

Safety Evaluation of Feeder Road Using International Road Assessment Programme: A Case Study of Rupani-Rajbiraj Road Section

ABSTRACT

The number of road fatalities in Nepal is increasing day by day despite of an action plan, due to road surface, human errors, mechanical problem. Construction of road is increasing yearly but the safety measures adopted in the road is limited resulting the road fatalities. GoN committed to meet the UN Sustainable Development Goal (SDG) target 3.6 by reducing the road fatalities to halve by 2030. Therefore road users vehicle occupants, motorcyclists, pedestrians, and cyclists should have star rating minimum three stars. iRAP believes achieving the road to at least of 3 stars for different users will reduce the fatalities by halve. Thus safety evaluation of different seven crash prone location of Rupani-Rajbiraj road section (FRN-F004) is made using iRAP methodology.

Star Rating for existing condition of the road varied from 2 star to 4 star for vehicle occupants, 2 star to 3 star for motorcyclists, 2 star to 4 star for pedestrians and 2 star to 3 star for bicyclists. Star rating score (SRS) is found in the varying range of 4.13 to 17.29 for vehicle occupants, 5.76 to 21.82 for motorcyclists, 13.13 to 57.5 for pedestrians and 10.68 to 46.54 for bicyclists. Analyzing the obtained result of all the seven studied location only the Rupani Sub-station area meets the target. Remaining area can be improved by maintaining of damaged road, improving the delineation and providing the speed limit of the vehicle for reducing the risk of crash type like run-off either side of carriageway, head-on collision due to loss of control and while overtaking, crash at intersection, moving along the road, crossing through and side of the road. Improved star rating for vehicle occupants, motorcyclists is 3 star and star rating for pedestrians and bicyclists is found in the varying range of 3 star to 4 star. Star Rating Score is found in the varying range of 5.65 to 8.9 for vehicle occupants, 6.99 to 11.64 for motorcyclists, 12.74 to 38.03 for pedestrians and 9.46 to 26.31 for bicyclists.

Key Words: Fatalities, Star rating, Star rating score, Sustainable Development Goal

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