THE USE OF ROAD SAFETY TARGET SETTING ON FATALITY AND INJURY REDUCTION

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Introduction

- Estimated 2 million fatalities per year by 2030
- We have tools, the knowledge, to undertake road safety related tasks - Target setting helped
  - Finland introduced target setting in 1973
- Historically greater attention has been paid in developed countries
- Decade of Action for Road Safety: 2010 – 2020, with an objective of 50% reduction.
- Road safety gap between developing and developed countries is widening
About half of the registered vehicles are motor cycles in low income countries.

Rapid drop as country develops (GNI increases)
Annual fatalities per 100,000 people

- Differences in road safety levels within the countries with similar economic condition
- Historical development, political background, vehicle ownership and other specific situations contribute to this differences
Objective

- Planned strategies within target help
- Establish a local level road safety framework
Targets setting practices

*Target:* Often expressed in the form of percentage of reduction during a period of time

- **Performance Indices**
  - Traditionally evaluation on fatality rates
  - Currently composite indicators are in use

- **Target periods:** 5 ~ 10 years

- **Geographical coverage**
  - Example
    - Australia: QLD, NSW, VIC, SA, WA, TAS, ACT and NT
Use of performance indices

- Performance evaluation used for target setting (Realistic approach)
  - F (Number of fatalities)
  - F/P (Fatalities per 100,000 population)
  - F/V (Fatalities per 10,000 vehicles)
  - F/L (Fatalities per million km of travel)

- Top priority approaches
  - ‘Vision Zero’ by Sweden
  - ‘Safest roads in the world’ by Canada
  - ‘Zero deaths on the roads’ by Hong Kong
Other issues

Road safety targets in selected countries

<table>
<thead>
<tr>
<th>Country</th>
<th>GNI in 2008(^1) ($)</th>
<th>Target Initiated</th>
<th>Latest target</th>
<th>Overall Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>520</td>
<td></td>
<td>2008-2010</td>
<td>F by -(10~12) %</td>
</tr>
<tr>
<td>Myanmar</td>
<td>-</td>
<td></td>
<td>2005-2010</td>
<td>940 P &amp; 32,900 SI</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>890</td>
<td></td>
<td>2005-2010</td>
<td>7,000 P &amp; 16,100 SI</td>
</tr>
<tr>
<td>Indonesia</td>
<td>2,010</td>
<td></td>
<td>2005-2010</td>
<td>20,411 P &amp; Reduce F growth by 2.4%</td>
</tr>
<tr>
<td>Thailand</td>
<td>2,840</td>
<td></td>
<td>2005-2010</td>
<td>13,000 P &amp; 1,508,000 I</td>
</tr>
<tr>
<td>Malaysia</td>
<td>6,970</td>
<td></td>
<td>2001-2010</td>
<td>F/V &lt; 2, F/P &lt; 10 &amp; F/L(^*) &lt; 1</td>
</tr>
<tr>
<td>South Korea</td>
<td>21,530</td>
<td>2008-2012</td>
<td>F by -50%</td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>27,940</td>
<td>1990</td>
<td>2001-2010</td>
<td>F &lt; 300, F/L &lt; 6.1, F/P &lt; 7.3 &amp; F/V &lt; 1.1</td>
</tr>
<tr>
<td>Japan</td>
<td>38,210</td>
<td></td>
<td>2006-2010</td>
<td>F &lt; 5,500</td>
</tr>
<tr>
<td>Australia</td>
<td>40,350</td>
<td>1993</td>
<td>2001-2010</td>
<td>F/P by -40 % (F/P &lt; 5.6)</td>
</tr>
<tr>
<td>Canada</td>
<td>41,730</td>
<td>1996</td>
<td>1996-2010</td>
<td>KSI by 30 % of average in 1996-2001</td>
</tr>
<tr>
<td>France</td>
<td>42,250</td>
<td>1997</td>
<td>2007-2012</td>
<td>F &lt; 3,000</td>
</tr>
<tr>
<td>Germany(^{\text{EU}})</td>
<td>42,440</td>
<td>2010-2020</td>
<td>F by -40 %</td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td>47,580</td>
<td>1996</td>
<td>1996-2008</td>
<td>F/L &lt; 1.0</td>
</tr>
<tr>
<td>Switzerland</td>
<td>65,330</td>
<td></td>
<td>2000-2010</td>
<td>KSI by -50 %</td>
</tr>
</tbody>
</table>
Geographical coverage

- Global target: Decade of Action for Road Safety
  Death by 50% reduction [2010 – 2020]

- European commission
  Death and serious injuries by 40% [2010-2020]

- ESCAP
  Save 600,000 lives [2007 – 2015]

- State level: Example – Australia
  Generally matches the appropriate efforts to the resources at regional and local level [Road infrastructure, capacity and law & order]
Split of Australia’s strategies

- The National Road Safety Strategy 2001 – 2010 [40%]
  - Remaining road fatalities [60%]
  - Road user behaviour [9%]
  - Vehicle occupant Protection [10%]
  - New technology [2%]
  - Improve the safety of roads [19%]

- Strategies change over a period of time
- Key changes in institutional responsibility
Phases of Target setting practices
Responsibility towards road safety

Social responsibility (Role of society)

Design responsibility (Role of Engineers, etc)
Institutional Framework

Problems ↔ Strategies

Responsibility

- Problems-Strategies matrix
- Institutional-Responsibility matrix (at local context)
Some possible problems in developing countries

- Culture, politics, budget allocation, ways of utilising allocated budget, and availability of other resources
- Complex environment created by alcohol industry
- Political and other transparency issues
- Poor trauma management, and so on

What is expected?

- Determination to start
- Data collection and monitoring
- Developmental Capacity
Future of performance indices

How long to reduce F/P from 6.2 in 2010 to 3.1?

Additional gains: Money and Social responsibilities
Few possible problems in rich countries

- Economic factors
  - Annual vehicle use increasing more than predicted

- Familiar environment for many drivers
  - *Drivers*: when and where enforcement is likely or unlikely
  - *Significant experience*: offending without being caught
Crash prevention

Complex solution = function (E1, E2, E3, E4, E5, E6, Etc)
Environment with Road & vehicles

Road safety is a multidisciplinary area
Conclusion

- Road safety target setting helps to reduce the burden.
- We have the tools, the knowledge to taggle the road safety problem.
- Problems in developing countries are not same as in developed countries.
- Various phases (with local level institutional framework) have have been identified.
Conclusion ......

- Determination to start, data collection, monitoring, and capacity development are vital in developing countries.

- Collecting data and identification of future performance indices are more challenging.

- Continuous assessment process help to identify new specific actions.
Thank you!