



RESEARCH ARTICLE

REEXAMINATION OF FIRE OUTBREAK AND ITS CONSEQUENCES ON REAL PROPERTIES IN ONITSHA MEGAPOLISE, REMEDY AND KEY FORWARD (REAL ESTATE PERSPECTIVE)

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ABSTRACT

The most critical urban disaster facing developing country is fire outbreak; this menace can be natural or manmade in any case, the end product of fire spread is usually devastating to both real property occupier and owner. This study focused on reexamination on fire outbreak and its effect on realproperty in Onitsha megapolise. Within the last decade urban fire spread has been reoccurring at a tragic rate in the study area; identifying the cause and coming up with best approach for preventing this occurrence was the motivation behind the study. This study reviewed other related literatures as to carve out its niche and consolidate the researchers' philosophy. Data generated for this study was achieved through the consultation of related academic materials and well-structured questionnaire. Data was analyzed using SPSS version 23 and Microsoft Excel, presentation was simplified to the minutest form in other to carry the general audience along considering the nature of the research and its impact to the study area. Recommendation was gearing towards the best approach in mitigating fire outbreak not only to the study area but to southeast geopolitical zone and Nigeria at large. The study also emphasize on the need for government to revamp existing firestation by equipping them with latest fire service facilities. Related professional bodies should lead a sensitization campaigns so as to inform the public on measures of bringing fire outbreak to a check.

INTRODUCTION

Fire outbreak in any case is environmental catastrophe that has the potency of destroying life, human and material resources. This environmental disaster has affected most of the underdeveloped nations as Africa is not left out. In Onitsha mega polis development of different land use ranging from residential, commercial, industrial, religious and agricultural etc. this adventure are all capital projects that are running into billions of naira. However, an attack by fire outbreak will not only have financial consequences, but other forms of obnoxious effect on property owner(s) such as health, debt, and psychological trauma. The upshot of fire outbreak will certainly harm adjoining properties depending on timely intervention. Fire being a exothermic chemical procedure of quick oxidation of a material that releases heat, light, and numerous reaction products. The segment of fire that can be seen is the flame. Blaze is produced at the eruption point, a particular stage of the incineration happening (Oluwunmi, 2023, Fire History, 2014; Yusuf, 2012; Adekunle, et' al, 2018). Contemporary fire outbreaks in Anambra urban cities especially Onitsha megapolise have raised an issue of concern among investors, general public and the government. The most problematic aspect is the incessant fire outbreaks in real properties in Anambra mega cities ranging from residential, commercial, and institutional buildings, which are major concern to professionals in the built environment especially the estate surveyor and valuer being the chief in art and science of managing both the physical and abstract interest in real property Udechukwu, (2016). On the long, the bye product of fire outbreak looking at the economic position of Onitsha megapolise in Anambra state, it will have a negative impact, resulting to a society

loss firstly reduction in availability of accommodation for various real property use. Secondly it will reduce internally generated revenue at the moment thereby altering socio-economic advancement leading to infrastructural deficit (Emenike, 2020; Emenike, 2022; Onwumereet'al, 2023). Fire outbreak normally occur when a inflammable combustible material, in amalgamation with a substantial quantity of an oxidizer such as oxygen gas or another oxygen rich compound is exposed to a source of heat or ambient temperature above the flash point for the fuel and has the capacity to maintain faster oxidation that produces series of reaction (Yusuf, 2012). This is usually classified as fire tetrahedron. Fire cannot function in the absence of these elements in place in a sufficient proportion. (See figure 1.0). Cases of fire outbreak in Onitsha megapolise has become a recurrent challenge. Most of the time it ignited by either gas explosion of fuel tankers and fuel stations. Sometime it could emanate for domestic means via our cooking gas. However, fire outbreaks in some cases are effect being generated from bush burning in rural, semi-urban and urban areas; strengthen by wind during dry season. (Zhiriet'al, 2020; Zhiriet'al, 2021) there are three types of wind associated with wild fire: Firstly, general winds resulting from atmospheric activity. Secondly, local winds emanating from unequal heating of land and sea surfaces. Thirdly, winds resulting from fires buoyancy also known as entrainment. However, fire outbreak is an unhealthy attack on real property especially in Onitsha megapolise that a combination of urban and semi-urban setting. The basic objective of study was firstly, to reexamine the root cause of fire outbreak in Onitsha megapolise. Secondly to appraise the effect of fire outbreak in Onitsha megapolise on real properties at various scales. Finally, to come forth will proactive approach that will serve as a lasting solution to put this menace on check. This study is

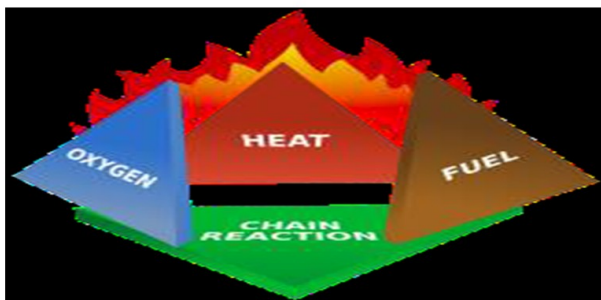


Figure 1.1. a figure showing all the elements causing fire (Adekunle, et' al, 2018).

properly guided by several fundamental questions what are the major causes of fire outbreak in the area? Apart from physical, functional and economic effect, are there other effects fire outbreak can cause on real property in the study area? What are the strategically regulatory frame works established to checkmate fire disaster, and to what degree has this framework been effectively implemented?



Figure 1. Showing fire outbreak on real properties in Onitsha megapolise

LITERATURE REVIEW

Over the years tragedy caused by fire outbreak across various part of (especially developing nations) has really invoke the quest and study on possible approaches to manage and minimize the current level of fire wild spread disaster that has been challenging Onitsha megapolise for more than a decade now. Various scholars have made an attempt to address this issue based on what is obtainable from their own view point and variant circumstance. According to (Alom and Ogbuene, 2023; Olokeet' al, 2022) fire outbreaks are seasonal disaster that is phenomena to states in Nigeria that mostly occur between November and March of every year. Fire hazard usually sets market, shopping malls, vehicles and buildings ablaze etc. the government, related stakeholder and various firefighting agencies have channel efforts towards ameliorating this environmental challenge. However, the level of success is still in search for a light at the end of the tunnel. Fire disasters either captured or not, are usually byproduct of bush burning, faulty construction, professional negligence and gross carelessness that leads to hurtful loss of lives, means of support, assets and properties.

This study was trying to point to the fact that the degree to which a city is designed and built has a long term effect on the city. (Mgina and Wawa, 2020) from their stand view insist that wildfire are a result of land preparation for farming purpose which involves bush clearing of forest harvest waste for seed replanting, slash and bush burning practice by farmers. (WWF, 2020). This study was coming from agricultural view, it centered concentration on preserving agaric resources and ways of mitigating wildfire spread on farming land. (Oluwunmi, 2023; Ugwu, 2018; Akinkuotu, 2021) in his study centered his study on government buildings. In his findings the major causes of fire outbreak in government buildings are electrical malfunction issues, political related jingoism, low awareness of fire safety measures, and the use of substandard building electrical fittings

(Ajayi, 2019; Are, 2022; Oguntola, 2022) in their observation, fire outbreak can be prevented to a minute level if appropriate measures are put in place. Other challenges that inflates this man made environmental disaster can also be trace to poor firefighting infrastructure in nodal communities (Oloke et' al, 2021, Agbonkeseet' al, 2017) insisted that fire hazard is a phenomenon that is commonly associate with deliberate or accidental outcome of human activity and must to be put to check through the provision and installation of infrastructure that will extinguish it when it attacks this was also supported by (Dirisuet' al, 2019) other researcher approach the impact of fire outbreak from another perspective in the case of Mandel et' al (2018) he studied coupled atmosphere-wildland fire modeling with weather research and forecasting (WFR) fire. They define the twosome atmosphere-fire model WFF-F ire, as they did not support awing fire, while canopy fire juxtaposition with ground fire is contained in couple atmospheric wildland fire environment (CAWFE). (Odogwu, 2021, Maina, 2022) in his study he discovered that outbreaks have the substantial effect on the country's economy in respect to exchange rate, which in reverse affect chain reaction along demand and supply chains, adding up to crime rate. Again, the impacts on bionetwork are highly important, therefore, they must not be considered insignificant while fire is furious, copious amount of greenhouse gases are released, which have heavy impact on weather at an environmental scale Odadu(2017). Having said all that, various scholars made research in various area of human endeavor like government building farm lands, rural areas, as well as urban areas. This research focuses on megapolis which is a lager set of a city which is a combination of different land uses basically a nodal region consisting of mixed land use. The study of other scholars has really help this study in capturing the overview of the present situation, and x-raying the latent factors of fire outbreak and the way forward.

MATERIAL AND METHODS

In a pursuit to achieve the study objectives the researcher conducted an evaluation using a five-step methodology used by Babalolaet' al (2019). The steps are firstly, formulating research questions and objectives; secondly, identifying relevant published studies; thirdly, evaluating the studies; fourthly; summarizing the major findings; and fifthly, interpreting the findings. After formulating the study's objectives, the next step is to identify related materials on fire outbreak in real properties in this study. Data was gained from various sources this includes journals, newsletter, websites magazines, text books and newspapers they are categorized as secondary data on the other hand site visit, direct face-to-face interview and administering of well-structured questionnaire to the respondent. This is categorized as primary data.

The questionnaire was drafted and distributed to 160 respondents, property occupier (tenant 120 respondents) and property owners (land lord 40 respondents) reason for the imbalance between their numeric variation is this, most of the respondents found on site are tenants. Considering this two as the principal actors in a common square root. The researcher retrieved 156 (85%), the retrieved data was sorted and analyzed using special package for social sciences (SPSS) version 23. Data was presented in tables, chart and other statistics presentation techniques. The findings and interpretation of finding was made within the simplest term for clarity and understanding. The population of the study is property owners and occupiers within the study area Onitsha mega polis and related stakeholders. While the sample size is the simple random sampling as shown above. The use of (%) is for the study and accuracy purpose.

RESULTS

Upon our site visit during this study we discovered that most of the real property is usually occupied by men due to nature of their existence and natural stratification. This real properties ranges from blocks of flats, bungalows, and duplexes which are needed for residential purpose, shops, warehouse, letting space, office plaza, and malls etc. which is used for business purposes and so on. Table 1 shows the gender of the respondent below.

Table 1. Shows the gender of the respondent

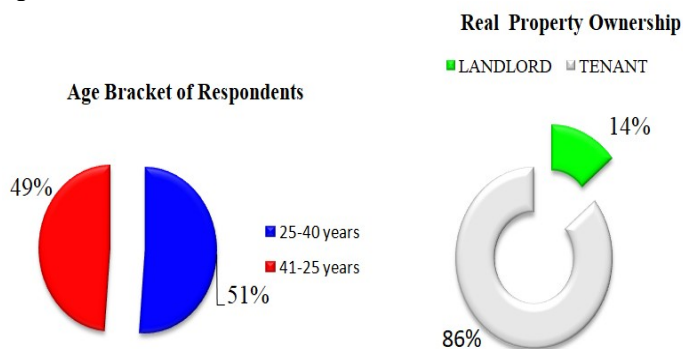
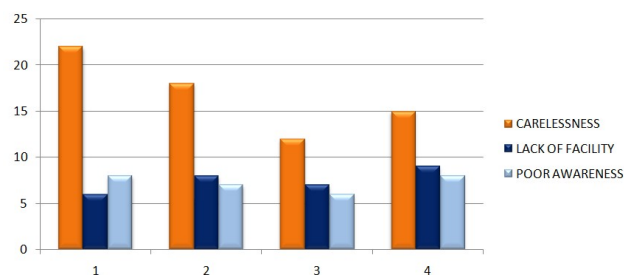
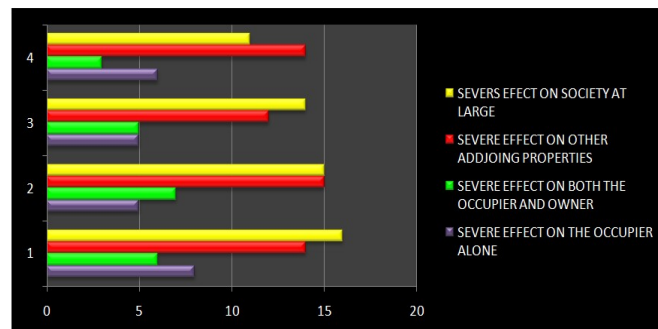
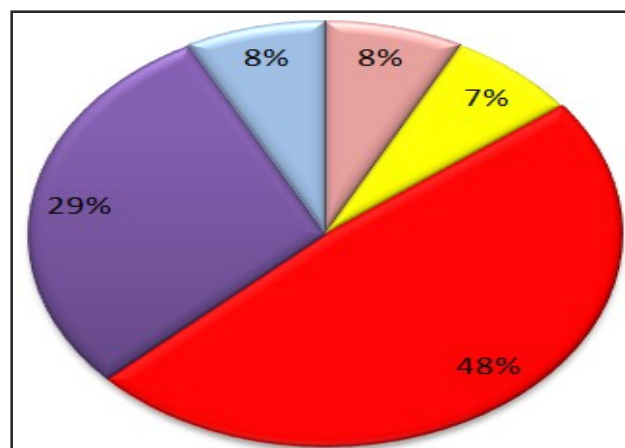
GENDER OF RESPONDENT					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MALE	123	78.3	78.8	78.8
	FEMALE	33	21.0	21.2	100.0
	Total	156	99.4	100.0	
Missing	System	1	.6		
Total		157	100.0		

This study revealed that the age bracket in active property occupying falls between 25-40 and 50-55 years suggesting that most of the fire outbreak in urban and semi-urban area, are usually a byproduct of human activities, this also has a link with overhauling in schedules that encumber people in this category as seen in figure 1 below. This also reveals that lack of proper carefulness and other poor precaution approach amongst tenant coupled with nonchalant attitude has a great effect in the event of fire outbreak. Consequently, age bracket of respondents point to fact; the people in active property occupation are in good position to administer approaches that can reduce fire outbreak in urban and semi-urban so a minimum acceptable standard if every measure is put in place.

The state of real property ownership was viewed as the latent reason behind some of the fire outbreak this can only be understood in the face of Africa proverb that states ‘a goat owned by the public normally starves’ this can be seen in figure 2. Property ownership places a high degree of carefulness and acceptance of responsibility especially in “owner occupier scenario” from the exploded doughnut chart above the study reveals that most of property occupier are tenant with 86%, while the occupier with 14% are landlord. From the figure above we can come to this conclusion that the state of ownership over real property, has impact on how it is been used, protect and preserved.

This study carefully discovered that the major cause of fire outbreak is carelessness in discharging their daily activity. In figure three above its evidently clear that carelessness was ranked 97,30, 29 frequency and 62.2,19.2, 18.6 (%), this also shows that in all the areas as contained in the scope of study in respect to geography, carelessness was collectively viewed as the common cause of fire outbreak in real properties in the study area.

The researcher made an attempt to appraise in other to ascertain the degree to which the afore mention urban disaster affect property owners and occupiers. However, our findings suggest that; in the case of fire outbreak the worst hit may not even be the property owner, this study unfolds that real property occupier may lose goods, the property owner may lose this building, on the long run, fire outbreak will certainly engulf the entire society if not placed on check. The recent blaze that attacked Hollywood was a perfect example of the degree of effect to people, building and other human resources. From the figure above the respondent strongly assert that, effect of fire outbreak affect the society at large and so ranked 35.9% from the table and 16 on above figure. Anambra state as at the day of carrying out this study a total of ten (10) fire stations with its headquarters at Eze-Uzu junction Agu Awka.

**Figure 1. Shows the Gender of the Respondent Figure 2 Property Ownership of Respondent****Figure 3. Above Shows What the Respondents Consider to be the Root Cause of fire Outbreak in Onitsha Megapolise****Figure 4. Above explains the degree or effect to which fire outbreak affects Onitsha megapolise and its surroundings****Figure 5. Respondents opinion on the number of fire stations in Onitsha megapolise**

However, the state of this fire station has made it impact felt with little or no relevance due to their deplorable state, from table five (5) above it can be noticed that poor allocation of budget, lack of efficient agency and dilapidated firefighting facilities are considered to be a contingent reason fire attack tends to ravage our society when it occurs, while providing firefighting facilities, reviving or re-installing related agencies and allocating appropriate budget will serve as a proactive measure in combating fire outbreak in the study area. from figure (5) above we can notice that beyond argument, that the respondent insist that mapping out budget for firefighting agencies, install fire control facilities had 95 frequency, ranked (60.5%), outweighs the opinion of building fire station in every metropolis with a variation of (35%) sanctioning of defaulters with the variation of (54.1%) and maintain existing fire stations (53%).

From the above pie chart the study reveals that the present fire station in Onitsha megapolise need to be increased, this can be seen from the figure above. The respondents are of the opinion that urban sprawling, increase in rate of development and population increase are all pointing to the fact that the existing fire station needs upgrade and new once built.

Table 2 below shows the respondents view as an approach to curtail fire outbreak in Onitsha megapolise

WHAT DO YOU CONSIDER TO BE A LASTING MEASURE IN COMBATING FIRE OUTBREAK IN ONITSHA MEGAPOLISE				
Lasting Measures to Combat Fire Outbreak in Onitsha Megapolise		Frequency	Percent	Valid Percent
Valid	MAP OUT BUDGET FOR FIREFIGHTING AGENCIES, INSTALL FIRE CONTROL FACILITIES	95	60.5	60.9
	BUILDING FIRE SERVICE STATION IN EVERY METROPOLIS	40	25.5	25.6
	SANTION DEFAULTERS IN THE EVENT OF FIRE OUTBREAK	10	6.4	6.4
	MAINTAIN THE EXISTING FIRE STATIONS	11	7.0	7.1
	Total	156	99.4	100.0
Missing	System	0	.6	
Total		156	100.0	

DISCUSSION

Over the last decade fire outbreak has become a global issue especially in south east Nigeria. Fire outbreak is caused by different events in different part of the globe, in some places it occurs as natural disaster while in some place it's caused by manmade disaster. Whichever, the outcome of this catastrophic event poses as hazard both to man and other resources. This study reveals that men are mostly associated with activities that lead to fire outbreak and also are the gender that can place these occurrences on check. Younger people should take up the responsibility of managing affairs that can lead to fire outbreak through application of preventive measures where applicable. In any circumstance both the tenant and landlord need to team up in putting in place all measure that can give birth to fire outbreak in real property and define boundaries during tenancy agreement, this can go a long way in putting fire outbreak on check. Carelessness should never be contingent enough; carelessness on the part of the landlord is not planning for fire safety during construction and subsequent maintenance while extra carefulness and application of fire safety measure should be the sole responsibility of a tenant. The outcome of fire outbreak affects the society at large and therefore should be a collective responsibility back up by statutory framework at all levels of government undertakings. Combating fire outbreak can be achieve through government regulation and policies, creating awareness and sensitization of measures of avoiding fire outspread and alternatives of managing it at a small scale with the compulsory installation firefighting gadgets like domestic fire extinguisher and related devices. Mapping out substantial budget for the sector, renovating and revamping the existing one is not out of context while at the same time building more equipped and sophisticated fire station will help preserve real property in event of fire outbreak.

CONCLUSION

The attack caused by fire disaster is a systematic way of economic retrogression to first an individual secondly to the society and thirdly to national economy. The fire incident of Hollywood will definitely have a negative impact on the economy of United States of America no matter how small. It's therefore a universal call to dwellers in Onitsha megapolise to contribute their quota in preventing factors that poses as danger to our common heritage through playing our part in checkmating our economic activities that can lead to fire outbreak. Onitsha megapolise is almost surrounded by markets, putting regulatory framework through the town plan authorities at various levels making a policy that captures firefighting facilities from design stage to redevelopment or real estate life cycle stage so as to protect real properties from fire disaster. Building modern fire stations by governments, equipping them with twenty first century facilities that can aid in the event of fire outbreak, allocating resources to the fire safety sector and implementing policies that will regulate fire occurrences in society.

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REFERENCES

- Adekunle. A., Umanah I.I., Ibe K.E., Imonikosaye M.R. (2018). Statistical Analysis of Fire Outbreaks in Homes and Public buildings Nigeria: A Case Study of Lagos State, International Journal of Engineering Research and Advance Technology Vol.4, issue 8 August available at DOI: <http://doi.org/10.31695/IJERAT.2018.3294>
- Agbonkheshe, O., Yerima, A.B., Abba, Y.L., Kawu, Y. (2017). Curbing Menace of Urban Fire Outbreak in Residential Buildings: a Case Study of Gombe Metropolis Scientific Research Journal (VII): 49-63 21
- Ajayi, O. (2019). Nigeria Loses N 5 Trillion to Fire in 4 years. Available at <https://allafrica.com/stories/201911300106.html>
- Akinkuotu, E. (2021). Fears over 2023 polls as fire guts 19 INEC Offices. Available at <https://punchng.com/fears-over-2023polls-as-fire-guts-19-inec-office/>
- Alom, A.C., Ogbuene, B.E. (2023). Seasonal Incessant Fire Outbreaks in Anambra state; a Case for Concern: Town Planers View. Journal of Faculty of Environmental Sciences, NnamdiAzikiwe University, Awka Nigeria, Vol. 9, No. 2.11 Available at www.erjournal.net
- Babalola, O., Ibem, E.O. Ezema, I.C. (2019). Implementation of Lean Practices in the construction Industry: A Systematic Review Building and Environment, 148, 34-43. 26
- Are, J. (2022). 50 INCIDENTS, 15 states' –INEC Details Attacks on its Office in 4 years. Available at <https://www.thecable.ng/50-incidents-15-states-inecdetails-attacks-on-its-offices-in-4-years>
- Dirisu, J.O., Fayomi, O.S.I., Oyedepo, S.O., Mmuokebe, J.I. (2009). Performance Assessment of the Firefighting Personal Protective Tunic. Energy Procedia 157 (2019): 405-41822
- Emenike, K.C (2020). Alternative Measure in Providing Real Estate Infrastructure in a Recess Economy in Awka, Anambra State Nigeria. International Journal of Engineering and Applied Science Vol.4.Iss.10 (pp.28-33) 6 Available at: <http://www.ijeast.com>
- Emenike, K.C (2022). The Aim of the Study is to Examine Impact of Sustainable Housing Infra- structure and its Effect on Property Values in Umuahia Capital Abia State Nigeria (Ph.D. Dissertation) 7 Available at: <http://www.selinus.com>
- Fire History (2014). A Historical repository for the fire service of the United States of America. Fire History. 2, X-Y.
- Maina, M. (2022). Expect More Fire Outbreaks in Nigeria-Aregbesola Available at: <http://dailypost.ng/2022/02/210/expect-more-fire-outbreaks-in-nigeria>
- Mgina, M., Wawa, A. (2020). Assessment of Wildfire in Tanzania Forest Plantations: a Case of Sao Hill in Mufindi District. Huria journal, Vol. 27(2), September 30-35 13
- Mandel, j., Jonathan, D.B., Adam, K.K. (2018). Couple Atmosphere-Wildland fire Modeling with WRF-Fire version 3.3 22
- Oloke, O.C., Oluwunmil, O.A., Oyeyeni, K.D., Ayedun, C.A., Peter, N.J. (2021). Fire Risk Exposures and Preparedness of Pre-Urban Neighborhoods in Ibadan, Oyo State, Nigeria. 4th International Conference on Science and Sustainable Development Advance in Science and Technology for Sustainable Development, ICSSD Vol.655 12

- Oluwunmi, A.O., (2023). A Review of Fire Outbreaks in Government Buildings in Nigeria: causes and remedies. *Tropical Journal of the Built Environment (TJOBE)* Vol. 4 No. 1 June, 1, 63-76.
- Udechukwu C.E (2016).Introduction to Real Estate Management Lagos.Treem Nigeria Ltd.5
- Odadu, U.S. (2017). Analysis of the Overview of the Cause of Fire Outbreaks in NigeriaMarkets.CARDInternational Journal of Environmental Studies and Safety Research (IJESSR), 2(2), 1-925
- Odogwu, G. (2021).Avoiding the Rivers of Fire. Available at <https://punch.com/avoiding-the-rivers-of-fire/23>
- Oguntola, T. (2022). Arson: INEC Records 50 Attacks in 4 Years.Available at <https://leadershipng/arson-inecrecords-50-attacks-in-4-years19>
- Oloke, O.C., Oluwumi, A.O., Oyeyemi, K.D., Ayedun, C.A., Peter, N.J. (2021). Fire Risk Exposure and Preparedness of Peri-Urban Neighborhoods in Ibadan, Oyo State Nigeria 4th International Conference on Science and Sustainable Development: Advances and Technology for Sustainable Development, ICSSDVOLUMN 655 20
- Onwumere, B.O., Ihekuna, C.P., Johnson, O.O, Obiadi, B., Onuorah I.M. (2023).Fire Outbreak in South east Nigeria and Inadequacies in Service and Fighting Stations.8 Available athttps://www.researchgate.net/publication/359413690_FIRE_OUTBREAKS_IN_THE_SOUTHEAST_NIGERIA_AND_INADEQUACIES_IN_SERVICE_AND_FIGHTING_STATIONS
- Ugwu, R. (2018). Nigeria lost N 5.5 trillion to fire disasters in five years. Federal Fire Service.Available at <https://sunnewsonline.com/nigerialost-n5-5trillion-firedisasters-federal-fire-service/15>
- World Wildfire Fund, (2020). Fires, Forest and the Future: A Crisis Ranging out of Control? Rue Mauverney 28 1196 Gland Switzerland.14
- Yusuf Olagbade (2012). "A literature review of fire incidence with emphasis on urban residential fires" Vol. 8, 116-130. 3
- Zihiri, A.B., Olayiwola, R.O., Odo, C.E. (2020). Modeling Fire Spread Behavior in Coupled Atmospheric-Forest Fire. *Journal of Science, Mathematics and Education (JOSTMED)*, 16(4), pp 104-113 9
- Zihiri, A.B., Olayiwola, R.O., Audu, K.J., Adeloye, T.O., Gupa, M.I. (2021). Analysis of Fire Outbreak in Coupled Atmospheric-Wildfire.Lapai Journal of Science and Technology, (LJST)), Vol.7, No.1 10 27
