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AIM

1. The constitution of the Federal Republic of Nigeria saddled the Nigerian Army (NA) with the responsibility of defending the territorial integrity of the nation and deterring any act of aggression by land.¹ However, the NA cannot fully meet its obligation without the availability of military hardware that meets the required standards. The aim of this paper is to examine the standardization of equipment as a viable option for the NA with a view to making recommendations.

INTRODUCTION

2. The NA has in its inventory an array of equipment that are neither manufactured nor assembled in the country. The reason is that Nigeria lack the technological knowhow to produce its own military hardware, and remains a consumer of defence products exported from developed countries. This equipment has become difficult to maintain over the years due to the economic, environmental and political situations. The result is that the NA has below 50% of serviceable equipment in its units.² Presently, due to paucity of funds the NA is faced with the problem of creating and managing a logistics system that will ensure availability, while at the same time is discourage from wasting of equipment. One way of achieving this task is by equipment standardisation.

¹ Popoola O, "Equipping the Nigerian Army to meet its constitutional roles" Chief of Army Staff Annual conference, 2015.

² Oyiogu Adoga, "Combat Readiness in the Nigerian Army" unpublished (NWC project 2011)

3. Standardisation in the NA could be defined as the process of creating standard models or quality by restricting to a minimum the variety of equipment to meet the major requirement of the NA. It is not only about, limiting the quantity of equipment but more about limiting the variety of equipment and their compatibility. This ensures cost effectiveness in terms of maintenance and also prolongs the life span of the equipment. Standardisation encourages expertise in technicians and enhances equipment management and planning. The purpose of this paper is to examine standardisation of equipment in the NA, an option for managing NA equipment. The paper will cover the appraisal of NA procurement policy, concept and advantages of standardisation. It will finally suggest ways of achieving equipment standardisation in the NA. However, it will be limited to Armoured Fighting Vehicles ('A' Vehicles) and Soft Skin Vehicles ('B' vehicles).

Appraisal of Nigerian Army Procurement Policy

4. The NA procurement policy came into being in 1999. Before its enactment, procurement in the NA was governed by the 'Q Administrative Instructions' which sets guidelines for all equipment procurement in the NA.³ The NA procurement policy is currently in line with the strategic directives given by the Presidency for the procurement process of all Ministries, Department and Agencies (MDAs) to conform to the 2007 Public Procurement Act (PPA). The PPA established the National Council on Public Procurement and Bureau of Public Procurement as the regulatory authorities responsible for the monitoring, regulating and setting standards and

³ Public Procurement Act, 2007,16.

legal framework for public procurements in MDAs.⁴ This is with the aim of ensuring that standards requirements are not with individual interest.

5. Despite all these measures, military equipment was procured without considerations to the PPA, resulting to various kinds of equipment from different manufacturers that do not meet the required standards. According to the report of Standard Inspection Mechanical Transport Tools and Equipment (SIMTTE) of Nigerian Army Electrical and Mechanical Engineers (NAEME) 2016, there were 24 different variants of AFV's, 11 different types of artillery pieces, 46 types and models of 'B' vehicles and various types of radio sets in the NA inventory.⁵ The result of all these uncoordinated procurements was waste of large sums of money on equipment that becomes easily unserviceable. Also, the lack of adequate spares and trained technicians coupled with limited resources has made the maintenance of this equipment difficult. Thus, most of them end up in the NA junk yard.

6. In Canada, for example, the acquisition of military equipment is conducted through a long process of research, test and evaluation. The Public Services and Procurement Canada is responsible for the standardisation of equipment procurement on behalf of the government of Canada.⁶ It is committed to ensuring federal procurement is carried out in a fair, open and transparent manner. This commitment is carried out by reviewing complaints from suppliers about contract awards or administration, making recommendations and by ensuring strict adherence to government requirement. The Nigerian Army can borrow a leaf to set up an

⁴ Makinde RA, "Equipment Procurement and management in the Nigerian Army": implications for NACAS operations, 2016.

⁵ Nigerian Army Standard Inspections for Mechanical Transport Tools and equipment Report 2016.

⁶ Martin Auger, "The Evolution of Defence Procurement in Canada." The Library of Parliament Research Publications. 2016, 8.

independent body made up of experts that would see to the strict adherence of the PPA and ensure standardisation.

Concept of Standardisation

7. The concept of standardisation could be explained using an example in the NA. An armoured brigade according to the 1996 NA Order of Battle (ORBAT) has two tanks battalions and one reconnaissance battalion.⁷ There is also an armoured workshop to support the brigade with maintenance. The armoured brigade is equipped with the Russian T72 and Eagle Main Battle Tanks (MBT) from Britain. The workshop needs to stock its store with spare parts to support 2 types of vehicles performing the same roles. They are also required to possess different tools, recovery vehicles and test equipment to support each of the vehicles.

8. In the area of manpower, the workshop will require two sets of technicians, with each set specialising on each of the vehicles. Additionally, the ordnance personnel have to contend with the problems of providing separate storage and documentation for two sets of spare parts. Moreover, the drivers of the vehicles cannot be moved into a different variant of spare tank. This is so because they may not be used to the mechanisms of the other type of vehicle. If however, the NA decides to adopt the Eagle MBT as the only tank in use, these problems would be reduced. All the technicians would focus on repairs of only one type of tank using only one set of repair, recovery and test equipment. Similarly, a driver could easily take over a spare tank in battle if the original driver becomes casualty. The efficiency of the brigade would then be enhanced. This is what is obtainable in the Canadian Army Armour Regiment. The Leopard

⁷ Saliu Wali, "An overview of the Nigerian Army ORBAT ACC Commandant's paper" (Kaduna: 1996), 14.

2A6M main battle tank is the only variant of tank used by the Canadian Armoured Regiment. The reconnaissance and infantry units are equipped with the LAV 25 Coyote, LAV III AFVs and the Tactical Armoured Patrol Vehicles (TAP V).⁸ All these armoured fighting vehicles were from the same manufacturer and their spare parts are compatible. As such, the cost of maintenance and training will obviously be low and the efficiency of the regiment will be enhanced. The Nigerian Army would enhance its operational effectiveness with less cost if the concept of standardisation is properly implemented.

Advantages of Equipment Standardisation

9. Equipment standardisation help to reduce the training requirements for both the operators and maintenance crew when new equipment is introduced into the NA inventory. The usual process is to sign an agreement with the manufacturer for regular maintenance of the supplied equipment. As an alternative, the manufacturer could offer training on the equipment to NA personnel. However, experience has shown that the level of training given by the manufacturer was not only expensive but also inadequate. The end result is that the particular equipment is not properly maintained. On the other hand, equipment standardization would reduce the NA's training needs due to consolidation of equipment types and models. In the long run, the process of on the job training is simplified as most technicians would have a wealth of experience on such equipment. They will in turn impart this knowledge to new technicians.

10. The availability of technical manuals serves as guide to technicians and operators. The manuals contains basic requirement that come along with new equipment. They are beneficial to

⁸ "TAPV: Contract Award for the Tactical Armoured Patrol Vehicle," last modified June 2015, accessed January 29, 2018, <http://www.casr.ca/doc-dnd-tapv-award.htm>.

the operators and maintenance crews and cover storage considerations. The lack of technical manuals makes the operation of any equipment much more difficult as maintenance crews have to resort to trial and error method when faced with serious technical problems. This method may cause damage to such equipment. There have also been times when technical manuals are written in foreign language and need to be translated into the English language at an added cost. However, such problems are reduced by equipment standardisation as there will be manuals on only agreed equipment which would have been mastered over time. This would reduce the amount of maintenance errors and down time.

11. Interchangeability of vehicle spares will help to maintain serviceability and operational effectiveness. The NAEME report of the Standard Inspection of Mechanical Transport and Mechanical Equipment 2016 noted that NA has over 46 brands of 'B' vehicles in its inventory.⁹ Some of these vehicles include Steyr, Mercedes Benz and Tata trucks, which are mainly used as troop carriers. They all run on diesel engines, but their parts are not interchangeable. The use of different 'B' vehicles by the NA means that there will be a need to invest heavily on spare parts, test equipment and repair facilities. However, equipment standardisation would make vehicles parts compatible. Vehicles that are beyond economic repair could be cannibalised to fix others with minor faults. This would in the long run increase the availability of vehicles in the NA inventory.

12. Rationalisation of tools and equipment is another major benefit of equipment standardisation. When major hardware is procured by the NA, provision has to be made for the purchase of special tool that are necessary for its maintenance. Where there are different varieties

⁹ NA SIMTTE Report 2016,8.

of equipment, the financial requirement for tools and test equipment become phenomenal. In addition, there would be the need to acquire the different tools, repair jigs, recovery vehicles and test equipment to support the equipment. It would also be necessary to stock the minimum spare parts to maintain it. Additionally, the risk of using the wrong tools or test equipment would always be present especially when under pressure. However, through the practice of equipment standardisation the need for specialist tooling and equipment is reduced because maintenance is focused on a particular type of equipment.

Adoption of Equipment Standardisation in the Nigerian Army

13. Equipment standardisation could be regarded as a technical and scientific task as it encourages expertise in technicians and enhances equipment management planning. This is why the Canadian Government has employed the role of special bodies to coordinate efforts in this field. An example of such a body is the Public service Procurement which is responsible for supervising the development, preparation and standardisation of specifications for all articles procured by the Canadian Military. Bearing this in mind studies of prospects for the development of equipment standardisation must be conducted on a permanent basis in order to improve the quality and efficiency of military equipment in the NA.

14. If the NA is to adopt equipment standardisation as a means of managing its equipment it would first have to come up with an equipment standardisation Program. Such a program could include the standardisation of materials, components, processes and engineering practices. Its primary goals could be aimed at the reduction of the number of different models and equipment that are easily available off the shelf and examine different equipment to encourage the use of

interchangeable parts. It could also come up with a rational for purchases of military hardware based on the principles of quality and suitability of the equipment, cost and supply terms.

15. In line with this view, the Department of Army Standardisation and Evaluation (DASE) could be made responsible for the implementation of an equipment standardisation program. This committee on equipment standardisation could be constituted through DASE to consider the areas that have been mentioned for a proposed standardisation program. The committee could examine all equipment presently in use within the NA and come up with a rationalised Table of Equipment (TOE). They could also take into consideration the uncertainty of irregular supply of such equipment. All specialist arms and services could also constitute sub-committees to carry out similar exercises for their special to arms equipment. Once the rationalized TOE has been approved, it would be necessary for it to be strictly adhered to by all corps.

16. The next phase towards equipment standardisation could be the writing of the NA's specifications agreement for all the equipment stated in the TOE. This document would contain concise and precise statements that must be satisfied by a product or material before it can be introduced into the NA. Where possible the methods of ascertaining these requirements are to be spelt out in the document. The results could be published as an equipment specification agreement for the NA. Rather than using an immediate costly general shift and redistribution of equipment, the adoption of equipment standardisation could be implemented gradually through a process of planned adjustments. The process could start with B vehicles, before proceeding to 'A' vehicles. On completion of the motorised transport phase, concentration could be placed on weapons systems and other equipment.

17. A final phase in adopting equipment standardisation could be the linking up of the Army's Department of Standards and Evaluation with that of the other services to form the Defence Directorate of Standardisation. This would give it more force at the defence headquarters level for further implementation.

CONCLUSION

18. In the past equipment procurement policies of the government have affected equipment management in the NA. Since independence, political and economic circumstances have led the NA to purchase equipment from different manufacturers. Some of these equipment were procured without due consideration to the environmental conditions of the country. The proliferation of vehicles contributed to maintenance problems, which has adversely affected the operational readiness of the NA. Most units are littered with unserviceable vehicles making their vehicle holding efficiency low hence the need for standardisation.

19. A major advantage of standardisation is the enhancement of personnel training and reduced maintenance cost arising from storage of spare parts. The introduction of variants of vehicles would require the training of personnel responsible for operating and maintenance, usually at some cost to the NA. Similarly the cost of holding spare parts, which are not interchangeable for a variety of vehicles, is high. Standardisation of vehicles would enhance training and reduce maintenance cost. Other advantages of standardisation are in the areas of technical manuals, and rationalisation of tools and equipment. Also, there is the ease of interchanging parts, tools and operators where only one variant of vehicle is accepted for use in the NA.

20. Equipment standardisation covers so many areas including materials, components, processes and engineering practices. It would therefore need to be introduced into the NA through an equipment standardisation program. The DASE which is responsible for uniform standards in the NA could be saddled with the responsible of monitoring of NA Equipment Standardisation Programme. However, care must be taken to avoid chaotic situation from attempting to standardise all NA equipment at once. Rather than embarking on a general shift and reduction of equipment, equipment standardisation in NA could be gradually implemented through planned adjustment on different equipment.

RECOMMENDATIONS

21. The Nigerian Army should embark on immediate standardisation of 'A' and 'B' vehicles in its inventory to be followed by technical equipment until the process is fully implemented. It is necessary to strictly adhered to the 1999 NA procurement policy in future procurements. The Army Headquarters should establish a department made of experts in different fields under DASE to assist in assessing and evaluating equipment procurement and ensure it meet the standard requirement of the PPA. Finally, the Armed Forces in general should encourage research and development in technology and production to improve capabilities and meet up with global trend.

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