Expert Group Meeting on Asian Highway: Project funded by the Korea Expressway Corporation (KEC)

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Development of Technical Standards on Road Infrastructure Safety Facilities and Model ITS Deployments for the Asian Highway Network

Transport Division, UNESCAP

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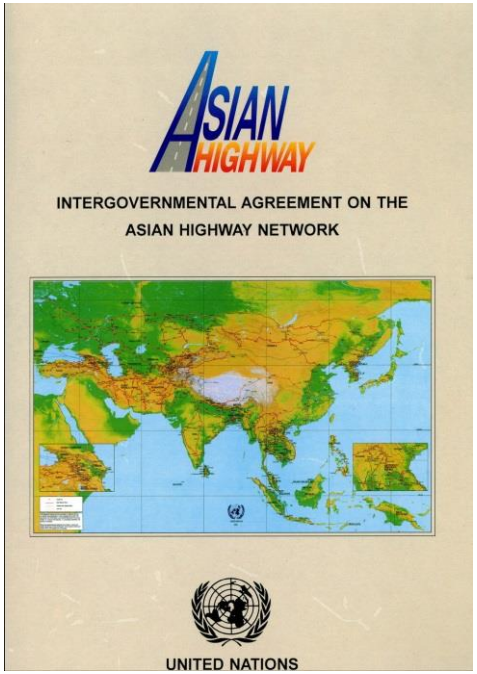
Economic and Social Commission for Asia and the Pacific

Background



a treaty that provides

- a coordinated plan for the development of highway routes of international importance in the Asia Pacific region
- with a view towards promoting and developing international road transport

The AH was conceived back in 1950s and was developed through a project called the Asian Land Transport Infrastructure Development Project (ALTID)

Asian Highway (AH)

Basic information

- A network of 144,630 km of roads linking 32 countries
- 15,650 km of access controlled roads
- About 10,092 km of Below Class III roads
- AH Agreement came into force on 4 July 2005
- 29 member States are Parties to the Agreement

Annex II to the Intergovernmental Agreement on the Asian Highway Network provides Classification and Design Standards for the highways.

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Asian Highway Design Standards

Cross Sections

Table 4. Asian Highway design standards

Highway classification		Primary (4 or more lanes)				Class I (4 or more lanes)				Class II (2 lanes)				Class III (2 lanes)			
Terrain classification		L	R	M	S	L	R	M	S	L	R	M	S	L	R	M	S
Design speed (km/h)		120	100	80	60	100	80	50		80	60	50	40	60	50	40	30
Width (m)	Right of way	(50)				(40)				(40)				(30)			
	Lane	3.50				3.50				3.50				3.00 (3.25)			
	Shoulder	3.00		2.50		3.00		2.50		2.50		2.00		1.5 (2.0)		0.75 (1.5)	
	Median strip	4.00		3.00		3.00		2.50		N/A		N/A		N/A		N/A	
Min. radii of horizontal curve (m)		520	350	210	115	350	210	80		210	115	80	50	115	80	50	30
Pavement slope (%)		2				2				2				2–5			
Shoulder slope (%)		3–6				3–6				3–6				3–6			
Type of pavement		Asphalt/cement concrete				Asphalt/cement concrete				Asphalt/cement concrete				Dbl. bituminous treatment			
Max. superelevation (%)		10				10				10				10			
Max. vertical grade (%)		4	5	6	7	4	5	6	7	4	5	6	7	4	5	6	7
Structure loading (minimum)		HS20-44				HS20-44				HS20-44				HS20-44			

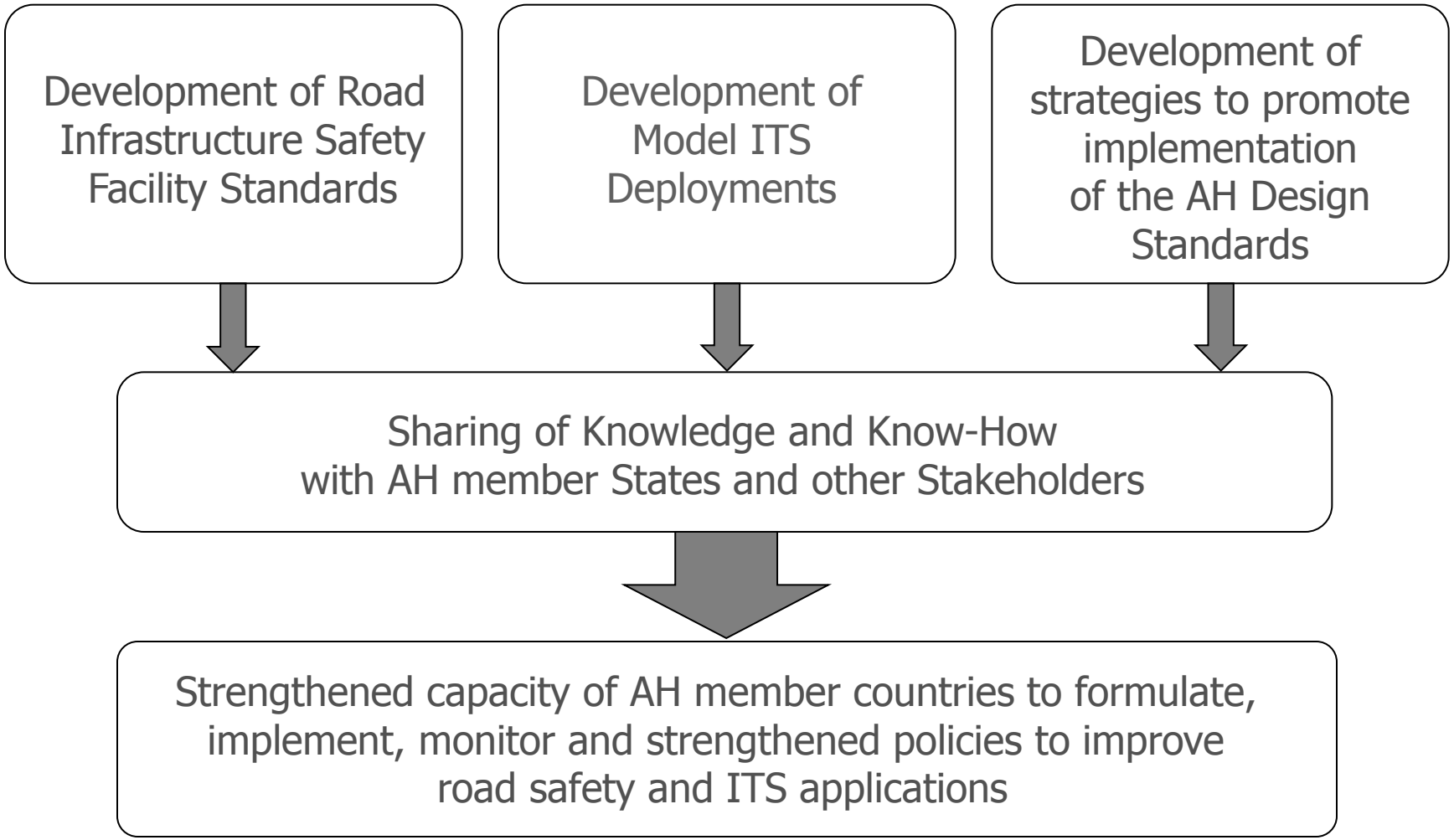
Notes: Figures in parentheses are desirable values.

Minimum radii of horizontal curve should be determined in conjunction with superelevation.

The recommended width of the median can be reduced with the proper type of guard fence.

The Parties should apply their national standards when constructing structures such as bridges, culverts and tunnels along the Asian Highway.

The Ongoing Project Structure



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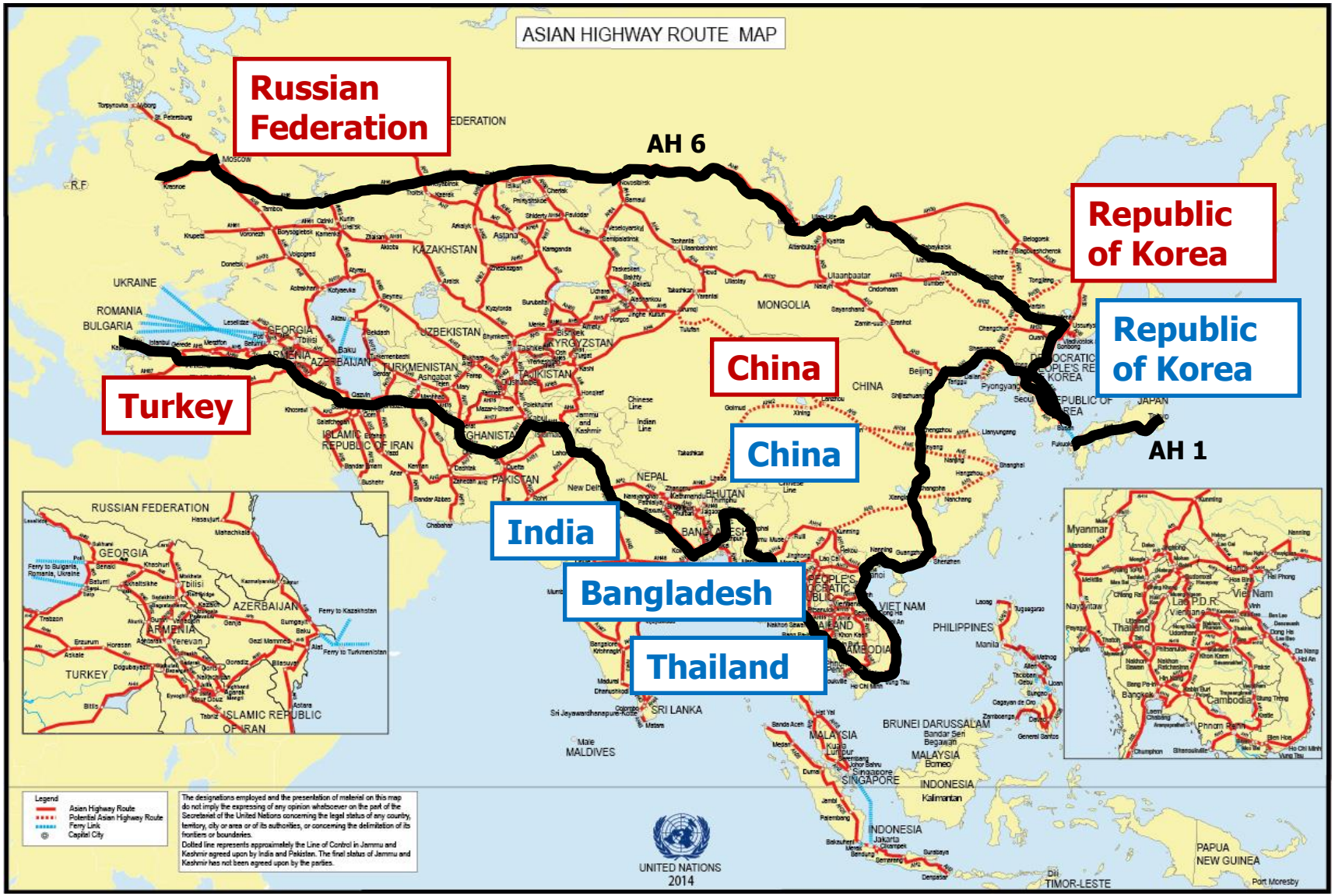
Participating Countries



Development of Road Infrastructure Safety Facility Standards

Achievements

- Initial reports from the five participating countries (Policy and Planning issues)
- 36 Road Infrastructure Safety Facilities (RIFs) were initially identified
- A first questionnaire was circulated to all AH member countries (December 2015)
- Survey replies were received from 17 member countries and survey replies were analyzed
- Star Rating Scenario Testing for 36 RIFs (iRAP)
- A List of Short Listed 24 RIFs have been prepared
- Detailed design standards from 5 participating countries (partially) and international practices

Initial country reports on road infrastructure safety practices from five participating countries

Analysis report of survey replies

Star Rating Scenario Scores for 36 RIFs

Short List of 24 Road Infrastructure Facilities

Detailed Design Standards (partially done)

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Development of Road Infrastructure Safety Facility Standards

Next Steps

The following activities are going on

- Collect design standards from the remaining countries

- Compare design standards collected from various sources

- propose minimum design standards (minimum requirements) for the Asian Highway network (ongoing)

- propose detailed design standards for the Asian Highway network (ongoing)

Design standards are being developed