

# Achieving the SDG on halving road deaths and injuries: impacts and the role of Infrastructure



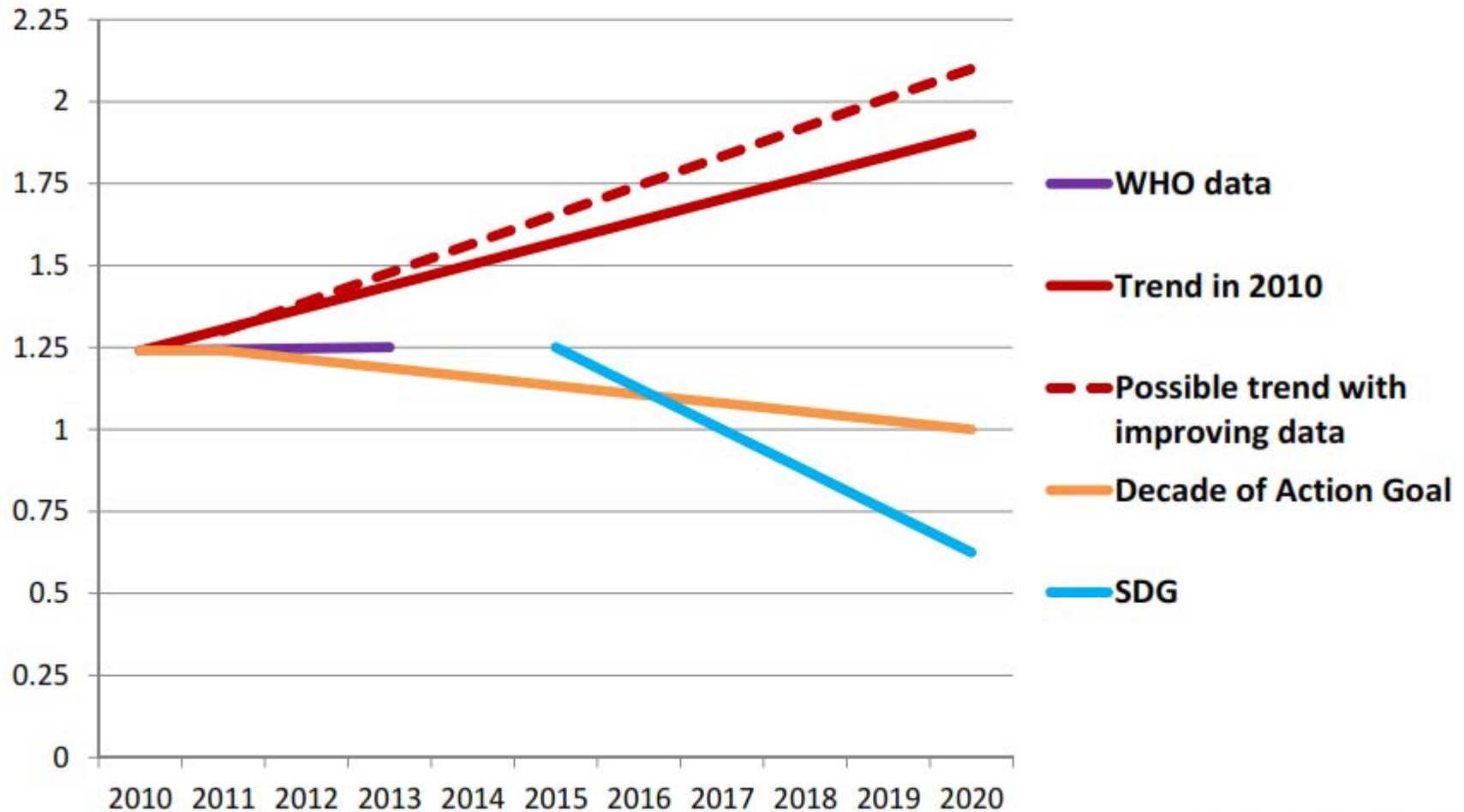
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**SDG Interactive Session**  
**ADB Transport Forum 2016**  
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# Why set targets?

- They provide the focus for the road safety strategy
- Research and experience in the EU demonstrates that long-term goals and targets provide:
  - Increased political will and stakeholder accountability
  - Better management of strategies and programs
  - Improved quality of safety programs
  - Better safety performance especially when targets are ambitious
  - Improved use of public resources
  - Increased motivation of stakeholders

# SDG Goals vs. Decade of Action Goals



Source: Perkins, ITF

# SDG interactive session

- Explore in detail the impact that dramatic improvements in road safety would have on numbers of deaths and injuries and associated economic costs for your country.
- Interactive tool that draws on the latest World Health Organization (WHO) statistics, economics data and iRAP data.

1 - 2010-03 WHO media releases - Overview of global road safety - final.pdf	05/09/2016 16:43	PDF Document
2 - ADB TF 2016 - Interactive SDG Results.xlsx	05/09/2016 15:32	Microsoft Excel W...
2 - ADB TF 2016 - SDG Interactive Session.pptx	05/09/2016 15:52	Microsoft PowerP...
2 - ADB TF 2016 - SDG Interactive Session.xlsm	05/09/2016 15:43	Microsoft Excel M...
3 - ADB TF 2016 - Interactive Star Rating Results.xlsx	05/09/2016 12:39	Microsoft Excel W...
3 - ADB TF 2016 - RAP-SR-2-2_Star_Rating_coding_manual.pdf	25/05/2015 15:48	PDF Document

# SDG interactive session

1. Test the effect of different national death rate targets
2. Test the effect of different national star rating targets
3. Test the effect of different global death rate targets
4. Report back to group for consolidated results

# iRAP Star Ratings and the SDGs - National Policy Targets to halve road deaths by 2020

## Maximising travel on 3-star or better roads for all road users



Note: Spreadsheet tool developed by iRAP to explore national targets and the % of travel of 3-star or better roads needed to reach the SDG targets in your country. For details on assumptions and background detail please contact [rob.mcinerney@irap.org](mailto:rob.mcinerney@irap.org).

Country selected: Afghanistan

Population numbers <sup>a</sup> for 2010	31,411,742
GNI per capita <sup>b</sup> for 2010 in US dollars	410
Income level <sup>c</sup>	Low
Reported number of road traffic deaths <sup>d</sup>	1,501
Modelled road traffic deaths - point estimate	6,209
Modelled road traffic deaths - 95% confidence	5 538 - 6 880
Estimated road traffic death rate per 100,000 population	19.8

Afghanistan	2010	2020	2030
Total reported fatalities per 100,000 population	19.8	19.8	19.8
Total modelled fatalities per year	6,209	7,588	8,956
Population estimate	31,411,742	38,322,300	45,232,900
% change target from 2010 baseline		-22%	-44%
GDP per capita (2020 values used for estimates)		659	
Annual crash cost as a % of GDP (simplified analysis)	7.1%	7.1%	7.1%

\*Straight line reductions assumed above for simple analysis - stabilise and then reduce is expected in reality

Afghanistan	LIVES IMPACTED: Fatalities and injuries avoided compared to WHO projections					
	10 year period to 2020			20 year period to 2030		
	Fatalities saved	Fatalities & serious injuries saved	Fatalities & all injuries saved	Fatalities saved	Fatalities & serious injuries saved	Fatalities & all injuries saved
Reduction	6,904	75,940	222,640	3,512	39,000	113,000
Economic benefits (USD)	1,405,131,531			717,803,420		

**STEP 1**  
Using the drop down box to select your country of interest.

**STEP 2**  
Enter your target for your country by updating the reported fatalities per 100,000 population in

**STEP 3**  
Review your potential to save fatalities and injuries and the immediate economic benefits available and enter into your worksheet.

**STEP 4**  
Click here to explore the Star Rating targets for your road network and how many lives can be saved.

SDG Targets National

Star Rating Targets

SDG Targets Global

WHO and iRAP Data

# iRAP Star Ratings and the SDGs - National Policy Targets to halve road deaths by 2020

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<b>Country selected</b>	Afghanistan		
Reported number of road traffic deaths <sup>4</sup>	1,501		
Modelled road traffic deaths - Point Estimate	6,209		
Estimated road length	5 538 - 6 880		
Estimated road traffic death rate per 100,000 population	19.8		
Population numbers <sup>5</sup> for 2010	31,411,742		
GNI per capita <sup>6</sup> for 2010 in US dollars	410		
Income level <sup>7</sup>	Low		

Star Ratings will be improved through a combination of investment in engineering upgrades on high volume high-risk roads and speed management on roads where investment is not affordable or economically viable. Upgrading roads and/or reducing speeds improves the star rating for all road

Percent of travel at each star rating level				
Star Rating (all users)	Baseline (example)	Baseline	2020	2030
5-Star	0%	0%	10%	15%
4-Star	2%	3%	15%	25%
3-Star	18%	22%	55%	60%
2-Star	30%	38%	15%	0%
1-Star	50%	35%	5%	0%
Total	100%	98%	100%	100%

Fatality Reduction Potential of Improving Star Ratings				
Performance Metric	Baseline (example)	Baseline	2020	2030
Weighted Star Rating Fatality Index	0.69750	0.59875	0.28750	0.19063
% of travel at 4-star or better			25%	40%
% of travel at 3-star or better			80%	100%
Percentage reduction in trauma from Star Ratings			52%	68%

Summary 5 Pillar Contribution (update to Save LIVES when published)		
Target for country	-22%	-44%
Road safety management		
Safer roads & mobility	52%	68%
Vehicles		
Road users		
Post-crash care		
Total of all pillar contributions	52%	68%
Progress	Target Met	Target Met

**STEP 5**  
Review the baseline star rating for your network / country, and set targets for the desired safety performance in 2020 and 2030.

**STEP 6**  
Enter the star rating targets and potential percentage reduction in road trauma in your worksheet.

**STEP 7**  
What action and results are needed from other pillars to ensure the SDG target is met? Enter your contribution for the other 4 pillars until "Target Met" message appears. Enter into your worksheet.

**iRAP Star Ratings and the SDGs - Global Policy Targets to halve road deaths by 2020**  
**Maximising travel on 3-star or better roads for all road users**



**STEP 1**  
 Enter per population targets for low, middle and high-income countries until the global SDG target to halve road deaths by 2020 has been achieved.

**STEP 2**  
 Review the number of fatalities and serious injuries that will be saved when the targets in Step 1 have been achieved. Enter the Targets and the "Fatalities & Serious Injuries" saved in your personal worksheet.

**STEP 3**  
 Review the potential economic benefits from reaching your targets at the global level (Cell O16 in red) and enter on your worksheet.

Executive summary	Fatalities per 100,000 population (rates in white can be edited)		
	2010	2020	2030
Low-income countries	18	18	18
Middle-income countries	20	20	20
High-income countries	9	9	9
SDG target (less than)		620,000	310,000
Total fatalities per year worldwide	1,240,000	1,375,405	1,506,252
Global per population rate	18	18	18
% Change target from 2010 baseline		-11%	-21%

	LIVES IMPACTED: Fatalities and Injuries avoided compared to WHO Projections					
	10 year period to 2020			20 year period to 2030		
	Fatalities saved	Fatalities & serious injuries saved	Fatalities & all injuries saved	Fatalities saved	Fatalities & serious injuries saved	Fatalities & all injuries saved
Low-income	347,000	3,817,000	11,191,000	857,941	9,437,000	27,669,000
Middle-income	559,000	6,149,000	18,028,000	1,776,172	19,538,000	57,282,000
High-income	0	0	0	0	0	0
<b>Total</b>	<b>906,000</b>	<b>9,966,000</b>	<b>29,219,000</b>	<b>2,634,113</b>	<b>28,975,000</b>	<b>84,951,000</b>

*\*Straight line reductions assumed above for simple analysis - stabilise and then reduce is expected in reality*

Simple economic analysis (linked to column D figures) and FSI crashes only with no GDP per capita adjustment		
Measure	Value	Notes
2010 GDP	\$62,393,785,001,765	Global GDP in 2010
2010 cost of FSI crashes	\$1,855,250,427,627	Based on iRAP analysis using True Cost of Road Crashes research
% of GDP	2.97%	Calculation
2030 GDP	\$117,668,666,604,000	Estimate of Global GDP in 2030
2030 cost of FSI crashes	\$2,253,608,880,799	Calculation using 1% red'n Cell D16 no allowance for discount rates
Cost saving over 20 years (in current GDP values)	<b>-\$3,983,584,531,720</b>	Simple calculation based on straight line reduction 2010-2030

*Note: Does not include benefits extending post 2030*