

Section 7. Technical sciences

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*Bui Thien Hương,
Master, Lecturer,
University of Fire Prevention and Fighting*

IMPROVING THE EFFICIENCY OF FIRE PROTECTION AND RESCUE IN THE URBAN AREA OF HANOI – VIETNAM AND MEETING THE REQUIREMENTS OF SUSTAINABLE DEVELOPMENT

Abstract. Hanoi capital is a special metropolis of Vietnam. In addition to the process of urbanization, the issue of fire and explosion in the area has developed complicatedly over the recent time, which affects the activities of production and business as well as the security, safety and order of society. The article analyzes and assesses the current situation of fire protection and rescue in Hanoi, thereby proposing solutions to improve the efficiency of this work; thanks to this, it can have a contribution promote sustainable development.

Keywords: Fire protection and rescue; Hanoi.

1. Questioning

In the last 2 years, from August 2020 to August 2022, 772 fires and explosions have occurred in Hanoi, of which 16 cases have been large fires, 14 fires have led to serious damage, with 32 dead people and 51 injured people. The overall property damage accounted for 46.7 billion VND and 25 hectares of forest. Compared to the same period of 2 years ago, the number of fire and explosion cases decreased to 302 cases and property damage declined to 257.3 billion VND, in which 4 deaths and 15 injuries were reduced [2]. The above data shows the great loss of life and property caused by fire and explosion; besides, with the rapid rate of urbanization, the situation of climate change is complicated and

unpredictable, which leads to the potential danger of fire and explosion in the city. Therefore, it is urgent and meaningful to study and propose solutions to improve the efficiency of fire protection and rescue in Hanoi in reality.

2. Actual situation of fire protection and rescue in Hanoi

2.1. The obtaining outcome

According to a report on basic investigation in Hanoi, currently the city has 5.368 residential areas, with 579 communes, wards and townships. Among these, there are 433 residential areas which are put at high risk of fire and explosion; 9.483 roads, streets, alleys located at a depth of 200m or more and cannot be accessed by fire motors; 5.569 roads, streets, alleys with

platforms, slatted roofs blocking the operation of fire motors. Nowadays, the city has 3.482 fire hydrants installed in 12 districts, 17 wards and 1 town, mainly in the inner city; 722 fire hydrants of self-managed urban and industrial areas; 16 water tanks of fire protection with a volume from more than 50m³ located in public areas, 3.670 water tanks of agencies, enterprises and establishments with a volume of over 20 m³ can be exploited and used for fire protection; 11 fire-fighting water collection pits in the city's ponds and lakes; 2.230 natural water sources such as ponds, lakes, rivers, canals, ditches, etc. can be exploited and used for fire protection [3].

Facing the situation of fire and explosion with many complicated developments, the City Party Committee, People's Council, City People's Committee have introduced many Directives, Resolutions, Plans and guiding documents. With a view to strictly comply with the Law on Fire Protection, the Directives, Action Programs and Plans of the Central Government and the City; it can be acknowledged that the work of fire protection and rescue is considered as the duty and responsibility of all levels, branches and people as well as prevention which is the main focus on building a movement of all people to participate in fire protection and rescue, in association with building a movement of all people to protect national security under the motto "four on the spot".

The Police force for fire protection and rescue have done a good job of grasping the situation, reviewing and making statistics for the locality and facilities. In addition, the inspection and examination, especially the coordination among all levels and branches, have been strengthened. The functional force resolutely suspends infringing works according to regulations and publicizes the identity of the investor, name and address

of the infringing works on the mass media for people to be aware of monitor implementation. For investors who intentionally do not comply with the provisions of the law, infringing works have the risk of causing fire and explosion, that lead to serious consequences. The report will be transferred to the investigating agency for research, consideration and handling proposal. According to the provisions of law, it can result in preventing new infringing works and gradually reducing existing infringing works. Be willing to deal with fight is maintained and strictly implemented by the units; with the reception and process of information being ensured smoothly and punctually; The synergies and coordination in the organization of fire protection are effectively implemented by the units.

The Police force for fire protection and rescue has done a good job advising on the development, issuance and implementation of directives and plans on strengthening measures for fire protection and rescue. Hence, the urban households have a positive contribution on the change in the awareness and actions of people, heads of units and establishments. For example, on August 19th, 2022, the Hanoi People's Committee reported on the preliminary review of 3 years of implementation of the Plan No. 58/KH-UBND dated March 6th, 2019 on the implementation of Directive No. 24-CT/TU dated October 31st, 2018 of the Hanoi Party Committee and Plan No. 165/KH-UBND dated July 31st, 2019 on the implementation of Official Dispatch 584/CD-TTg dated May 19th, 2019 of the Prime Minister.

The work of building a movement for all people to participate in fire protection and rescue has been promoted. In the city, 5,368 civil defending teams have been established in villages and residential groups (accounted for 100%).

The grassroots fire protection force has established and maintained 39.090 counterparts with 367.225 people [1]. Currently, in the city, there are two models related to volunteer fire protection forces, including the model “Volunteer mobile fire protection team of Dich Vong Hau ward” in Cau Giay district. Hanoi takes the core as volunteers with jobs being adjacent to home. Their spirit stems from volunteer participation without any allowances and impulsion. The model “Volunteer fire protection team” which is established at Truc Bach ward, Ba Dinh district, Hanoi takes the core of people who own houses to settle, in combination with production and business to maintain efficient and continuous operations.

Moreover, the city is currently maintaining 12 fire protecting safety models and deploying 4 new models. Notably, the model “Propaganda and mobilization of households so as to dismantle solid iron cages and equip themselves with tools and means of fire protection and secure” of Police Department at Thanh Xuan District has been approved by the Ministry of Public Security. Currently, this model has been replicated throughout the city.

The People’s Committee of the city regularly directs the departments, divisions and branches to organize periodic and irregular fire safety checks, especially inspections in some special places such as apartments, high-rise buildings; karaoke activities, discos; markets, trade centers; business establishments of petroleum, liquefied petroleum gas; warehouse, production workshop; business and service establishments... in the first 6 months of 2022, which inspects fire-fighting safety more than 19.100 establishments and thereby issuing a decision to sanction 930 cases with a fine of over VND8.6 billion [1].

The People’s Committee of the city has directed the units to resolutely handle violations for the works that have not been tested and accepted for fire protection and put into operation. In particular, administrative violations were sanctioned for 399 establishments with a total amount of VND1.280.300.000; which can cause to issue decisions on temporary suspension or suspension of operations for 541 establishments; most importantly, the identity of the violating establishments are more likely to post publicly on the mass media [3]. Directing the People’s Committees of 30 districts and towns that organizes work with the help of investors of infringing works to discuss and agree on measures and solutions for implementation requires 100% of the investor to commit to the roadmap, time and step-by-step remedial progress for each specific existing or violation content.

2.2. Existing limitation

Through the review and statistics, in Hanoi, there are currently 2.921 fire protection projects that have not been tested and put into operation with a total of 9.466 existing errors and violations on fire protection. Among those, 498 works that did not meet the requirements on fire protection were put into use before the Law on Fire Prevention and Fighting No. 27/2001/QH took effect, with 2.423 works violating regulations on fire protection and fire-fighting operation from 2001 to present [3].

Traffic infrastructure, water source for fire protection in the metropolitan area still have many shortcomings due to population growth, frequent traffic jams, especially at peak hours and at streets under construction (overpass, elevated urban railway...). Through investigation, survey and comparison with current regulations and standards on fire protection, the whole city needs to install additional 6.882 fire hydrants,

343 fire-fighting water tanks, 448 water intakes, fire hydrants [2].

In addition, the implementation of tasks by the units has not been proactive, the inspection, urging, guidance and removal are not timely, so the implementation efficiency at the facilities, especially at the ward, communes, townships, are still limited, leading to the situation that the investor and the head of the facility do not comply with the regulations on fire protection and rescue.

The construction of the civil defense force, the grassroots and specialized fire prevention and fighting force are not guaranteed, in which the operation in the locality is formal as well as the initial fire-fighting organization is still puzzled, ineffective and it is equipped with weak equipment. This is one of the main causes leading to big fires. Some officers and soldiers who do the fire-fighting activities and rescue lack practical experience, and the general level of professional qualifications is still not high. The training work has not met the requirements of the task and has not clearly changed the professionalism and proficiency in fire protection and rescue, which badly affects the effectiveness of fighting protection.

3. Solutions to improve the efficiency of fire protection and rescue in Hanoi to meet the requirements of sustainable development

- Organize the effective implementation of the Master Plan on capacity building and assurance of fire protection and rescue in the capital for the period 2021–2025, vision to 2030; Implementation plan of Resolution No. 05/2022/NQ-HDND dated July 6, 2022.

- Strengthen propaganda and dissemination of legal education and knowledge of fire protection and rescue, creating a positive change in

awareness and action in fire protection and rescue of all civil servants, public employees, laborers and a large number of citizens;

- Build and replicate many good practices and new models of advanced examples in fire protection and rescue;

- Continue to advise the competent authorities to promulgate new amendment, adjust and supplement legal documents to perfectionize the institution in the implementation of fire protection and rescue;

- Build a police force for fire protection and rescue, ensure the city's network of headquarters, barracks, payroll structure, forces, equipment and means; stable operation, quality, efficiency in order to meet the requirements of the City's work on fire protection and rescue as well as ensure to relate to the motto "The regular Metropolitan Police force for fire protection and rescue";

- Raise awareness in fire protection and rescue of heads of Party committees, local authorities, units at all levels, heads of establishments, agencies and organizations, businesses and people in the area, focusing on enhancing the quality and effectiveness of the construction of the all-people movement for fire protection and rescue, and the propaganda, dissemination and education of legal knowledge on fire protection and rescue;

- Increase the effectiveness and efficiency of the state management of fire protection and rescue in the city; thereby focusing on improving the capacity of units assigned to perform the function of state management of fire protection and rescue; at the same time, focus on definitively solving the backlogs in fire protection and rescue in residential areas and infringing works;

- Plan and develop fire protection infrastructure in association with the general planning on

construction of the capital by 2030, with a vision to 2050 so as to meet the requirements of the fire protection and rescue work of the City;

- Constantly reform and simplify administrative procedures for fire protection and rescue; create maximum favorable conditions for people and businesses, and at the same time meet the requirements of society in the new situation;

- Promote the application of “digital technology” in the state management of fire protection and rescue; fire alarm information and organize the dispatch of fire protection and rescue for command to meet the requirements of fire protection and rescue tasks as prescribed;

- Strengthen scientific research and application of results on fire protection and rescue in accordance with the characteristics of the Capital.

4. Conclusion

Hanoi, capital of Vietnam, will continue to develop strongly in the direction of civilization and modernity while the urbanization process will continue to take place rapidly; According to the types of production, business and service establishments in the capital, they will develop constantly. Since then, the work of fire protection and rescue in the metropolitan area needs to be strengthened and further promoted. The above solutions are basically comprehensive, logical, scientific and feasible in practice, however, due to these effectively implemented solutions, the participation of the whole Prime Minister’s government system is required. With the support of people living and working in the capital, the effectiveness of fire protection and rescue in the city will be enhanced, contributing to promote sustainable development.

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