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Policies and laws on human resource development in agricultural sector in Vietnam now

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Abstract: In the trend of the 4th Industrial Revolution and the trend of digital transformation, along with the orientation of building ecologically sustainable agriculture, modern countrysides, civilized knowledge farmers, meeting the requirements of international economic integration. More than ever, countries' agriculture requires human resources from managers to researchers and those directly getting involved in agricultural production that meet the standards of professional qualifications, capacity and quality of work performance. In Vietnam, in terms of resources in the agricultural sector, there is a surplus of manual and simple labor but a shortage of high-skilled workers and lack of good managers and organizers. In terms of policies and laws in the field of agriculture, it is relatively complete when there are 15 laws passed in 4 production sectors: fisheries, forestry, horticulture and animal husbandry. This is an important legal basis to mobilize resources, including agricultural human resources in order to develop the country. However, the legal system on human resource development in the field of agriculture in general and on training, education, compensation and support in particular is still lacking and scattered. Thus, the article focuses on analyzing the current status of regulations and practices of implementing regulations on human resource development in the agricultural sector, thereby proposing corresponding policies and laws in Vietnam in the next time.

Keywords: agriculture; human resources; human resource development; human resource development in the agricultural sector

1. Introduction

In Vietnam, resources in the agricultural sector have an excess of manual and simple labor but a shortage of high-skilled labor and lack of good managers and organizers. Besides, our country is accelerating the process of industrialization and modernization, while promoting the urbanization process nationwide. In other words, along with the rapid changes in science and technology as well as climate change, they have had a strong impact on the traditional agriculture and high-tech agriculture of our country more demanding in the production process of agricultural and rural products in the integration period. In which, agricultural and rural human resources applying science and technology to agricultural production are becoming an inevitable trend to create a breakthrough in productivity, quality and economic efficiency in rural agricultural production and contribute to environmental protection. Thus, it is clear that the agricultural sector as well as other industries need to restructure production to suit the country's development requirements. Training, fostering, attracting and rewarding human resources to serve rural agricultural development is an urgent need currently in Vietnam.

2. Research overview and research method

Currently, policies and laws on attracting and appreciating talents, and promoting human resources are always an important task that Vietnamese Communist Party has been concerned about since its inception until now. Throughout the Party Congresses, documents have affirmed that human factor is a vital factor in deciding the victory or defeat of every front and every revolution (VOV, 2027). With that policy, the State has issued policies as well as laws and implemented lots of solutions on human resource development in general and human resource development in the agricultural sector in particular in recent times. Particularly, Decision No. 579/QĐ-TTg dated 19 April 2011 of the Prime Minister approving Vietnamese Human Resources Development Strategy for the period 2011–2020; Decision No. 1216/QĐ-TTg of the Prime Minister dated 22 July 2011 on Approving Vietnamese Human Resources Development Plan for the period 2011–2020; Resolution No. 52/NQ-CP, dated 15 June 2016 of the government promoting human resource development of ethnic minorities in the period 2016–2020, orientation to 2030; vocational training program for rural workers (The Prime Minister, 2009); Labor Code 2019; Employment Law 2013; Law on Vocational Education 2014; Education Law 2019; Law on Higher Education 2012 (amended and supplemented in 2018) and so on. Specially, right after the 13th National Party Congress, human resources in the agricultural sector in particular and rural agricultural development in particular is valued more by the Party. Accordingly, at the Fifth Conference of the Party Central Committee, term XIII, passed Resolution No. 19-NQ/TW dated 16 June 2022 on agriculture, farmers, and countrysides to 2030, with a vision to 2045. Then, to bring Resolution No. 19-NQ/TW into life, the Prime Minister issued Decision 150/QĐ-TTg approving the Sustainable Agriculture and Rural Development Strategy for the period 2021–2030, vision to 2050; On 8 May 2023, Party Committee of Ministry of Agriculture and Rural Development issued Resolution No. 37-NQ/BCSD on “Innovating and improving the effectiveness of training high-quality human resources so as to meet sustainable development needs of the Agriculture and Rural Development sector in 2025 and orientation to 2030”. It can be said that this is an important political and legal basis for building a system of policies and laws on human resource development in the field of agriculture next time in Vietnam.

Regarding research subjects: human resources taking part in the agricultural sector are studied including 3 groups of subjects. They are: (1) Human resources are agricultural workers. They are the force directly participating in the process of production and provision of agricultural services, working mainly in rural areas; (2) Human resources are cadres and civil servants belonging to the state management agency in charge of agriculture. This is the human resource for agricultural management—a significant force that contributes to building, planning policies and applying laws in the agricultural sector; (3) Human resources are a team of scientists, training and vocational teams in the field of agriculture. This is the force contributing to helping learners connect theory with practice, have an opportunity to be in contact with reality, and have access to modern machinery systems and advanced production processes, thereby comprehensively develop their qualities, knowledge and

professional skills in the agricultural sector. Simultaneously, this is the force that needs specific, practical and appropriate mechanisms and policies for use and treatment, creating a favorable environment to attract high-quality human resources working in the agricultural sector. Because no matter how good the training quality is, the above force cannot develop steadily and this leads to the phenomenon of “brain drain” to other jobs if there is no mechanism to attract, use, and treat properly.

The methodology used in this study is a qualitative research approach to regulations in policies and laws on human resources and human resource development in Vietnamese agricultural sector. Those are the guidelines and policies of the Communist Party of Vietnam in the documents of the Congresses; regulations in State policies and laws on human resource development in general and human resource development in the field of agriculture in particular. From there, it can be seen that policies and laws on agricultural human resource development have had successes and certain limitations, and since then, set out perfect solutions in Vietnam in the upcoming time. Besides, the article uses the comparative legal method when evaluating and analyzing legal provisions on human resource development in the agricultural sector of some countries in the world so as to point out some lessons in planning guidelines and policies as well as promulgating laws in Vietnam. This is extremely meaningful while Vietnam is paying great attention to high-quality human resources in all fields to ensure the country’s rapid and sustainable development in the new period.

3. Results and discussion

Developing human resources in the field of agriculture is understood as increasing value, quality, physical strength; having high academic levels and agricultural technical expertise, good labor skills, sensitivity and creativity; quickly adapting and mastering the achievements of modern agricultural science and technology of human resources in the agricultural sector, contributing to determining the development of agriculture and rural areas in Vietnam currently through various methods of education, training, consulting, support and facilitation from the State and other organizations. Today, the overall policy system and legal documents on human resource development in the agricultural sector have been issued, especially when the 13th National Party Congress took place. This is a favorable political and legal corridor and creates motivation for promoting human resource development in the agricultural sector in both quantity and quality. Nevertheless, facing the requirements of the market economy and our country being in a period of accelerated industrialization and international integration, in addition to the achievements, policies and laws on human resource development in this field still have a lot of limitations and challenges.

3.1. Reality of policies and laws on human resource development in the agricultural sector in Vietnam

3.1.1. Reality of regulations on training and education of human resources in the agricultural sector

Human resource development in general and human resource development in

the agricultural sector in particular are identified by the Party and State as one of the strategic breakthroughs helping our country develop in the period of industrialization and modernity (Dung, 2023). At once, identifying the human resource training and education for agriculture and rural areas is one of the foremost missions of the agriculture and rural development sector. Because, in Vietnam, agriculture is identified as an advantage, a sustainable foundation, a pillar of the national economy, and a vital economic sector in the past, in the present and in the future. Rural areas are important economic development areas; a source of supplying a large number of workers for national economic sectors, especially industry and services; and a place to supplement the urban labor market of towns and big cities (General Statistics Office, 2022) (according to the report of General Statistics Office: The rate of labor force participating in urban areas is 66.4%, while this rate in rural areas is 70.4%. Looking at age groups, the rate of labor force participating in urban areas is lower than that in rural areas in the very young and old age groups, of which the largest difference is recorded in the group 55 years and over (urban: 32.7%; rural: 46.7%) and the group from 15–24 years old (urban: 34.8%; rural: 44.1%). This shows that people in rural areas enter the labor market earlier and leave the market much later than in urban areas; This is a typical characteristic of labor market with a high proportion of labor participating in agriculture). Specially, today with the distribution of industrial parks and industrial clusters across the country, industrial facilities in localities annually attract a large labor force in rural areas to work. Thus, in order to bring the agricultural sector to sustainably develop, it is indispensable for a consistent affirmation of the importance of training and educating human resources in the agricultural sector to serve the overall development of our country in the Party's documents mentioned.

However, in terms of State regulations, policies and laws on training and educating human resources in the agricultural sector still have many limitations and obstacles. That is having no common policy and legal framework on human resource training in the agricultural sector in the new context in Vietnam. Currently, concerning training and educating human resources in the context of rapid and strong development of the Fourth Industrial Revolution, the Politburo issued Resolution No. 52-NQ/TW dated 27 September 2019 on several guidelines and policies to proactively participate in the Fourth Industrial Revolution (Vietnamese Communist Party, 2019), which sets out the policies and guidelines: "Overall reviewing and implementing innovation in educational content and programs, training in the direction of developing accessibility, creative thinking and the ability to adapt to a constantly changing and developing technological environment; including in the general education curriculum minimum digital skills and foreign languages. Innovating teaching and learning methods based on the application of digital technology; taking business assessments as a measure of the training quality of universities in the field of information technology. Encouraging new education and training models based on digital platforms." This is an important political basis in general for human resource development policies, which emphasizes improving the ability to access and proactive participation in the Fourth Industrial Revolution in every occupation and every social field in Vietnam. For the agricultural sector, thanks to the strong development of science and technology, agriculture 4.0

development has been comprehensively affecting every link in the production and supply chain of agricultural products and food in general. In that new context, a strong transformation from “agricultural production to agricultural economy” is required through promoting the application of science and technology in the agricultural sector to serve the sustainable agriculture and rural development strategy such as applying automation technology, big data, and AI in farming and animal husbandry; applying AI and Blockchain in traceability, demand forecasting, production and distribution planning and so on. With these requirements, there is a need for legal regulation of agricultural infrastructure (including items such as: investment in irrigation, dykes, electric power systems, internal roads, warehouses, wharves and etc.) to create conditions to promote mechanization and irrigation in the process of agricultural production and human resource training and education activities in the agricultural sector. Legal adjustments to human resource training and educating activities in the field of agriculture in response to the challenges posed by the fourth industrial revolution are necessary. Because:

Firstly, in terms of human resource quality in Vietnam, there is a shortage of skilled labor, especially highly qualified labor serving the agriculture. The reality of untrained labor or labor with low training levels will limit the application and transfer of scientific and technical advances; market access; investment capital use. As a consequence, labor productivity in the agricultural sector is not high and the development goals of the agricultural sector are not achieved. According to a report by the Ministry of Agriculture and Rural Development at the scientific conference “Training and developing science and technology human resources in agriculture and rural development” shows: Labor force in agriculture accounts for about 30% of the whole country’s workforce, but students enrolling in agricultural majors account for less than 2% of total student enrolling annually. Statistical results from schools of the Ministry of Agriculture and Rural Development show that in the period 2016–2020, students registering in the fields of agriculture, forestry, irrigation and fisheries decreased by over 30% compared to the period 2011–2015. In recent years, some traditional agricultural fields have had few or even no students enrolling (Ministry of Agriculture and Rural Development, 2023). Therefore, having no force registering for training is considered as a major barrier and challenge to our country’s current efforts to develop the agricultural sector. This significantly affects the quality of human resources in agriculture in relation to domestic industries and services.

Secondly, in terms of human resource training facilities in the agricultural sector. Today, most training facilities under the Ministry of Agriculture and Rural Development as well as other ministries and branches are making great efforts to innovate teaching and learning methods and content to attract participants to register. However, in fact, according to the Ministry of Agriculture and Rural Development, by 2023, there will be about 50 universities nationwide with specialized training in agriculture, forestry, fisheries and irrigation (for example: Vietnam National University of Agriculture, Ho Chi Minh City University of Agriculture and Forestry, Thai Nguyen University of Agriculture and Forestry, Can Tho University, Hue University of Agriculture and Forestry, Tra Vinh University, Water Resources University, Vietnam National University of Forestry, Bac Giang Agriculture And Forestry University, etc). In which, the Ministry of Agriculture and Rural

Development has 4 universities and 28 colleges (For example: Vietnam National University of Agriculture, Thai Nguyen University of Agriculture and Forestry, Can Tho University, Hue University of Agriculture and Forestry). By 2022, the Ministry's training facilities will have trained 38 doctoral-level majors; 39 master's majors and 97 university-level majors, 112 college majors and 122 intermediate majors. However, the training of human resources for the agricultural sector still reveals some limitations such as: The proportion of trained workers with degrees and certificates from elementary level or higher is still low, less than 5% (VOV, 2027). Some schools still have a subsidized mindset, are not drastic in enrollment work, and have not proactively innovated administration, content and teaching methods to meet the needs of learners and the labor market in the new context (Minh, 2023). Furthermore, according to the Ministry of Education and Training, by 2022 the country will have more than 521,000 students enrolling in 25 training fields. Of these, there are only 7100 students enrolling in the fields of agriculture, forestry, fisheries, and veterinary medicine, accounting for 1.37% (Song, 2023). This shows that the number of people registering to study agriculture at training institutions is becoming less and less, and tends to decrease (see Appendix). The reason is because of agricultural environmental prejudices such as being strenuous, difficult to develop, untouchable, and unmodern; learners not finding jobs suitable to their training expertise after graduation, etc. Hence, with the challenges of training quality and the current training organization model in agriculture, it cannot meet the transformation from agricultural production to agricultural economy and meet the quality of human resources to serve research, application and transfer of science and technology, production, processing and business in the agricultural sector.

3.1.2. Reality of human resource treatment in the agricultural sector in Vietnam

In Vietnam, the bottleneck in the sustainable development of agriculture and modern agriculture is the institution of human resource development in general and the institution of remuneration, attraction, utilization, and support of human resources in particular. The 13th Party Congress determined to “foster people's strength, improve the quality of human resources, have a breakthrough mechanism to attract and utilize talented people, promote innovation, and strongly apply science and technology and so on to create a strong driving force for rapid and sustainable development” (Vietnamese Communist Party, 2021). This is the correct, creative and timely viewpoint of the Party to strongly arouse the will and desire to develop a prosperous and happy country of all Vietnamese domestically and abroad; concurrently create a legal corridor to attract and utilize talents in all industries and fields, contributing to creating a strong driving force for national development (Dung, 2022). To institutionalize the Party's policy on attracting and appointing talented people, both the 2008 Law on Cadres and Civil Servants and the 2010 Law on Public Employees (amended and supplemented in 2019) mention talent with the expression is a “talented person” in public service activities and in professional activities: “The State has a policy of discovering, attracting, appointing and rewarding talented people; the Government regulates the policy framework of appointing and treating talented people in public service activities” (Article 6 of the 2008 Law on Cadres and Civil Servants) and “Implementing the State's preferential

policies towards talented public employees” (Clause 4, Article 6 of the 2010 Law on Public Employees), “The State has policies to discover, attract, foster, utilize and adequately reward talented people to improve the quality of service to the people” (Clause 4, Article 10 of the 2010 Law on Public Employees). Specially, based on the provisions of the Law, the Government has issued Decrees to materialise some contents on talent and the Prime Minister issued Decision No. 899/QD-TTg dated 31 July 2023 approved the National Strategy on attracting and appointing talents to 2030, with a vision to 2050. Therefore, the policy and legal framework on attracting and appointing talents is extremely concerned by the Party and State when promulgating many regulatory documents. At once, this is the basis for localities to build their own programs and plans on policies for talented people in their area. For instance, in Ho Chi Minh City, the People’s Council and the City People’s Committee issued many regulations such as Resolution No. 20/2018/NQ-HDND dated 7 December 2018 of the City People’s Council in terms of income of experts, scientists, and people with special talents in the field Ho Chi Minh City needs to attract in the period 2018–2022; Decision No. 17/2019/QD-UBND dated 4 July 2019 of the People’s Committee of Ho Chi Minh City promulgating Regulations on policies to attract and develop a team of experts, scientists and people with special talents for fields Ho Chi Minh City needs in the period 2019–2022; Decision No. 381/QD-UBND dated 3 February 2021 of the City People’s Committee on promulgating the Plan to attract and select people with special talents in the fields of culture, arts - physical education and sports of Ho Chi Minh City in 2021, etc.

However, these are regulations on attracting, treating, and appointing human resources of the Party and State for talented people in general, but there are no policies and laws on treating, attracting, and appointing human resources in the field of agriculture. Meanwhile, it is necessary to promulgate policies and laws on treating, attracting, and appointing human resources in the agricultural sector, especially agricultural workers in Vietnamese rural areas in the current period. Because:

- (1) Originating from the political and legal basis for agriculture. For Vietnam, a country with a mainly agricultural economy, improving the quality of human resources in rural areas is an inevitable requirement in the process of promoting industrialization and modernization of agriculture and rural areas associated with restructuring agriculture and building new countrysides. This is the task set according to the Implementation Plan of Conclusion No. 54-KL/TW dated 7 August 2019 of the Politburo on continuing implementing the Resolution of the 7th Central Committee, Session X on agriculture, farmers and rural areas, issued by the Prime Minister on 10 March 2020. At the same time, in fact, labor force in rural areas is quite abundant. According to the 2022 Labor and Employment Survey Report of the General Statistics Office, labor force in rural areas is about 36.7 million people, accounting for nearly 67% of the whole country’s workforce (Tien and Thi Minh, 2023). Hence, the above results show that a large number of rural agricultural workers go on being pressure on the demand for on-the-job training and solving for rural workers.
- (2) Besides, through development policies, policies on treating and attracting human resources in agriculture, it will help them gain new and higher

capabilities and qualities to be able to achieve the goals of the Party and State as well as perfect themselves, especially contributing to the process of building new rural areas and developing the country quickly and sustainably.

Therefore, for those reasons, it is essential to research to propose specific goals and contents on treating, attracting and appointing policies for Vietnamese rural labor force next time.

3.2. Several solutions to complete and enhance the effectiveness of law enforcement on human resource development in the agricultural sector in Vietnam next time

The aim of the agriculture and rural development sector set by 2030 is to strive to achieve an average of vocational training for about 1.5 million workers each year; the rate of trained agricultural workers is over 70%; the rate of workers with degrees and certificates (from elementary level and above) in agriculture, forestry and fisheries will increase from 4.6% in 2020 to 10% in 2030 (The Prime Minister, 2023). To achieve that general goal and to improve the quality of human resources in the agricultural sector, the following solutions need implementing:

Firstly, it is vital to build a general policy and legal framework on human resource training in the agricultural sector in the new context in Vietnam. Accordingly, the general policy and legal framework on human resource training and education in the agricultural sector can be a Government Resolution or a Prime Minister's Decision. Inside, the main and basic contents of objectives, opinions; training and education needs; tasks and solutions are clearly specified. This is one of the solutions to change the concept that has been deeply embedded in people's subconscious up to now that "farming is a profession that does not require training and if there is nothing to do, let's return to farming". At the same time, this is a solution to institutionalize Resolution 19-NQ/TW of the Fifth Conference of the 13th Party Central Committee on Agriculture, farmers and rural areas to 2030, with a vision to 2045, and the Sustainable Agriculture and Rural Development Strategy for the period 2021–2030, with a vision to 2050. Thus, to enhance the knowledge of direct agricultural workers in particular and other participants in the process of the state management and agricultural research, separate State policies are required. In other words, to achieve a certain percentage of trained rural workers, to increase the quantity and ensure the quality of a team of experts mastering high technology and techniques in agriculture, Policy and legal solutions from the state are needed. Specifically:

The first is about the common goal:

- (1) Training and educating agricultural human resources (including direct agricultural workers; officials and civil servants of state management agencies on agriculture; a team of scientists; and a team of vocational training in the agricultural sector) having a reasonable and synchronous structure as well as having good professional qualifications, high skills and quality, which contributes to building and developing agricultural economics.
- (2) Enhance the potential for research, development, application and mastery of modern agricultural technology. Bring science and technology into a driving

force to raise labor productivity and develop agriculture to get an advanced and sustainable level.

- (3) Promote training and fostering to enhance the quality of human resources to meet the needs of agricultural development in the form of new training, retraining, vocational training, short-term training to ensure quality, especially focus on training specialized human resources and highly qualified experts.

The second is in terms of content: It is essential to have regulations aimed at:

- (1) Update and adjust annual training and retraining plans in accordance with changes in agricultural human resources and task requirements of each state management agency, university, academy, research agencies; gradually solve the lack of human resources studying at training establishments in the fields of agriculture, forestry and fisheries; focus on training agriculture and rural development human resources to serve sustainable agriculture and rural development to increase income for rural farmers.
- (2) Training agricultural human resources must follow the value chain. Correspondingly, training agricultural human resources not only lets them take part in the labor market to work for businesses but also creates people owning businesses, mastering agricultural technology and becoming managers and agricultural researchers.
- (3) Appreciating the academic level and composition of the force participating in agricultural development. Particularly, appreciating the entire process of training new professional farmers. Meanwhile, the process of training new professional farmers must ensure the following aspects: building a reasonable training model, in which training for farmers requires not only classroom teaching but also distance education; clearly identifying which groups of people have more potential to be nurtured into professional farmers; choosing a suitable training investor that can be the state or agricultural enterprises; and the state has preferential and supportive policies (Cui et al., 2022).
- (4) Mobilize and use resources of the State and society effectively to serve the training of high-quality human resources and develop projects to attract high-quality human resources to work in the field of agriculture and rural development.
- (5) Agricultural education and training must be organized at many different levels, including: Higher agricultural education; professional agricultural education; primary education in agriculture; distance education in agriculture; other training courses related to agriculture. The content of training in these programs mainly includes agricultural technical subjects such as cultivation, plant protection, soil, animal husbandry, veterinary medicine, etc (Li et al., 2023).
- (6) Connecting training institutions, research institutions—businesses—agricultural workers—society to solve shortcomings in the content of training, the method of training, job creation and state management so that the training of human resources follows the market trajectory and creates motivation to promote agricultural economic development.

Secondly, it is necessary to research adequate treating policies to attract the highly qualified workforce to work in agriculture (especially working in rural areas). This is a policy problem to help the agricultural sector develop quickly and

sustainably compared to other industries. Especially in the current context when the most outstanding rural workers graduating often tend to stay in big cities and urban areas—where there are many job opportunities, high income and intellectual development. Accordingly, policies on adequate treating, attracting and appointing for highly qualified agricultural forces need to pay attention to the following basic issues:

Firstly, it is about the goal: creating a favorable environment to support future farmers and helping them become new professional farmers; focusing on supporting startup training, creating a startup environment and financing for startup projects of rural agricultural workers; agricultural experts and businesses;

Secondly, it is about the content:

- (1) For rural agricultural workers, it is vital to provide free or subsidized tuition to study at agricultural training establishments, and provide interest-free loans or subsidies when starting innovative businesses in agriculture. This will change rural agricultural workers' thinking and awareness so that they understand the value of agriculture, find out lots of paths to the agricultural profession and overcome cultural, social, economic and educational barriers to pursue farming as a job. There needs to be a solution to enhance farmers' role, position, capacity and ability to master technology to be able to enrich from agriculture. Developing programs, plans and projects to bring agricultural workers and members of agricultural cooperatives to work and study in developed agricultural countries is necessary.
- (2) For agricultural enterprises: Treating policies for agricultural enterprises and agricultural economic units need to open opportunities to access agricultural land in order that they can create a generation of new farmers with new business orientations to lead sustainable agriculture in the future. Because agricultural enterprises are indispensable in the process of agricultural modernization and act as a bridge between scattered small-scale farmers and the modern market (Lu and Chen, 2021). Additionally, continuing improving mechanisms and policies to encourage businesses to invest in agriculture and rural development.

4. Conclusion

Policies and laws on human resource development in the agricultural sector through policies and laws on education and training are important in developing the national agriculture. On the one hand, they bring benefits and improve productivity, efficiency, and work performance for themselves. At the same time, training and educating human resources with enough knowledge, skills, qualities and attitudes to meet the requirements and demands of high-tech agriculture and smart agriculture plays an important and decisive part in the cause of agricultural industrialization and modernization and brings agricultural products to join the global value chain in the coming time in Vietnam.

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References

- Congress. (2013). Law on Employment 2013. Congress.
- Congress. (2014). Law on Vocational Education 2014. Congress.
- Congress. (2019). Labor Code 2019. Congress.
- Congress. (2019). Education Law 2019. Congress.
- Congress. (2018). Law on Higher Education 2012 (amended and supplemented in 2018). Congress.
- Congress. (2019). Law on Cadres and Civil Servants 2008 (amended and supplemented in 2019). Congress.
- Congress. (2019). Law on Public Employees 2010 (amended and supplemented in 2019). Congress.
- Cui, L. J., Medvid, V., Zhao, H. J., et al. (2022). Cultivation of new professional farmers: an experience introduction to rural human resource management in China. *Journal of Innovations and Sustainability*, 6(1), 7.
<https://doi.org/10.51599/is.2022.06.01.07>.
- City People's Committee. (2021). Decision No. 381/QĐ-UBND dated 3 February 2021 of the City People's Committee on promulgating the Plan to attract and select people with special talents in the field of culture, art—physical education, sports of Ho Chi Minh City in 2021.
- City People's Council. (2018). Resolution No. 20/2018/NQ-HĐND dated 7 December 2018 of the City People's Council on the income level of experts, scientists and people with special talents in the field Ho Chi Minh City needs to attract in the period 2018-2022.
- Dung, B. X. (2023). Promoting industrialization and modernization of rural agriculture in the spirit of the 5th Central Committee Resolution of the Party term XIII. Available online: <http://lyluanchinhtri.vn/home/index.php/thuc-tien/item/4797-day-manh-cong-nghiep-hoa-hien-dai-hoa-nong-nghiep-nong-thon-theo-tinh-than-nghi-quyet-trung-uong-5-khoa-xiii-cua-dang.html> (accessed on 13 February 2023).
- Dung, B. X. (2022). Attracting and appointing talents to create motivation for fast and sustainable development. Available online: <http://lyluanchinhtri.vn/home/index.php/thuc-tien/item/4349-thu-hut-trong-dung-nhan-tai-tao-dong-luc-de-phan-trien-nhanh-va-ben-vung.html> (accessed on 22 July 2022).
- Government. (2018). Decree 57/2018/ND-CP on mechanisms and policies to encourage enterprises to invest in agriculture and rural areas, policies to support human resource training and market development for businesses have projects to invest in agriculture and rural areas.
- General Statistics Office. (2022). Press release on labor and employment situation in the fourth quarter and in 2022. Available online: <https://www.gso.gov.vn/du-lieu-va-so-lieu-thong-ke/2023/01/thong-cao-bao-chi-tinh-hinh-lao-dong-viec-lam-quy-iv-va-nam-2022/#> (accessed on 10 January 2023).
- Government. (2016). Resolution No. 52/NQ-CP, dated 15 June 2016 of the Government promoting the development of human resources for ethnic minorities in the period 2016-2020, with a vision to 2030.
- Li, X., Lin, Z., Wang, Y., Wang, L. (2023). Policy advocacy for EET of agricultural and rural development planners and local leaders in China. Available online: https://www-fao-org.translate.goog/3/Y0923E/y0923e10.htm?_x_tr_sl=en&_x_tr_tl=vi&_x_tr_hl=vi&_x_tr_pto=sc (accessed on 10 January 2023).
- Lu, Y., Chen, Y. (2021). Is China's agricultural enterprise growing steadily? Evidence from listed agricultural companies. *Chinese Journal of Population, Resources and Environment*, 19(2), 203-212.
- Ministry of Agriculture and Rural Development. (2023). Proceedings of the Scientific Conference, "Training and developing scientific and technological human resources in agriculture and rural development". Ho Chi Minh City, November 18th, 2023.
- Ministry of Education and Training. (2023). Report on graduate students' employment situation in the period 2018-2021, Available online: <https://vnua.edu.vn/tin-tuc-su-kien/dao-tao/nhung-nganh-hoc-tren-90-sinh-vien-ra-truong-co-viec-lam-53862> (accessed on 29 May 2023).
- Minh, A. (2023). Renovating human resource training in agriculture. Available online: <https://nhandan.vn/doi-moi-dao-tao-nhan-luc-nganh-nong-nghiep-post761893.html> (accessed on 21 July 2023).
- Nghi, S. (2023). If we want agriculture to be the main pillar, we must start from human resources. Available online: <https://thesaigontimes.vn/muon-nong-nghiep-lam-tru-chinh-phai-bat-dau-tu-nguon-nhan-luc/> (accessed on 21 July 2023).
- Nguyen, K. (2023). Connecting the needs of agricultural human resources between enterprises and training institutions. Available

- online: <https://www.qdnd.vn/xa-hoi/tin-tuc/ket-noi-nhu-cau-nhan-luc-nong-nghiep-giua-doanh-nghiep-va-cac-co-so-dao-tao-734106> (accessed on 11 July 2023).
- Politburo. (2019). Resolution No. 52-NQ/TW dated September 27, 2019 of the Politburo on a number of guidelines and policies to actively participate in the Fourth Industrial Revolution.
- Politburo. (2020). Conclusion No. 81-KL/TW dated July 29, 2020 on “Ensuring national food security to 2030”.
- People’s Committee of Ho Chi Minh City. (2019). Decision No. 17/2019/QĐ-UBND dated July 4th, 2019 of the People’s Committee of Ho Chi Minh City promulgating Regulations on policies to attract and develop a team of experts, scientists and people with special talents for the fields that Ho Chi Minh City needs in the period 2019–2022
- Party Committee of the Ministry of Agriculture and Rural Development. (2023). Resolution No. 37 dated May 8, 2023 on “Innovating and improving the efficiency of training high-quality human resources to meet the needs of sustainable development of Agriculture and Rural Development until 2025 and orientation to 2030”. Party Committee of the Ministry of Agriculture and Rural Development.
- Song, N. (2023). If we want agriculture to be the main pillar, we must start from human resources. Available online: <https://thesaigontimes.vn/muon-nong-nghiep-lam-tru-chinh-phai-bat-dau-tu-nguon-nhan-luc/> (accessed on 21 July 2023).
- Tien, N. T, Thi Minh, H. N. (2023). Creating jobs and increasing incomes for rural workers in Vietnam today. Available online: <https://tapchitaichinh.vn/giai-quyet-viec-lam-va-tang-thu-nhap-cho-lao-dong-nong-thon-viet-nam-hien-nay.html#:~:text=Theo%20B%C3%A1o%20C%C3%A1o%20C4%91i%E1%BB%81u%20tra,cho%20lao%20C4%91%E1%BB%99ng%20n%C3%B4ng%20th%C3%B4n> (accessed on 30 July 2023).
- The Prime Minister. (2009). Vocational training program for rural workers (according to Decision No. 1956/QĐ-TTg dated November 27, 2009 and Decision No. 971/QĐ-TTg dated 1 July 2015 of the Prime Minister).
- The Prime Minister. (2023). Decision No. 899/QĐ-TTg dated 31 July 2023 approving the National Strategy on attracting and appreciating talents to 2030, with a vision to 2050.
- The Prime Minister. (2011). Decision No. 579/QĐ-TTg dated 19 April 2011 of the Prime Minister approving the Vietnamese Human Resources Development Strategy for the period 2011-2020.
- The Prime Minister. (2011). Decision No. 1216/QĐ-TTg of the Prime Minister dated 22 July 2011 on approving the Vietnamese Human Resource Development Plan for the period 2011-2020.
- The Prime Minister. (2023). Decision No. 1058/QĐ-TTg dated 14 September 2023 of the Prime Minister approving the Rural Industry Development Strategy to 2030, with a vision to 2045.
- VOV. (2017). The Party’s cross-cutting view on promoting human resources. Available online: <https://vov.vn/chinh-tri/dang/quan-diem-xuyen-suot-cua-dang-ve-phat-huy-nguon-luc-con-nguoi-477381.vov> (accessed on 16 July 2017).
- Vietnamese Communist Party. (2019). Resolution No. 52-NQ/TW dated September 27, 2019 of the Politburo on a number of guidelines and policies to actively participate in the Fourth Industrial Revolution. Available online: <https://tulieuvankien.dangcongsan.vn/he-thong-van-ban/van-ban-cua-dang/nghi-quyet-so-52-nqtw-ngay-2792019-cua-bo-chinh-tri-ve-mot-so-chu-truong-chinh-sach-chu-dong-tham-gia-cuoc-cach-mang-cong-5715> (accessed on 16 July 2023).
- Vietnamese Communist Party. (2021). Documents of the XIIIth National Congress of Deputies, volume II, Truth National Political Publishing House, Hanoi, 2021, pp. 324-325.

Appendix

Table A1. Students studying professions from 2018–2021 (Ministry of Education and Training, 2023).

| No. | Areas of training | 2018 | 2019 | 2020 | 2021 |
|-----|----------------------------------------------|--------|--------|--------|--------|
| 1 | Educational sciences and teacher training | 84.90% | 87.4% | 91.90% | 87.40% |
| 2 | Art | 93.50% | 95.30% | 97.10% | 95.50% |
| 3 | Humanities | 90.60% | 89.70% | 91.98% | 91.90% |
| 4 | Journalism and information | 89.20% | 85% | 90.80% | 90.90% |
| 5 | Social and behavioral sciences | 92.50% | 73.40% | 91.80% | 91.70% |
| 6 | Business and management | 94.90% | 91.40% | 92.80% | 92.20% |
| 7 | Law | 87.20% | 86.20% | 88.30% | 86.10% |
| 8 | Life sciences | 87.70% | 90.30% | 88.90% | 87.50% |
| 9 | Natural sciences | 87.60% | 77.80% | 85.50% | 86.80% |
| 10 | Mathematics and statistics | 89.70% | 95.10% | 96.40% | 90.5% |
| 11 | Computers and information technology | 93.90% | 93.70% | 91.80% | 93.50% |
| 12 | Engineering technology | 93.10% | 91.60% | 90.80% | 93.10% |
| 13 | Engineering | 97.30% | 90.60% | 94.40% | 92.60% |
| 14 | Production and processing | 89.50% | 89.80% | 88.50% | 90.50% |
| 15 | Agriculture, forestry and fisheries | 82.70% | 86% | 95.80% | 95.70% |
| 16 | Veterinary medicine | 90.50% | 85.40% | 89.40% | 88.30% |
| 17 | Health | 92.30% | 88.40% | 89.60% | 93.10% |
| 18 | Social services | 82.30% | 98.40% | 95.80% | 93.10% |
| 19 | Travel, hotels, sports and personal services | 94.10% | 75% | 81.80% | 82.50% |
| 20 | Transportation services | 94.40% | 89.50% | 89.50% | 84.70% |
| 21 | Environment and environmental protection | 80.40% | 62.50% | 92.30% | 96.30% |
| 22 | Architecture and construction | 94.60% | 84.80% | 80.20% | 87.30% |

Percentage of students employed by field of training.