

The Enlightenment of Maslow's Hierarchy of Needs Theory on Rural Environmental Education in China

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Abstract

Ecological revitalization is the core content and important support of rural revitalization, and the villagers are the main force of rural ecological environment construction, as well as the destroyers in their production and life. Their actions such as burning stubble, abusing pesticide and fertilizer, discharging livestock manure everywhere, and stacking garbage randomly, which have caused great trouble to environmental remediation. Therefore, strengthening villagers' understanding of environmental connotations, changing their unfriendly attitudes and behaviors towards the environment, and enhancing their enthusiasm for participating in environmental protection are urgent tasks for rural environmental protection. In the past 20 years, while urban environmental education has gradually been strengthened, the effectiveness of rural environmental education has not been significant, and the issue of farmers' zero awareness of environmental protection has become increasingly prominent. To solve the environmental problems in rural areas, the first and foremost task is to find appropriate entry points, carry out effective environmental education, and improve the environmental awareness, knowledge, and participation in environmental protection practices of rural residents. Based on Maslow's Hierarchy of Needs Theory, this paper analyzes villagers' needs, motivations, behavior and their impact on environmental problems in terms of physiology, safety, love and belonging, respect, self realization, and puts forward corresponding countermeasures in order to promote rural environmental education.

1. Introduction

Environmental problems have become a global issue, posing a serious threat to human survival. With the increasing severity of environmental problems and people's deepening understanding of environmental issues, they have become increasingly aware of the importance of environmental education in cultivating environmental protection awareness. Therefore, environmental education has become an increasingly important field of education. Due to the unique nature of production activities, the environmental problems in rural areas are particularly serious, and environmental education is even more urgent. In the past decade, China has gradually carried out rural environmental education and achieved certain results. However, there are still various new and old environmental problems [1-2], which seriously affect the physical and mental health of farmers, reduce their quality of life,

and hinder the process of rural revitalization. The reason for this is that the current rural environmental education lacks attention, focusing on rigid policy promotion, dull theoretical learning, and one-way knowledge infusion, which fails to meet the living characteristics and survival needs of farmers, and thus fails to effectively play the role of subjectivity of rural residents [3]. Based on Maslow's Hierarchy of Needs Theory, this paper analyzes villagers' needs, motivations, behavior, and their impact on environmental issues in terms of physiology, safety, love and belonging, respect, self-realization, etc., in order to promote rural environmental education.

2. Environmental issues in rural areas of China

2.1 The environmental Status of rural areas in China

Some scholars monitored the status of environment and health of several regions (including economically developed and underdeveloped areas) from 2018 to 2020. It has been found that the rural environmental sanitation situation in China is gradually improving, but various measures still need to be taken to improve it. Specifically, 66.04% of residents in underdevelopment areas drink centralized supply water, and more than 98.8% of residents in developed areas drink centralized supply water; The proportion of sanitary toilets has increased year by year, from 1.08% to 21.82% in underdevelopment areas, and 99.7% in developed areas, with complete sewage flush toilets as the main (50.7%); In underdevelopment areas, manure is mainly treated by direct fertilization, with the proportion declining year by year, from 88.33% to 60.00%. In developed areas, manure is mainly treated by entering the drainage system (74.8%). The domestic garbage in underdevelopment areas is mainly stacked at random, while that in developed areas is mainly stacked and landfilled at designated places. The Domestic sewage in underdevelopment areas is mainly discharged at will, while that in developed areas is mainly discharged through pipelines and recycled by sewage treatment plants (84.0%). The positive rates of mouse stains and flies in the kitchen of farmers have decreased from 24.00% and 81.67% to 5.33% and 44.33% respectively, the positive rate of mosquitoes has been increasing year by year (from 2.00% to 4.00%), and the positive rate of cockroaches are relatively low (from 0 to 0.33%). The disposal of pesticide waste packaging bottles (bags) is mainly done by discarding them at the edge of the field or in garbage piles. It can be seen that there are still many environmental problems in villages in China: The centralized water supply needs to be strengthened; popularization rate of sanitary toilets is relatively low; The harmless treatment rate of feces is not high; domestic waste has the characteristics of strong regional and obvious dispersion, and the treatment level still needs to be improved; there is still significant breeding of vector organisms [4-6]; there are still environmental issues such as land occupation, soil erosion, and water pollution in some places [7].

2.2 Environmental Awareness of rural residents in China

Farmers in a few developed regions have good environmental awareness, while most farmers in other regions have little knowledge about environmental protection and lack environmental awareness. Some villagers even feel very unfamiliar with the term 'environmental protection'. Some farmers also believe that environmental protection is a problem of the city and industrial production [8].

2.3 The current situation and reasons of rural environmental education in China

Due to the backwardness of most rural residents' concepts, low education, and weak ability to accept new concepts and technologies, their environmental awareness is low, and they have difficulty in understanding environmental knowledge and technology. In addition, they are one-sided in pursuing production and unwilling to spend time on environmental education. Therefore, the effectiveness of environmental education in rural areas is not significant, and there are problems such as insufficient

attention, a focus on rigid policy promotion, dull theoretical learning, and one-way knowledge infusion, which fails to meet the living characteristics and survival needs of farmers, and fails to effectively play the role of subjectivity of rural residents [3].

3. Maslow's Hierarchy of Needs Theory

In the 1940s, Abraham Maslow, an American social psychologist, put forward the Hierarchy of Needs Theory in his Theory of Mobilizing People's Initiative and Motivation, and Personality. This theory is based on two basic arguments: (1) humans are animals with needs, unmet needs can affect behavior, and satisfied needs do not motivate behavior; (2) There are levels of human needs, and only when lower level needs are relatively satisfied can higher level needs appear.

Maslow's Hierarchy of Needs Theory divides human needs into five levels. The first and fundamental level is physiological needs, the second level is safety needs, the third level is love and belonging needs, the fourth level is respect needs, and the fifth level is the highest need, that is, self-realization needs. The first four levels of needs are called deficient needs, which means that individuals can basically feel comfortable only after meeting these needs; The fifth level of needs is called growth needs, reflecting the needs of individual growth and development. The five types of needs present a hierarchical progression, but may not necessarily appear completely in sequence. Generally speaking, when a certain level of needs is relatively satisfied, one will pursue a higher level of needs. During the same period, an individual may have several needs, but only one dominates. The needs that have been met no longer have motivational power, but no need will disappear due to the development of higher-level needs.

4. The basic needs of farmers and their impact on environmental protection

4.1 The physiological needs of farmers

Physiological needs include clothing, food, shelter, and transportation, which are the most basic requirements for human survival and the most primitive and fundamental needs of humanity. In a sense, physiological needs are the most important driving force behind people's behavior. Farmers use their skill, professional knowledge, and business capabilities to seize market opportunities, implement production, improve product quality, adjust the structure of agricultural products, utilize the multi-functionality of agriculture to meet consumer needs, pursue maximum returns, and objectively promote the modernization development of "agriculture, rural areas, and farmers" while subjectively pursuing physiological needs. This is a positive effect of the physiological needs of farmers.

Even ordinary behavioral processes such as clothing, diet, housing, and transportation are silently affecting the environment. The first is clothing, which uses some dyes and chemical agents in its production process. The emissions can affect water sources and also have an impact on the health of workers and wearers who come into contact with these chemical agents; the indiscriminate disposal or burning of worn-out clothes can result in pollution such as the spread of dioxins, plastic microfibers, and bacteria. The

consumption concept of "Fast fashion" will drive consumers to buy more fashionable and colorful clothes. On one hand, it will stimulate manufacturers to produce more and more pollution. On the other hand, it will cause more unused, piled up, abandoned and wasted old clothes. The second is food. The variety of food often makes it difficult for villagers to choose. They want to buy and taste everything. In order to "save face" and "show off", the food purchased during weddings and funerals is even more abundant. The more they buy, the more packaging bags they have. The use of disposable containers is also astonishing, resulting in "white pollution" that cannot be underestimated. If they buy too much and can't finish it, dumping it out does waste food and pollute the environment. More consumption means more supplies and rapid planting may have more impacts on the environment and human health from pesticides, fertilizers, and additives. Of course, there is another approach, which is to keep an amount of food on the table instead of in the refrigerator, which may seem frugal but actually damage peoples' health [9-10]. The third is "living", which refers to the residential environment. "How to improve the effectiveness and orderliness of rural residential environment governance" is a research hotspot in the current domestic academic community. The rural residential environment is an extension of the living environment in rural areas [11], which is a dynamic and complex giant system composed of human environment, regional spatial environment, and natural ecological environment. It is also a composite of material and intangible environments formed by rural residents in their production and life [12], including both pure private living spaces and semi-public spaces between public and private living spaces. Semi-public space mainly refers to the space shared by some farmers, such as a certain cove or the shared space of several farmers. Pure private living space refers to the living space owned by a certain farmer family. The management of semi-public space often has the phenomenon of "Diffusion of responsibility", that is, people believe that "everyone is responsible for the public place", and even believe that "the public place is managed by the public", always waiting for others to start and do more cleaning. The result is that no one does anything, and semi-public spaces become increasingly dirty and messy due to lack of management. Pure private living space includes farmers' courtyards, houses, and even indoor living facilities. Harmful substances emitted from overdecorated or newly renovated houses, furniture, kitchen fumes, as well as noise, inappropriate lighting, and the stacking of household waste, are environmental issues of purely private living space. Villagers have a subconscious idea: "Everything I am using or have used is clean and safe". Based on this concept, they often have no desire to clean their homes. Final is "transportation". For the convenience of daily life, private cars, various novel portable mobile transportation tools, shared electric vehicles, bicycles, etc. are popular tools. Some of them may generate noise and exhaust pollution, while others may generate waste such as batteries, plastics, metal parts due to poor management or improper use. Villagers have a superficial understanding of pollution in terms of "living" and "transportation", without realizing the harm to humans, livestock, and crops. They believe that the living conditions in rural areas are poor, and the effects of odor, oil smoke, noise, and inappropriate

lighting are ubiquitous and inevitable. They can only tolerate it and get used to it or believe that improving these situations requires a lot of manpower and resources, and the results are not significant, which also delays production and is not cost-effective.

4.2 Farmers' safety needs

Safety needs refer to the needs to avoid danger and seek life security, which can be extended to include social stability, career stability, and life security. Scholars have proposed the Vulnerability Theory of Farmers' Life Security [13]. The so-called security vulnerability refers to the risk of economic loss or poverty faced by individuals or families due to external factors. The reasons for the fragility of life safety are the impact of external risk factors and the low ability of internal risk resistance and social system support [14]. Internal risk support mainly comes from family and land security. External risk protection mainly comes from social security and collective security in villages and towns. From the perspective of Vulnerability Theory of Farmers' Life Security, the safety of farmers' lives depends on whether they face external risks, whether they have strong internal risk support capabilities, and good external risk protection measures [15]. When the interference of external risk factors is small or farmers have sufficient internal support and external guarantees to resist risks, they will have a strong sense of life security. The current huge social change is pushing China into a "risk society", and even into a high-risk society [16]. The interweaving of "external risks" and "artificial risks" [17] is an important symbol of China's entry into a risk society, and farmers are at the forefront of the risk society. First, agriculture is an industry that depends on the weather, and natural disasters constantly threaten and hinder crop harvests, which is already a huge risk. Second, there is the issue of land. For farmers, land has always played a dual role in ensuring both life and production and is crucial for stable benefits and career stability. It is also known as the last line of defense for farmers' employment and elderly care, but the function of land security is weakening. This is manifested in the following five points: (1) China has a large rural population and limited per capita arable land area which is still decreasing, resulting in a very prominent contradiction between people and land. (2) With the acceleration of industrialization and urbanization, non-agricultural land is increasing, reducing rural arable land area and weakening land security capabilities. (3) The price of agricultural products and the price growth of rural Means of production are unbalanced, and farmers increase production without increasing income. (4) The aging of agricultural labor force is severe, which not only leads to low production efficiency but also hinders the development of modern agriculture. (5) The issue of land ownership. China is vigorously promoting the confirmation and certification of farmers' contracted land rights, aiming to solve the problem of farmers' land (use rights) ownership, allowing them to have tangible land rights, and providing strong guarantees for the current rural land management system. However, the land transfer system is not yet sound, the operation and management of cooperatives are still in the exploratory stage, and various support policies and funds have not yet been institutionalized and normalized. The low comparative income of agricultural production leads to a lower income level for

farmers, and many discriminatory practices, such as depriving farmers of their right to speak, and depriving them of their rights, make farmers constantly worry about their income not being guaranteed. Third is the issue of medical services. In the past 20 years, the country has actively promoted the development of rural medical and health services, continuously increasing subsidies for the New Rural Cooperative Medical Scheme and basic public health investment, promoting the integration of the New Rural Cooperative Medical Scheme with urban residents' medical insurance, and continuously improving rural medical services and public health conditions, effectively safeguarding and enhancing the health rights and interests of farmers. However, there are still many problems in rural medical and health services, especially structural difficulties such as insufficient fairness, effectiveness, balance, and accessibility of medical care. Farmers still have anxiety about "difficult to access" and "expensive to access" [18-19]. Final is the issue of elderly care. The imperfect social security policies, restrictions on family planning policies, and changes in fertility concepts have brought about problems such as "Aging and Few-children", "aging before getting rich", and "aging before getting prepared", which have led farmers accustomed to "raising children to prevent aging" to fall into a "retirement dilemma" [20-21].

"Sustainable Farmers' Livelihoods Framework" proposed by the UK Agency for International Development [22] uses a two-dimensional plan to display the core elements of livelihoods and their relationships. This framework divides the livelihood assets of farmers into five categories: human assets, natural assets, material assets, financial assets, and social assets. It points out that in the risk environment caused by institutional, policy, and natural factors, under the mutual influence of assets, policies, and institutions, the nature and condition of the assets that serve as the core of livelihood determine the type of livelihood strategy adopted by farmers, leading to a certain livelihood outcome, and livelihood outcomes, in turn, have a negative impact on assets, affecting their nature and condition. That is to say, the vulnerability of farmers is determined by the allocation of livelihood assets. The various uncertainties and changes in the social environment will intensify farmers' strong pursuit of safety needs, prompting some farmers to engage in short-term profit behaviors, such as excessive cultivation, abuse, and excessive use of pesticides in order to obtain more income within a limited contract period, illegal construction of trenches to protect their own farmland and aquatic products, and arbitrary dumping of garbage to save time and cost. They are not aware that doing so will pollute the environment, nor are they aware of the harm that environmental pollution poses to humans, livestock, and crops. They neglect environmental protection and believe that "rural areas are dirty and smelly, and cannot be produced in a neat and clean manner". Various short-term profit behaviors seem to save costs and increase income, but actually endanger environmental safety, especially air, water, and food safety, which is not conducive to sustainable agricultural development and the health of farmers.

4.3 Farmers' needs for love and belonging

The needs for love and belonging are also known as the needs for social interaction. The need for love refers to an individual's desire to receive care and understanding from family, friends, colleagues, etc., including the need for family, love, and friendship. The need for belonging is the need to participate in and attach to a certain organization, reflecting a psychological identity and dependence, including the identity of the group, the identity of the field, and the cultural identity in the field. The satisfaction of the needs of love and belonging can provide individuals with harmonious and stable interpersonal relationships, allowing them to experience a sense of interpersonal security.

In traditional village society, village space is closely related to blood, clan, and geography. People establish interpersonal relationships on this basis, forming a unique and distinct local society - the society of human relations. Therefore, the traditional rural society is a society of acquaintances, where people are connected by blood and geography based on the rules of human relationships and communicate in daily life to form information exchange and mutual enjoyment. In dense and complex social relationships, people tend to manage their own behavior to reach a certain consensus, which leads to the formation of field consciousness [26], including the interconnection and confrontation of various forces. Therefore, as Bourdieu [23] said, relationships are the foundation of the field, and human gregariousness determines that although individuals in the same field may not be very familiar with each other, they will achieve some unity in certain behaviors and ways of handling things, in order to integrate into the field. Similarly, the field can also have a subtle impact and implication on individuals' role or identity. For example, people in the same village may have the same wedding and funeral customs, which in turn affect those who enter this field, forming a common spatial memory and ultimately becoming a group with unique attributes. Regional communication is built on the homogenization of community connections within the circle of acquaintances, and the interactive rituals between people are based on a social model of small circles. Due to the geographical characteristics of villages, most of the communication and interaction methods among villagers tend to be informal. They establish an informal communication field by visiting each other, sitting and chatting in the yard, or chatting by the roadside. This "close" and "trustworthy" relationship is prone to forming strong interpersonal trust, known as the "hometown complex". Due to the fact that actors in the same field have the same status and have similar factors affecting their habits, groups all have similar personalities and even unified action logic. This homogeneous habit enables people to establish close alliance relationships, and similar interactions gradually rationalize their habits. From this, it can be seen that through the persistence of common habits, forming a common identity and dependence, a sense of belonging can establish strong interpersonal trust within the circle, bringing a practical sense of security to the members of the circle. If a member of the circle no longer adheres to common habits, he will be regarded as "dissidents" by the circle and rejected, making he feel isolated and insecure. Therefore, from the perspective of belonging needs, we can have the following understanding of the

dirty and disorderly phenomenon in rural areas: for a long time, the habit of the rural community in China has been "diligent in work, neglecting cleanliness". Farmers tend to believe that 'being unclean, eating without illness; being irregular, enriching and prosperous'. If someone pays special attention to cleanliness and tidiness, he will appear out of place among the villagers and is often mocked for being labeled as "stinky beauty", "fake literary style", and "fake foreign devils", or even isolated, despised, and disguised to evade welfare benefits. Therefore, regardless of whether villagers like this kind of mess or not, they will not give up their inherent circle habits alone or first, even if it is unscientific and unreasonable, out of the need for a sense of belonging and fear of losing security. And this unconscious adherence to common habits is precisely the "ideological" bottleneck of rural environmental education.

4.4 Farmers' esteem needs

The needs for esteem includes self-esteem and the need to be respected by others, specifically manifested as the desire to be appreciated and highly valued by others. Meeting these needs can enhance one's self-confidence and sense of pride. If discouraged, it can lead to a sense of inferiority. For a long time, rural areas in China have been despised by society for being dilapidated, backward, dirty, and disorderly, and farmers have been marginalized and stigmatized due to poverty, low education level, and rough behavior, resulting in low social status and inadequate income. In the past 20 years, with the implementation of the relevant policies of "socialist new countryside" [24], the economic conditions of rural areas have been greatly improved, and the original dilapidated and backward appearance has been completely changed. Farmers have moved into spacious new apartments, new buildings, and even new villas. From this perspective, the living conditions of farmers are better than most urban residents who live in commercial housing. At present, the per capita disposable income of rural residents in China is 16021 yuan, while the per capita disposable income of urban residents is 42359 yuan, which is 2.6 times the per capita disposable income of rural residents [25]. The urban-rural income gap is huge, but after balancing the effect of high consumption level, especially the high housing prices in urban areas, the urban-rural income gap is actually not very obvious. In some frontier areas, such as Dongguan City and Shunde City, Guangdong Province, the income of farmers is still higher than that of ordinary urban wage earners. At the same time, the application and promotion of modern agricultural technology, as well as the superior living conditions of the "white-collar class", have made farmers aware of the importance of knowledge, and they have also made every effort to improve their own and their children's education level. In this way, the current education level of farmers has greatly improved, but there is still a significant gap compared to the education level of urban residents. Farmers' democratic and legal awareness is weak, and their ideological and moral qualities are relatively backward. These factors have affected the process of rural revitalization in China. Although the large-scale modern production methods have largely changed the backward and messy situation of "a handful of soil and a handful of sweat", the lack of environmental education has led farmers to neglect the environment protection, resulting in a inconspicuous

improvement in the "dirty and messy" appearance of rural areas and the "rough and messy" image of farmers. Except for a small portion of rural areas that carry out "rural tourism" and "rural entertainment" characteristic projects, the rest of rural areas are still dirty and messy, and farmers still carry the stigma of being 'beggars', 'thieves', and 'virus carriers'. Wang Xinming [26] and others combed the Kwai accounts with more than 50000 fans with the keywords of "farmers" and "rural areas", and obtained 252 effective research samples. Through analyzing the video content and fan messages and other text information released by them, they found that more than half of the accounts stigmatized the image of farmers as "vulgar, backward and ignorant", "clowns judging ugliness and seeking novelty" and "vandals who violate laws and disciplines". The stigmatization of farmers leads them to fall into a paradox of self-construction and other cognition, strengthening social class bias and contradictions towards farmers, and even causing class conflicts, hindering farmers' identity, cultural confidence, and social integration. Of course, the main reason for this stigmatization is a class bias, but it is also closely related to the failure of farmers to create and promote their own image and tell well the "charm story of a new socialist countryside".

4.5 Farmers' needs of self-actualization

Simply put, the self-actualization needs of farmers are to vigorously develop rural characteristic industries through their own modernization, become rich, and maximize their potential. Prosperity in life is fundamental to rural revitalization. In recent years, society has developed rapidly and materials have been greatly enriched. Farmers naturally expect higher incomes and pursue higher quality of life. It is reported that 49.76% of farmers are dissatisfied with their current income, and 58.43% of farmers aged 18-45 are dissatisfied with their current income [27]. In a mechanized society, there is a dialectical relationship between Chinese farmers and modernization [28]: on one hand, modernization cannot do without farmers, but farmers are alienated while promoting modernization and are in a dilemma; On the other hand, farmers are also inseparable from modernization, as they are overcoming difficulties and improving their own level of modernization. This is reflected in the different stages of modernization, during the rising stage of industrialization and modernization in China, due to the "poor" foundation, it is necessary to sacrifice the interests of farmers in exchange for the rapid accumulation of industry. Industry and agriculture, as well as urban and rural areas, have been artificially divided into a hierarchical gap. Although the overall living standards of farmers have improved, in the entire social stratification, farmers appear outdated and trapped, especially with poor economic capabilities and low social status. After industrialization and modernization reached a certain scale and obtained foundation, achieving agricultural modernization, improving farmers' economic conditions, and eliminating farmers' difficulties have become inevitable for modernization itself. This is not only the way out for farmers, but also the way out for China's modernization.

The essence of agricultural modernization is the modernization of farmers, that is, the modernization of the quality of farmers. Traditional agriculture mainly relies on the weather and does not

have high requirements for the quality of farmers. Modern agriculture is a kind of scientific and technological agriculture. Although it needs the strength and experience of practitioners, it also needs their scientific knowledge, professional technology, and management level: while mastering various agricultural knowledge, they must be familiar with, understand, and master various agricultural policies, master certain processing knowledge. "Internet plus agriculture" also requires "technology empowerment" for farmers, i.e. training in e-commerce, network technology, and live-streaming sales. The basic requirements of these three aspects influence each other and are unified in the practice of agricultural and rural modernization. According to expert evaluation, if farmers only engage in the production process and do not engage in subsequent stages, they can only obtain 10% of the profits of the entire industry chain. For a long time, the reason why farmers in our country are poor and backward is largely because the products they sell remain in an extensive state of "hair down" (without organization), "naked" (without packaging), "clear soup noodles" (without deep processing), "no name or surname" (without brand), and "unknown origin" (without origin). On the other hand, environmental pollution, soil degradation, extreme weather, and reduced crop yield and quality have put forward urgent and strict requirements for environmental protection. However, the education level of Chinese farmers is generally low, most of whom have a junior high school or lower education, and their ability to accept new technologies and knowledge is not high. Therefore, they are even more unable to understand the importance of environmental protection from a scientific perspective, master and consciously apply necessary environmental protection technologies. Governments at all levels are concerned about economic benefits, and the saying goes, 'When we focus on the economy, we only have GDP in our eyes'. The media also mostly emphasize the importance of agricultural production technology, and there are few promoting environmental protection and green production. This makes farmers view increasing production and income as their own value while ignoring other needs such as environmental protection.

Today's agriculture no longer only has a single function of food supply, but also has various functions such as employment and income, raw material supply, ecological conservation, tourism and leisure, cultural inheritance, etc. Ensuring food safety, ecological safety, and cultural safety has become the focus of social attention, and is also the most important value of agriculture. Food safety is a prerequisite for human survival. Food safety not only refers to total safety, but more importantly, it refers to structural safety and quality safety. Consumers' demand for ecological, green, and organic food is increasingly strong, but the excessive use of pesticides, fertilizers, and herbicides in the production end often results in excessive residues. The phenomenon of harmful food additives in the processing process and counterfeit and inferior products in the sales process also seriously affects food safety. Ecological security is the foundation of life, and the production of high-quality agricultural products requires a good ecological environment. Of course, people also need to live in a good ecological environment. It is incumbent on agriculture and rural areas to provide a nurturing environment for society. Cultural

security is the root of civilization. Today, with the rapid development of high-tech, traditional agricultural culture is experiencing a cliff-like sinking. The collection and organization of traditional production and living utensils, handicrafts, and the inheritance of concepts, ways of thinking, life wisdom, and institutional construction in traditional culture have become urgent matters.

In summary, if we only pursue increasing production and income, overemphasizing the food supply function of agriculture, and neglecting the functions of ensuring food safety, ecological safety, cultural safety, etc., it will endanger the physical and mental health of citizens, be detrimental to social harmony and stability, and ultimately hinder farmers' production and income.

5. Approaches to rural environmental education Based on Maslow's Hierarchy of Needs Theory

5.1 Physiological needs - overall planning, and beautifying the overall environment

Agricultural production is the top priority in rural areas and the main channel to meet basic survival needs. Rural environmental education should comply with this demand and seek a combination of labor and education. If local agricultural production issues are ignored and environmental education is talked about, it is difficult for villagers to devote their energy to environmental protection learning that is neither prioritized nor beneficial.

On the other hand, in response to the environmental issues in the villagers' "food, clothing, housing, and transportation", we will teach them some better solutions, integrating the concepts of civilization, health, and green environmental protection into daily life, and achieving the goal of environmental protection, saving money, and increasing income. For example, there are the following ways to deal with old clothes. First, clothes with outdated styles and good texture can be transformed into the favorite styles for continue wearing. This method is more troublesome, but it is not only environmentally friendly but also can save a lot of money. Second, clothes that are relatively old and will not be worn again can be given away or donated. Third, clothes that are relatively old, basically can't be worn again, and are not good for giving away can be cut into various household goods (such as mops) or made into handicrafts, such as dolls, baby clothes, cushions, etc. Final, recycling, making woven tapes, etc. In terms of diet, rural families should be guided to form a healthy diet culture, promote scientific diet standards, guide villagers to balance nutrition, prepare meals as needed, eat reasonably, popularize food storage facilities such as household refrigerators to improve food storage conditions and reasonably use leftovers, not store food for a long time or blindly. On the other hand, we should pay attention to the important influence of diet culture on food waste of rural families. In terms of "living" and "transportation", we should advocate for green homes and green transportation, provide economical and practical green building materials and green transportation tools, and teach relevant usage methods.

5.2 Safety needs - Combining science and education to assist environmental protection practice

Safety needs prompt villagers to pay the most attention to whether there are factors that threaten their personal safety and physical health, and at the same time, they hope to create more wealth in pursuit of a higher quality of life. Safety needs can also easily prompt villagers to adopt short-term interest behaviors. In response to the above situation, we should provide education in the following aspects: First, carry out various forms of rich environmental protection publicity and education. In response to the environmental protection issues that arise in various aspects and links of production, various methods such as multimedia and virtual reality technology can be used to conduct environmental education through theoretical explanations, case analysis, experimental demonstrations, and other forms. This helps villagers to correctly understand that environmental protection is not only related to consumers' health, but also the first and most frequent contacts of harmful substances as producers, be the first to be affected by pollution. Second, actively pay attention to the cutting-edge dynamics of agricultural technology, promote new agricultural technologies in education, reduce environmental pollution and damage caused by agricultural production, and meet the needs of villagers for a healthy living environment. "One-to-one" guidance can be carried out in practical activities such as "Targeted Poverty Alleviation" and "Three Trips to The Countryside" to help villagers master new agricultural technologies. New technologies that balance ecological and environmental protection with convenience and efficiency can help reduce factors that threaten physical health in the environment, save more costs and create more income within the same time frame, and help integrate environmental education into the production activities. Final, adhere to the principle of "knowledge and action go hand in hand", take necessary reward and punishment measures, and require villagers to practice environmental knowledge, proficiently acquire skills in various environmental protection activities, improve environmental awareness [30], and transform environmental awareness and knowledge into environmental protection actions in daily life and production practice.

5.3 Love and belonging needs - Skillfully borrowing rural customs and infiltrating environmental protection concepts

Villagers yearn to establish various emotions with others in their collective life and hope that their ideas and behaviors can fit in and be accepted by the collective. And rural customs are an important channel to enhance the sense of belonging and guide and assimilate the behavior of villagers. For example, the Dragon Boat Race in Tongren, Guizhou, Guangdong-Hong Kong-Macao Greater Bay Area, and other places. During the Dragon Boat Festival, people come from villages to watch the dragon boat race, which is the best opportunity to promote the low-carbon travel method of "low pollution and zero emissions". Another example is the "Floating Color" parade of the Lantern Festival in Wuchuan, Guangdong Province, which is an art program that both villagers and citizens like to watch. We can adopt the "infiltration teaching method" to integrate environmental education themes into the "Floating

Colors" performance, which can not only enhance the modern sense of the "Floating Colors" performance, but also guide villagers to practice environmental protection concepts, form green new customs and new "fields", and receive the due acceptance of environmental protection ideas and behaviors.

5.4 Respecting needs - Setting a model for environmental protection

If villagers actively receive environmental education and take practical actions, which can receive recognition or public praise from everyone, the initiative of this behavior will be greatly enhanced and become an example to attract more people to participate. We can cooperate with the local government to select "advanced environmental protection households", "environmental activists", and "environmental protection demonstration villages", and promote their environmental education deeds through channels such as radio reporting, cultural station posting, flag hanging, and even creating internet celebrities, in order to set an example and expand the scope of environmental education influence. We need to integrate the protection of excellent folk culture into rural culture, integrate it into the planning of rural living environment, cultivate the soil for the growth of folk culture, stimulate the vitality of folk culture, and encourage and support rural society to restore its own folk culture. We can also choose some villages and dwellings that actively participate in environmental protection practices, and have beautiful environments, unique folk customs, and good hygiene conditions as the development units of "farmhouse entertainment", "ecological tourism", and "environmental education bases". We can help villagers set up environmental experience projects in tourism planning, and appropriately add scientific and environmental knowledge links in practical teaching such as research travel, in order to create a combination of artistic and cultural value, an influential environmental brand. At the same time, we encourage tourists to visit and learn about the charm of these village houses, as well as the knowledge, skills, and taste of the villagers. This will not only increase villagers' income but also attract praise from various sectors of society, thereby enhancing the social identity of rural areas and farmers, and facilitating their "decontamination" and better integration into society.

5.5 Self-actualization - Naturally fulfilling the personal dreams of villagers

Self-actualization is the highest level of needs, which refers to the ability to fully utilize one's strengths, potential, values, and emotions in work practice, and fulfill one's aspirations. When we do a good job of rural environmental education and improve the rural environmental remediation through the above four ways, we can make the countryside look new: flat roads, clean houses, beautiful natural scenery, and unique folk culture, etc. On one hand, it beautifies the rural living environment, and improves the quality of life of villagers; On the other hand, it has broadened the channels for social resources to flow to rural areas, promoted the development of rural areas, and the realization of individual aspirations of villagers, and is also conducive to narrowing the urban-rural gap, alleviating urban-rural conflicts, and better ensuring the stable social development.

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