Acci L. Measuring Well-Being and Progress. *Social Indicators Research*. 2011
4. Sen A. *On economic inequality*, Oxford: Clarendon Press; 1973.
5. A M Phegley , D Melby, C Schenck, J Mandel, P K Peterson, 1999. Can we predict recovery in chronic fatigue syndrome?
6. Adams, Marilyn, 1987. *William Ockham. Vols. 1–2*. South Bend, IN: University of Notre Dame Press.
7. Adams, Robert, 1975. “Where Do Our Ideas Come From? Descartes vs. Locke,” in *Stich 1975*, 71–87.
8. Alane, Lilli, 1994. “Sensory Ideas, Objective Reality, and Material Falsity”, in John Cottingham (ed.), *Reason, Will, and Sensation*, Oxford: Clarendon Press.
9. Bagh-E Nasar, 2017, The Study Of “Landscape” Concept with an Emphasis on the Views of Authorities of Various Disciplines
10. Base Content Copyright 2022 Market Hardware, Inc. Additional text content Copyright 2022, Curtis’s Landscaping, Inc. | Curti & Associates, Ltd.
11. Bradburn NM. The structure of psychological well-being. Chicago: Aldine; 1969.
12. Bratman, G.N., et al., *Science Advances*, 2019
13. Bethesda, MD: National Institutes of Health, National Institute of Mental Health. 2015.
14. Denis Galligan, 2005. Law in Modern Society
15. DesJardins, J.R. 2000. Environmental Ethics: An Introduction to Environmental Philosophy. 3rd ed. Wadsworth, Belmont, CA.
16. Devall, B. and G. Sessions. 1985. Deep Ecology: Living as if Nature Mattered. Peregrine Smith Books, Salt Lake City, UT.
17. Diener E, Seligman ME. Beyond money. Toward an economy of well-being. *Psychological Science in the Public Interest* 2004;5(1):1–31.

18. Diener E. Assessing well-being: the collected works of Ed Diener. New York: Springer; 2009.
19. Dubos, Rene, 1969. The Biosphere: a delicate balance between man and nature.
20. Ecotherapy: Theory, Research and Practice
21. EEA Technical Report 15/2011 Revealing the costs of air pollution from industrial facilities in Europe
22. Erickson, S. and King, B. 1999. Fundamentals of Environmental Management. John Wiley and Sons, Inc.
23. Freeman, Harry. 1995. Industrial Pollution Prevention Handbook. McGraw-Hill, Inc.
24. Guite HF, Clark C, Ackrill G. Public Health. 2006.
25. Hays, Ron D., et al. "Development of physical and mental health summary scores from the patient-reported outcomes measurement information system (PROMIS) global items." *Quality of Life Research* 2009; 18:873-880.
  
26. Heather Ohly, Mathew P. White, Benedict W. Wheeler, Alison Bethel, Obioha C. Ukoumunne, Vasilis Nikolaou, 2016. Attention Restoration Theory: A systematic review of the attention restoration potential of exposure to natural environments.
27. Jordan, M., & Hinds, J. (Eds.), Red Globe Press, 2016
28. *Karl Marx on the materials of production, 1867. Against Nature.*
29. Kumar, M. (2009, October 16). *Difference Between Feelings and Emotions*. Difference Between Similar Terms and Objects.
30. Kumar, Manisha. "Difference Between Feelings and Emotions." *Difference Between Similar Terms and Objects*, 16 October, 2009.
31. Marie Stevenson, PCC, MSODL, 2002. Physical well-being and health: What it is and how to achieve it
32. Marmot M, Bell R. Fair society, healthy lives. *Public Health*. 2012.
33. Mathematics and 21st Century Biology. (2005). National Academies Press.
34. *National Geographic Society is a 501 (c)(3) organization. © 1996 - 2022 National Geographic Society.*
35. National Geographic Society. (2011, August 15). Ecosystem. National Geographic Society.
36. Nature and Mental Health: An Ecosystem Service Perspective

37. Ostir GV, Markides KS, Black SA. et al. Emotional well-being predicts subsequent functional independence and survival. *J Am Geriatr Soc* 2000;48:473–478.
38. Ostir GV, Markides KS, Peek MK, et al. The association between emotional well-being and incidence of stroke in older adults. *Psychosom Med* 2001;63:210–215.
39. Paula Braverman, Laura Gottlieb, 2014. The Social Determinants of Health: It's Time to Consider the Causes of the Causes
40. Fact sheet no. 220. Geneva, Switzerland: World Health Organization.
41. The Concept of the Ecosystem. (2017). Umich.Edu.
42. White, L. 1967. The Historical Roots of Our Ecologic Crisis. *Science* 155: 1203–07.
43. Willis, A. J. (1997). “The ecosystem: an evolving concept viewed historically”.
44. Wilson, E.O. 1984. *Biophilia*. Harvard University Press, Cambridge, MA.
45. World Health Organization — Air pollution & health impacts and the Apedom study
46. World Health Organization, Commission on Social Determinants of Health. Geneva: WHO; 2008. Closing the gap in a generation: health equity through action on the social determinants of health. CSDH final report.

## **8 Appendix**