COST-EFFECTIVE SOLUTIONS & ORIGINAL SOLUTIONS IN DEVELOPING COUNTRIES ON ROAD SAFETY
(FRSC AS A CASE STUDY)

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SUSTAINABLE TRANSPORTATION: TRANSPORTATION SAFETY - ROAD SAFETY (FRSC AS A CASE STUDY)

AN ORAL PRESENTATION
AT A WORKSHOP ON
‘COST-EFFECTIVE SOLUTIONS & ORIGINAL SOLUTIONS IN DEVELOPING & DEVELOPED COUNTRIES’

OF THE
16TH IRF WORLD MEETING /CONFERENCE, LISBON
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1. INTRODUCTION

• Developing countries currently loose an estimated $100 billion every year from Road Traffic Crashes, twice as much as its total development assistance ... (1).

• Estimated 50 million people are injured and 1.2 million die every year from Road Traffic Crashes....(2).

• Road traffic death will increase by 80% in developing countries by 2020 If adequate measures are not taken ....WHO report (3).
2. IMPACT OF INCREASED MOTORIZATION

• Road development in Nigeria dates back to 1906 with a total kilometer of road being 3200km, but by 1992 it rose to 51,428km and as at today 194,394km network, despite the increase of the number of vehicles, road development did not evolve at the same pace.

• Nigeria witnessed in the last decade, an unprecedented increase in demand for motorized vehicles due in part to the near collapse of the railway system, the high cost of air transport and the undeveloped waterways.

• This growth created a demand for faster modes of passenger and freight (goods) transport and as a result put so much pressure on road transportation.

• About 80% of total passenger and freight in Nigeria is accounted for by the road... (4).
3. CAUSES OF ROAD TRAFFIC CRASHES

3.1 THE DRIVER

• It is generally acknowledged that human error is a hidden cause of almost all accidents; human error in observation, decision making and response to the situation at hand.

• Research in several countries, including Nigeria, conclude that human error is involved in over 75% of all road accidents (5).

3.2 THE VEHICLE

• Due to the economy of the country many people have settled for imported second hand vehicles popularly called “Tokunbo” which have been banned in their countries of origin due to age and inability to meet the safety standards of those countries.

3.3 THE ROAD

• In Nigeria, most urban roads are designed without consideration for human traffic and the pedestrians and drivers compete for space on the roads leading sometimes to pedestrian deaths.
3. CAUSES OF ROAD CRASHES CONT.

• Some of the highways are too narrow for the traffic volume and categories of vehicles they support. One of such routes is:

  • The Bode Saadu – Jebba - Mokwa highway, that links the South-West of Nigeria, through the middle belt, to the North-West a distance of about 80 kilometers which should ordinarily take about an hour now takes about two hours due to the poor state of the road.

  • The economic implications of this are manifold, cost of additional fuel, the wear and tear on the vehicle and the man – hour loss to the driver and the owner of the vehicle
• The Lagos - Ibadan - Ogbomosho - Ilorin - BodeSa’adu - Jebba - Minna Express-way in Nigeria is ranked amongst the 23 most dangerous roads in the world (6):

  • The road is described as a congested road with deep potholes, in disrepair, not maintained and is without road infrastructure.

  • The current state of this road calls for extra care and the need for the drivers to go at lower speed especially when it is dark or in inclement weather.

  • Road traffic crashes on this road have been fatal leading to the death of people especially within the productive age bracket of 25 - 55 and untold number maimed and reduced to mere vegetables.
4. STUDY

• A 3 years study on the road crash trend in Nigeria was carried to find out the effect of the intervention strategies of the FRSC from 2007 to 2009 on the crash reduction.

• Bode saadu road was used as a case study for its important link between the north and southern part of the country.

• Traffic counts were conducted and an average daily traffic volume of 2141 vehicles were discovered to be plying the Bode saadu road. 39% of the traffic are heavy trailers (see fig 1).

• Out of a total reported casualty figure of 29791 in the country for the period under review, Bode saadu road accounts for 1,966 of this record (see fig.2 & fig.3)

• This represents more than 2% of the nation’s crashes.
4.1 TRAFFIC COUNT- Fig. 1

AVERAGE DAILY TRAFFIC COUNT CONDUCTED ON BODESAADU ROAD SHOWING THE CATEGORY OF VEHICLES

- NO OF VEH/DAY, TRUCK, 187, 9%
- NO OF VEH/DAY, M/CYCLE, 122, 6%
- NO OF VEH/DAY, TRAILER, 848, 39%
- NO OF VEH/DAY, CARS, 442, 21%
- NO OF VEH/DAY, BUS, 544, 25%

SOURCE: FEDERAL ROAD SAFETY CORPS, NIGERIA
Total yearly casualty for Nigeria 2007-2009

<table>
<thead>
<tr>
<th>Year</th>
<th>Casualty</th>
</tr>
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<tbody>
<tr>
<td>2007</td>
<td>22467</td>
</tr>
<tr>
<td>2008</td>
<td>34641</td>
</tr>
<tr>
<td>2009</td>
<td>30126</td>
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</tbody>
</table>

SOURCE: FEDERAL ROAD SAFETY CORPS, NIGERIA
4.2 COMPARISON OF CRASH RECORDS – Fig. 3

**CASUALTY FIGURE INVOLVED IN CRASH ON BODE SAADU ROAD**

*(2007 - 2009)*

**TOTAL KM OF NIGERIA ROADS IS 195,000 KM WHILE BODE SAADU IS 80KM (REPRESENT 0.04%) OF NIGERIA ROADS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of persons involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>740</td>
</tr>
<tr>
<td>2008</td>
<td>670</td>
</tr>
<tr>
<td>2009</td>
<td>556</td>
</tr>
</tbody>
</table>

*SOURCE: FEDERAL ROAD SAFETY CORPS, NIGERIA*
4. STUDY cont.

- The study was carried out on Bode saadu road from year 2007 to 2009.
- It was observed that the number of road casualty reported during the period under review, showed that there was a sharp decline in year 2008 with 670 record when compared to 2007 record of 740 with further decrease in 2009 with 556 reported as shown in fig 3.
- This shows that the FRSC intervention on that route paid off with about 13% reduction in road crash, however it is observed that a better result could have been achieved if not for the deplorable state of the road which continues to deteriorate.
- The road condition is a factor which the FRSC has little or no control over during the period of study.
- However as part of our intervention strategies called 6 E’s (see fig.4), the FRSC carried out road inventory of the route stating the various defects and state of disrepair which are being forwarded yearly to the appropriate agency statuary responsible for their correction.
5.0 THE 6 E’s – Fig. 4

• The federal road safety corps has over the years developed strategies, as earlier mentioned, in tackling the problems of road crash on our highways called the 6 E’s.
5. INTERVENTION STRATEGIES

5.1 ENGINEERING:

• This will largely address the issue of road design, constructing and maintenance of the highways through activating plans for Road Safety Audit in the pre design, construction, post design of the roads.

• It is a proactive approach to improving transportation safety, also trying to ensure new roads in Nigeria go through road safety audit while the road safety audit review is carried out periodically - A RSAR ensure adequate maintenance and safety of the highways.

• The FRSC is also collaborating with the WORLD BANK GLOBAL ROAD SAFETY FACILITY to facilitate Safe Corridor project which devotes 10% of project cost to provision of safety initiatives on selected routes in Nigeria.

• The FRSC is Operationalising various reports and pledges for weigh bridges on some well traveled routes while activating plans for Tanker parks and rest areas on these routes.
5. INTERVENTION STRATEGIES cont.

5.2 ENLIGHTENMENT:

- Involves aggressive enlightenment for road users through motor parks rallies, media prints, audio and video media, handbill, bill boards.

- In order to call local and global attention/ awareness to the road safety problem in Nigeria, the FRSC single handedly organized a major international conference which highlighted the importance of road safety and gave rise to the Abuja declaration of February 2008.

- As a pioneering road safety lead agency in the region and presently the African Regional President of GPA-PRI, FRSC brought together ECOWAS members to form a West African Sub regional road safety body called West Africa Road Safety Organisation (WARSO) and also attained an Observer status for GPA-PRI in ECOWAS assembly.

- This is in its resolve to chart a new course for road safety education in Nigeria, and the ECOWAS Sub-region by bringing road safety to front burner of African Heads of Governments.
5.3 EDUCATION:

• Commercial drivers will be mandated to go through stricter driver’s training before they can be issued commercial licences.

• The Federal Road Safety Corps has established a Department of Training, Standards and Certification.

• The department aggressively driven training/retraining programmes for all categories of drivers both in the public and private sector of the economy.

• The results have shown in the improved efficiency of the drivers in terms of skill and public relations thereby improving safety on Nigeria roads.

• Due to the capital intensive nature of setting up driving schools, the FRSC provided the enabling guidelines that allowed private owned organizations to set up the schools.
5. INTERVENTION STRATEGIES CONT

• Today, there are over 350 privately owned driving schools in the country providing tutorials for intending and professional drivers which operate under the strict monitoring of the FRSC.

• The FRSC had since seen the need to inculcate the principles of road safety in children and youth so that when they grow up they become more safety conscious than what even obtains today.

• Corps successfully collaborates with the Federal Ministry of Education to teach road safety in primary and post primary schools in the country.

• Road safety has also been incorporated in the curriculum of the schools, the results have been that less children are now involved in road crashes as a result of the improved education

• The Corps has further revised the Highway Code taking into cognizance the current traffic realities, it is also being translated into the three Major Nigerian Languages of Hausa, Igbo and Yoruba to enable more people to read and understand its contents
5. INTERVENTION STRATEGIES CONT.

5.4 ENFORCEMENT:

• This involves the use of heavy duty tow trucks, patrol vehicles and the fine penalty system on erring drivers while reprobate offenders are taken to mobile court for prosecution for none adherence to the national road traffic regulation.

• To adequately enforce the rules all over the country it has established 12 zonal commands, 37 state commands and over 131 unit commands in the local government areas.
5. INTERVENTION STRATEGIES CONT.

5.5 ENVIRONMENT:

- The road environment has an impact on the safety on the road.

- Defects set in on the roads easily, the road shoulder is usually over taken by vegetation which obstructs the view of road users especially the drivers.

- The Corps carries out regular audit of the roads in Nigeria and reports its findings to the appropriate authority for necessary action in correcting such defects.
5.6 EVALUATION:

- FRSC has begun ISO 9001: 2008 Certification of her services so as to provide better service to road users.

- Currently the Corps has two research projects ongoing, one is on the effect of road signs on the driving culture of drivers in Nigeria, and the other is the study on road furniture.

- Some staff of the Corps are currently undergoing training on crash investigation.

- A good understanding of this process will further equip the Corps to carry out a thorough post crash analysis to determine the immediate and remote causes of road traffic accidents.
6. CONCLUSION

• The Federal Road Safety Corps’ mandate is to restore confidence and assurance of safety on the nation’s roads and has come up with a master plan with a decade of action tagged ‘Our Today, Our Future’

• The roads may not be at their best, the bridges may be narrow but great care and due consideration for the other road user by every road user it is possible to have safer roads and fuller lives.

• The above study shows that the intervention strategies applied actually reduced crashes by 16% but the road factor plays an important part in further reduction of crashes on our roads.

• In order to tackle this problem the Corps is activating plans for Road Safety Audit in the pre design, construction, post design of all Nigerian roads.


6. Website of the Association for Safe International Road Travel, U.S.A.2009
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