

Trends in the industry for rubber lattices



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International Rubber Study Group

Rubber lattices



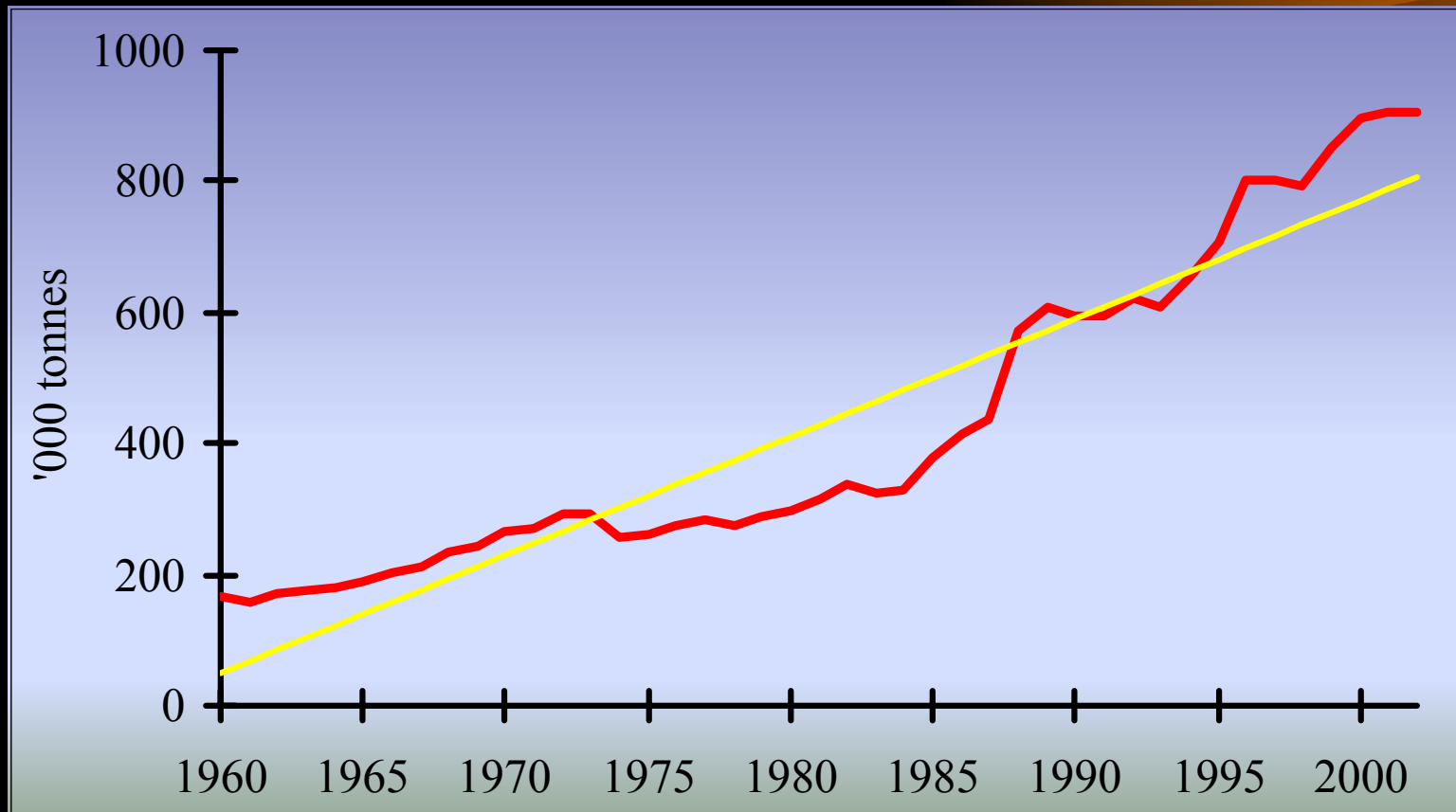
- Natural rubber latex
- Synthetic rubber lattices

Natural rubber latex

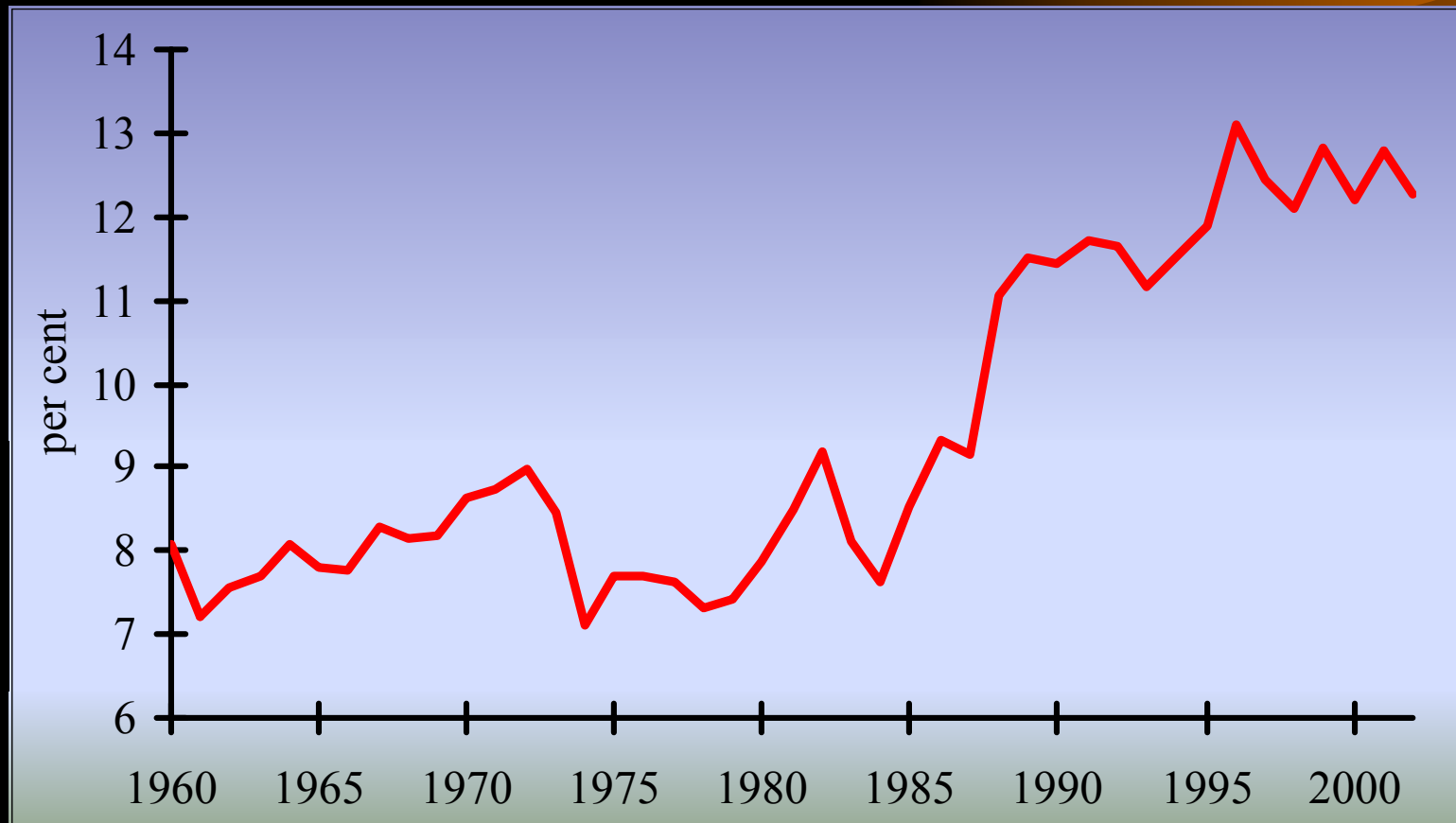


- Consumption
- Production and exports
- Prices

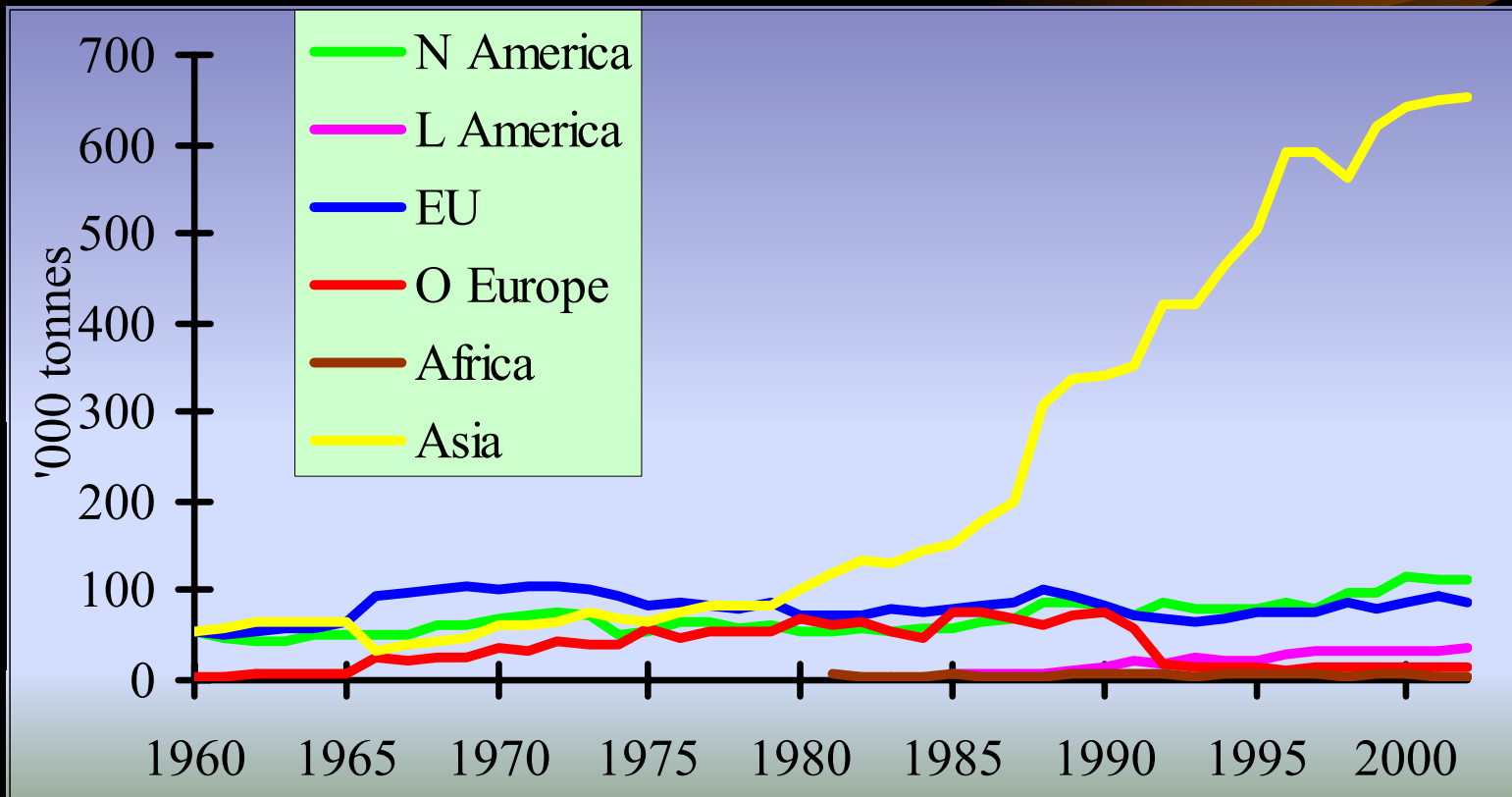
World NR latex consumption, 1960-2002



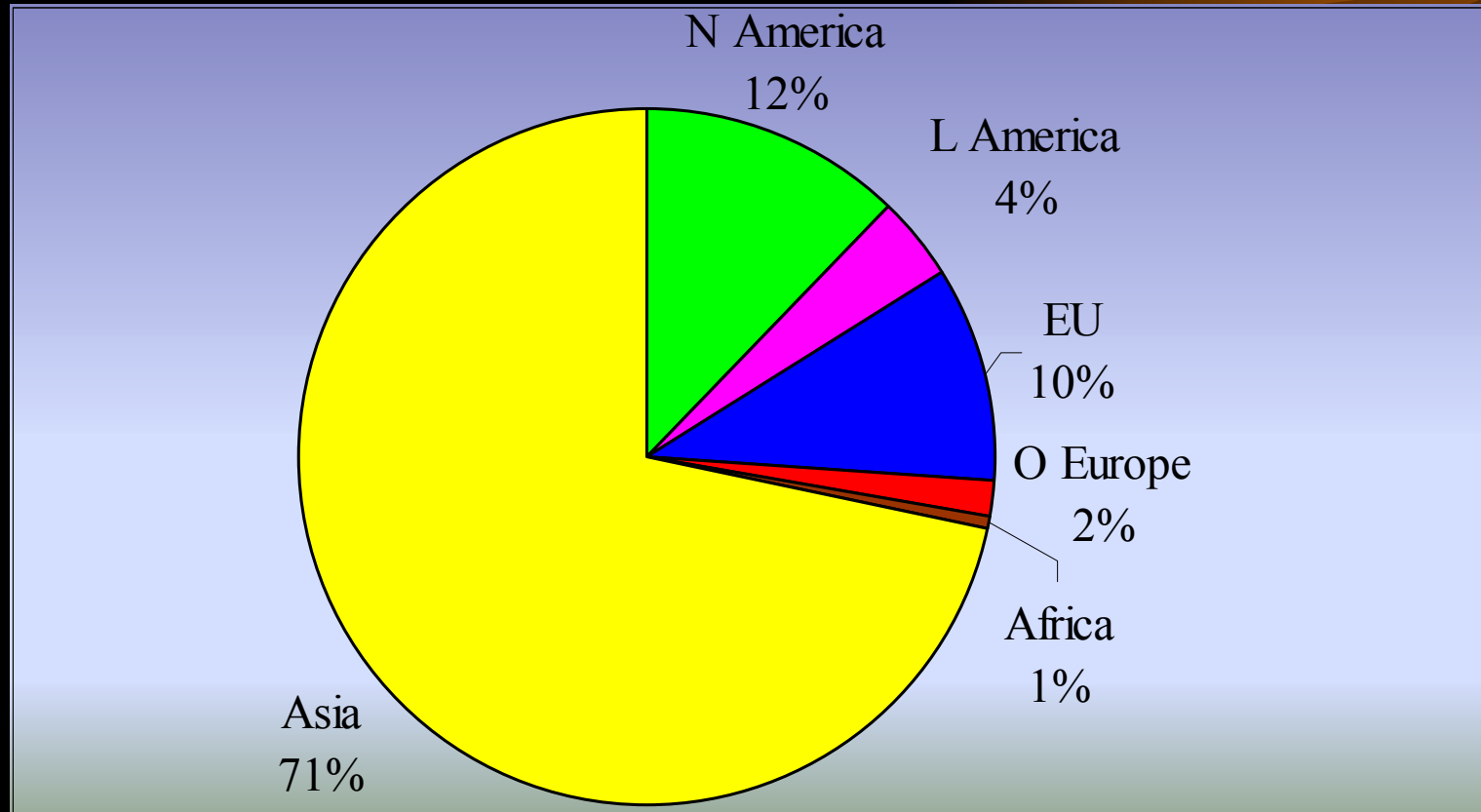
Share of NR latex in total NR consumption, 1960-2002



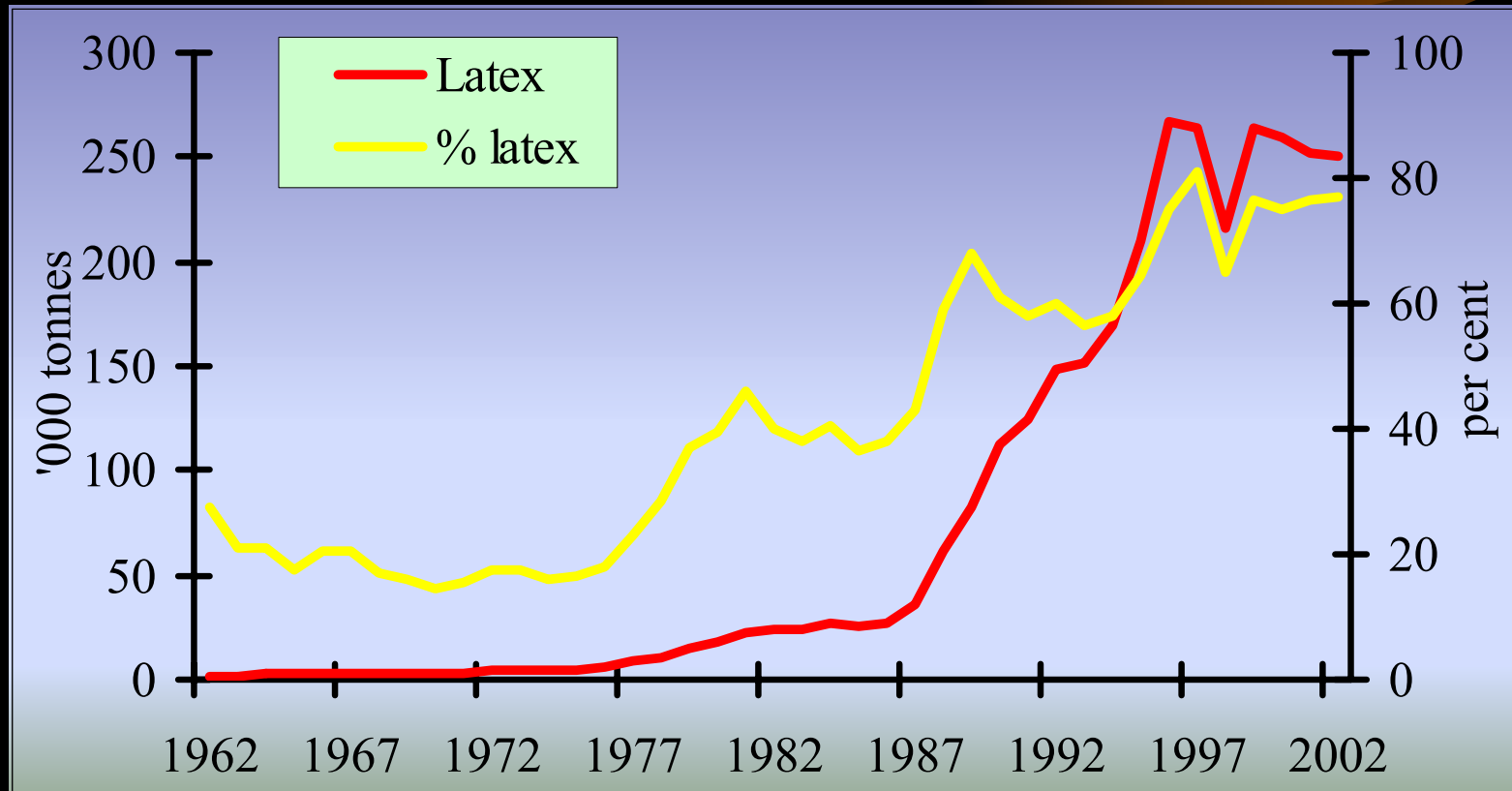
Regional NR latex consumption, 1960-2002



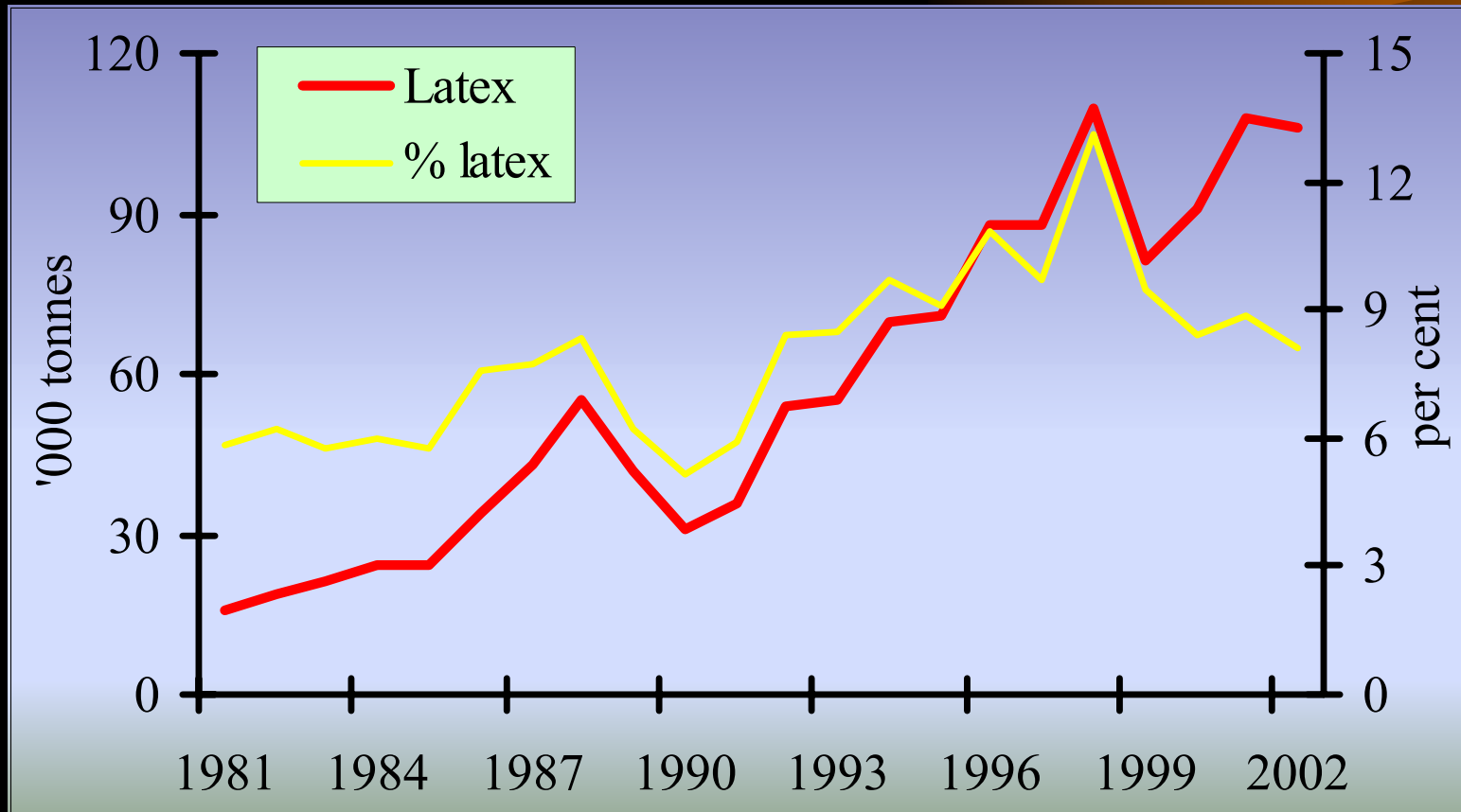
Regional distribution of NR latex consumption, 2002



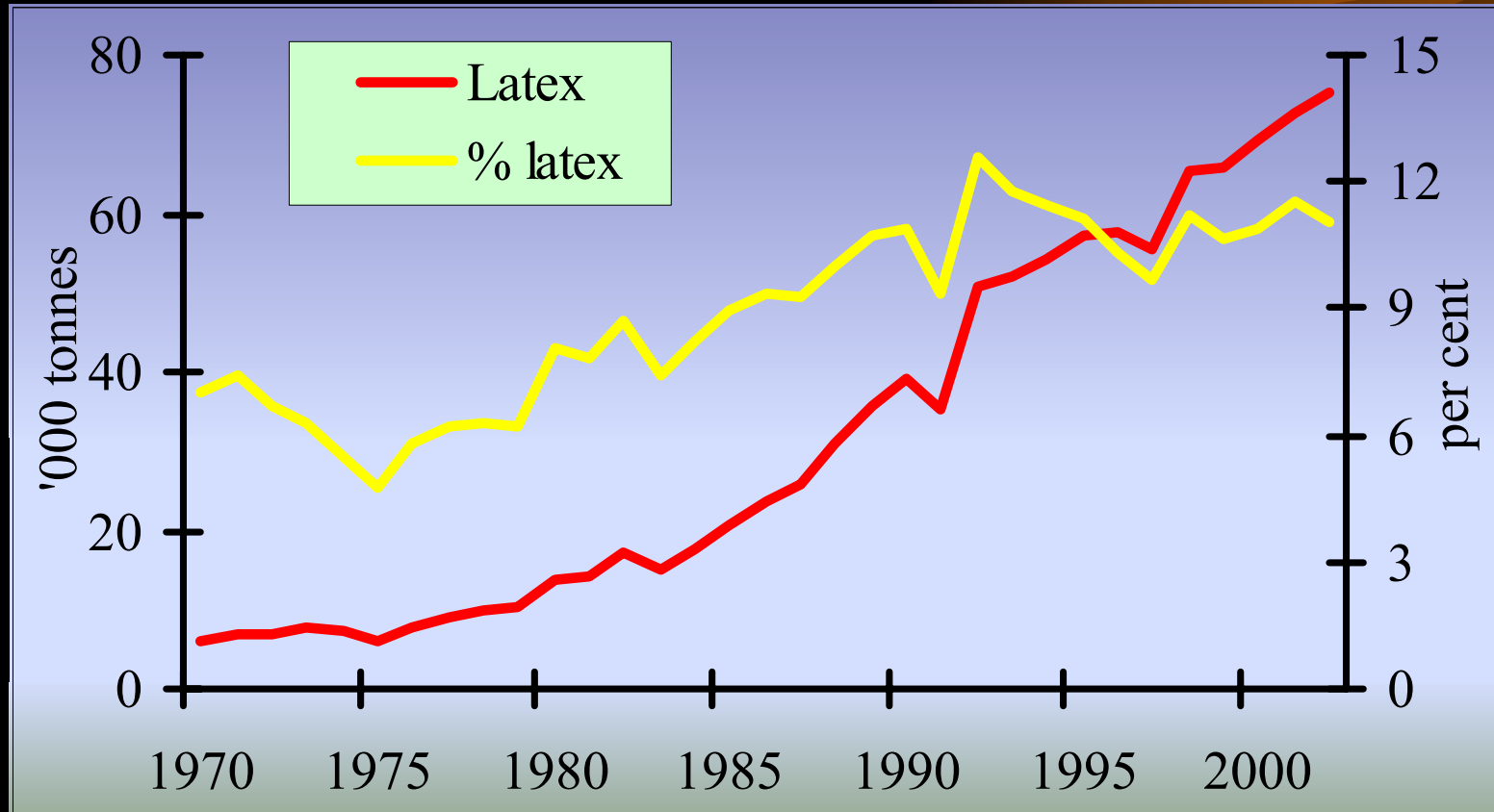
NR latex and its share of total NR consumption - Malaysia



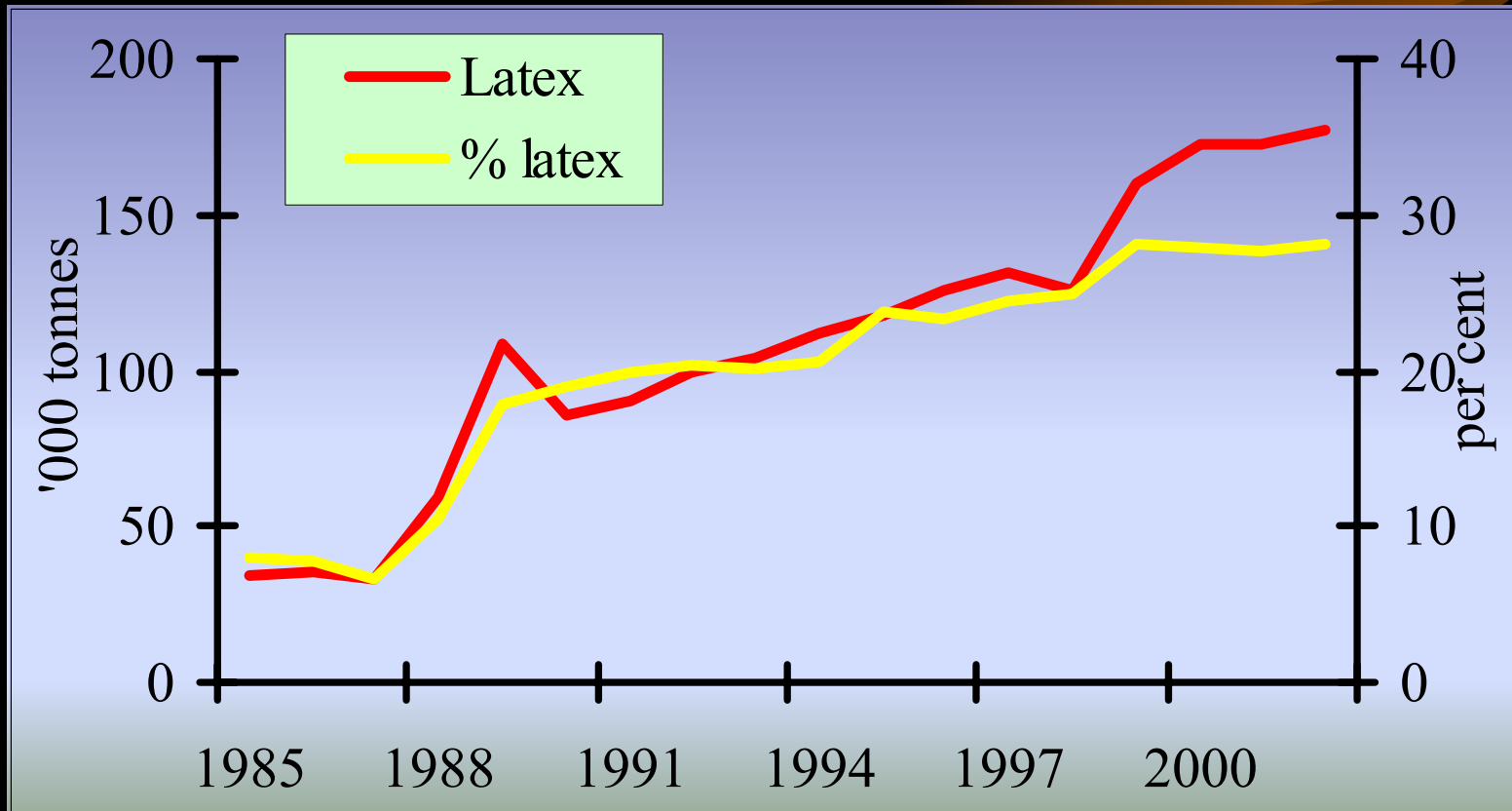
NR latex and its share of total NR consumption - China



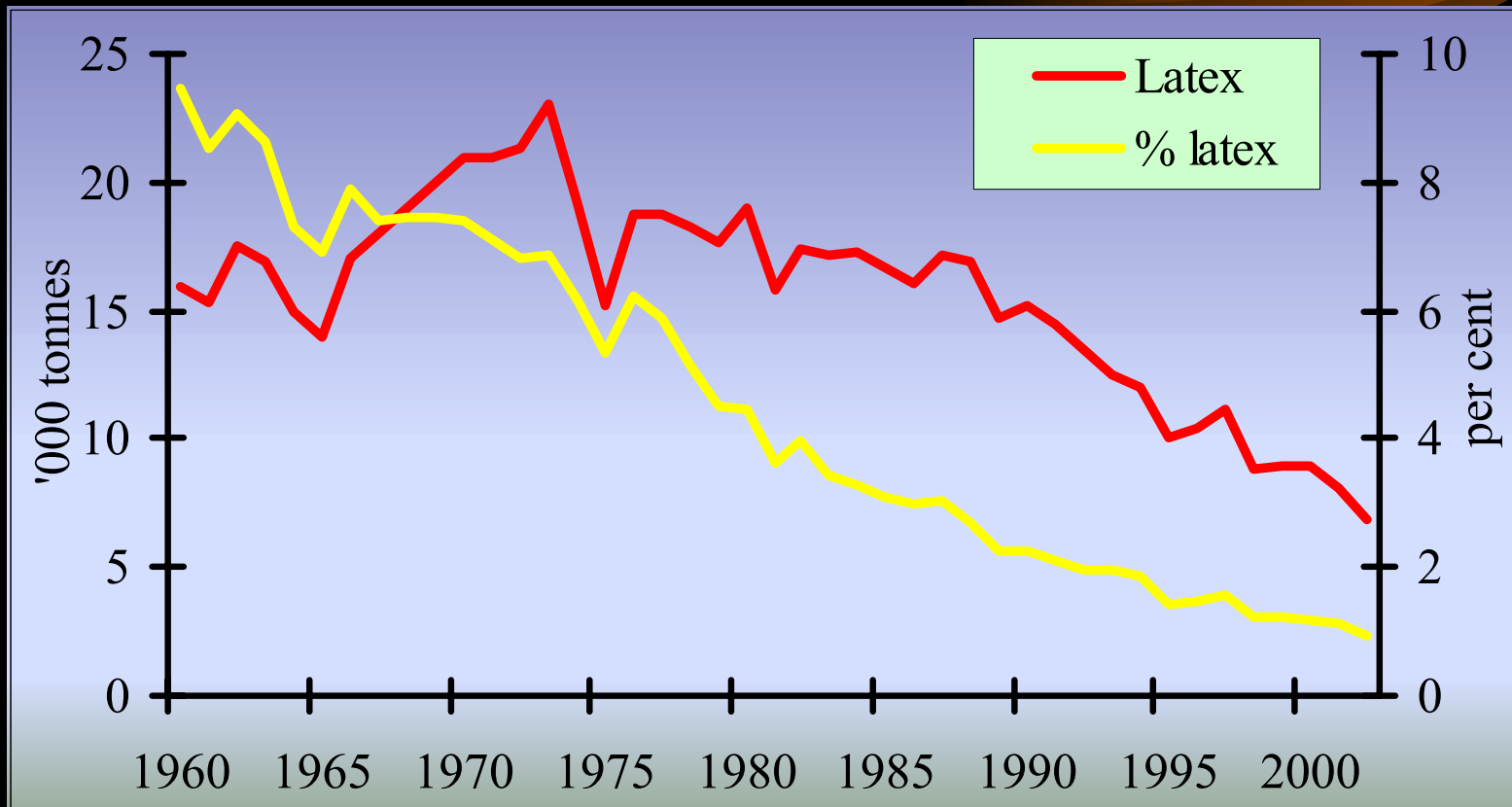
NR latex and its share of total NR consumption - India



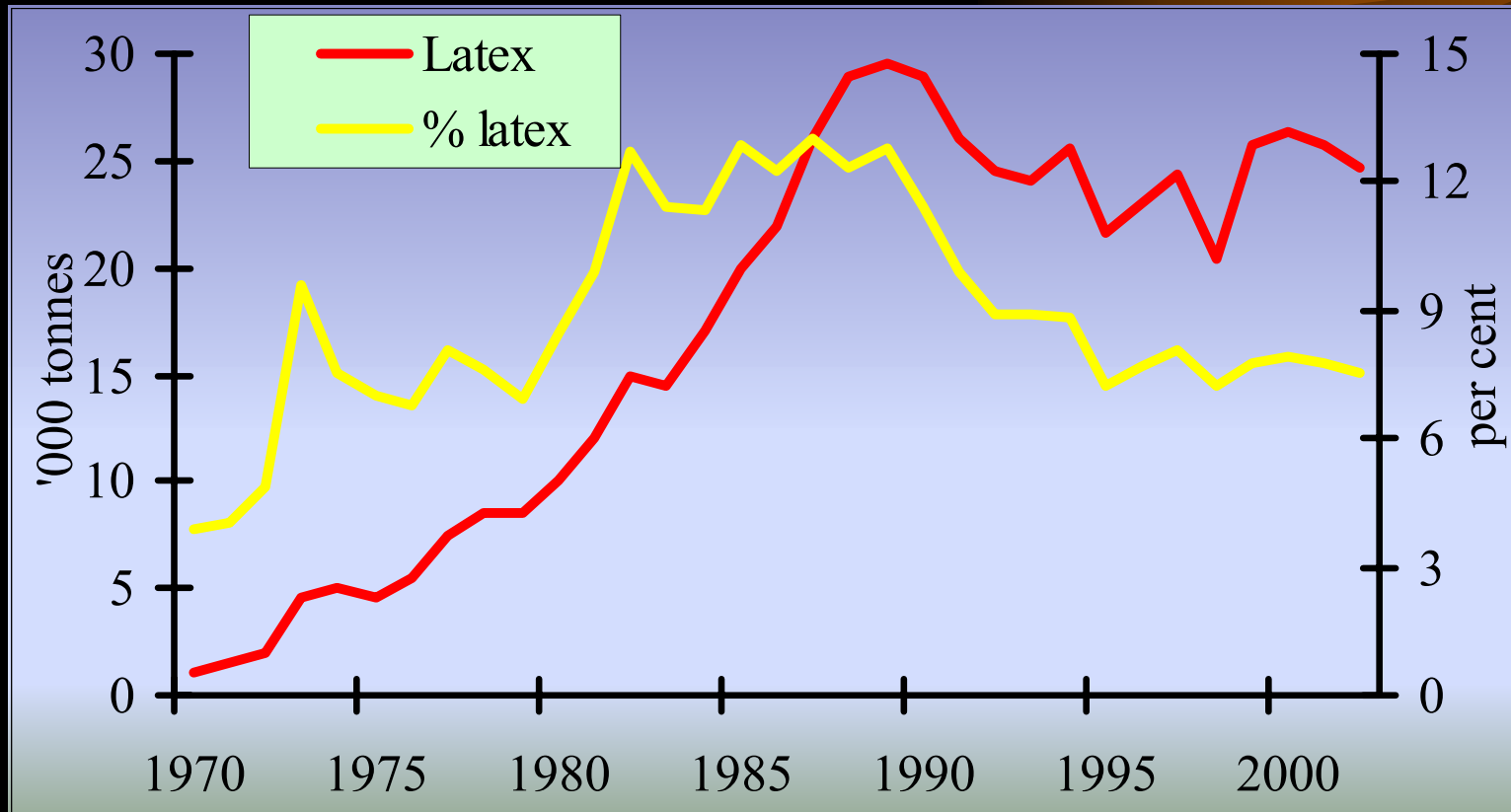
NR latex and its share of total NR consumption – Other Asia



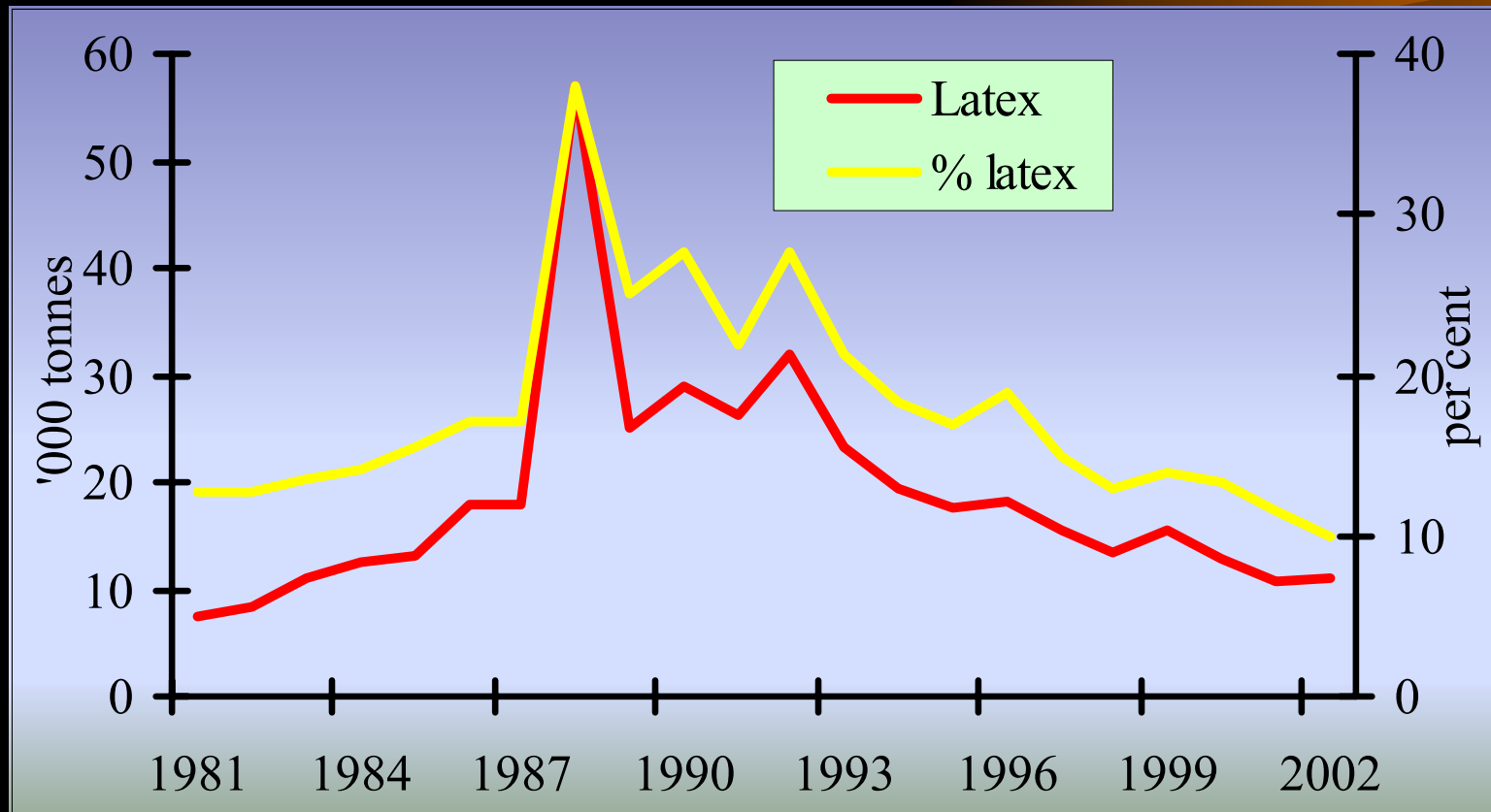
NR latex and its share of total NR consumption - Japan



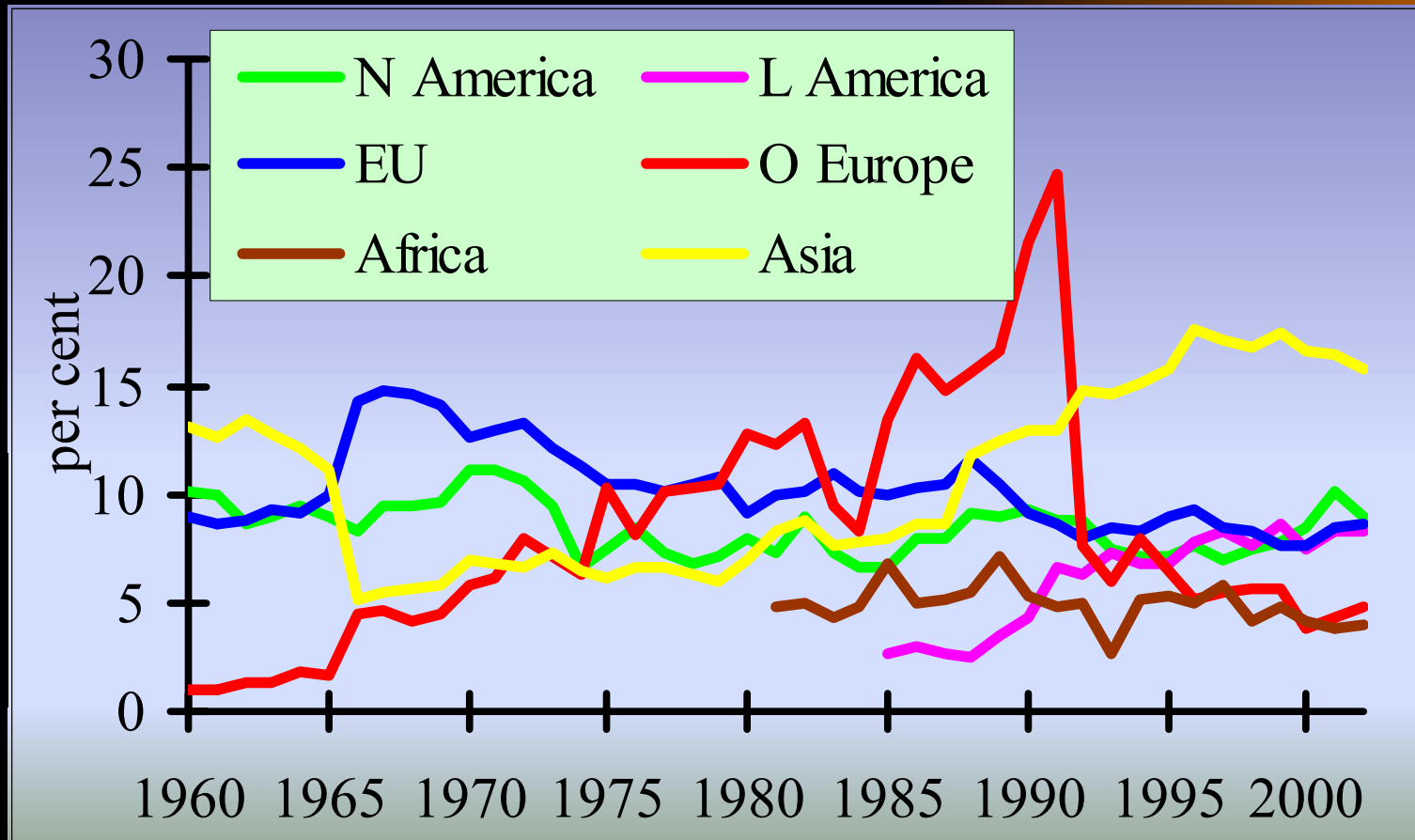
NR latex and its share of total NR consumption - Korea



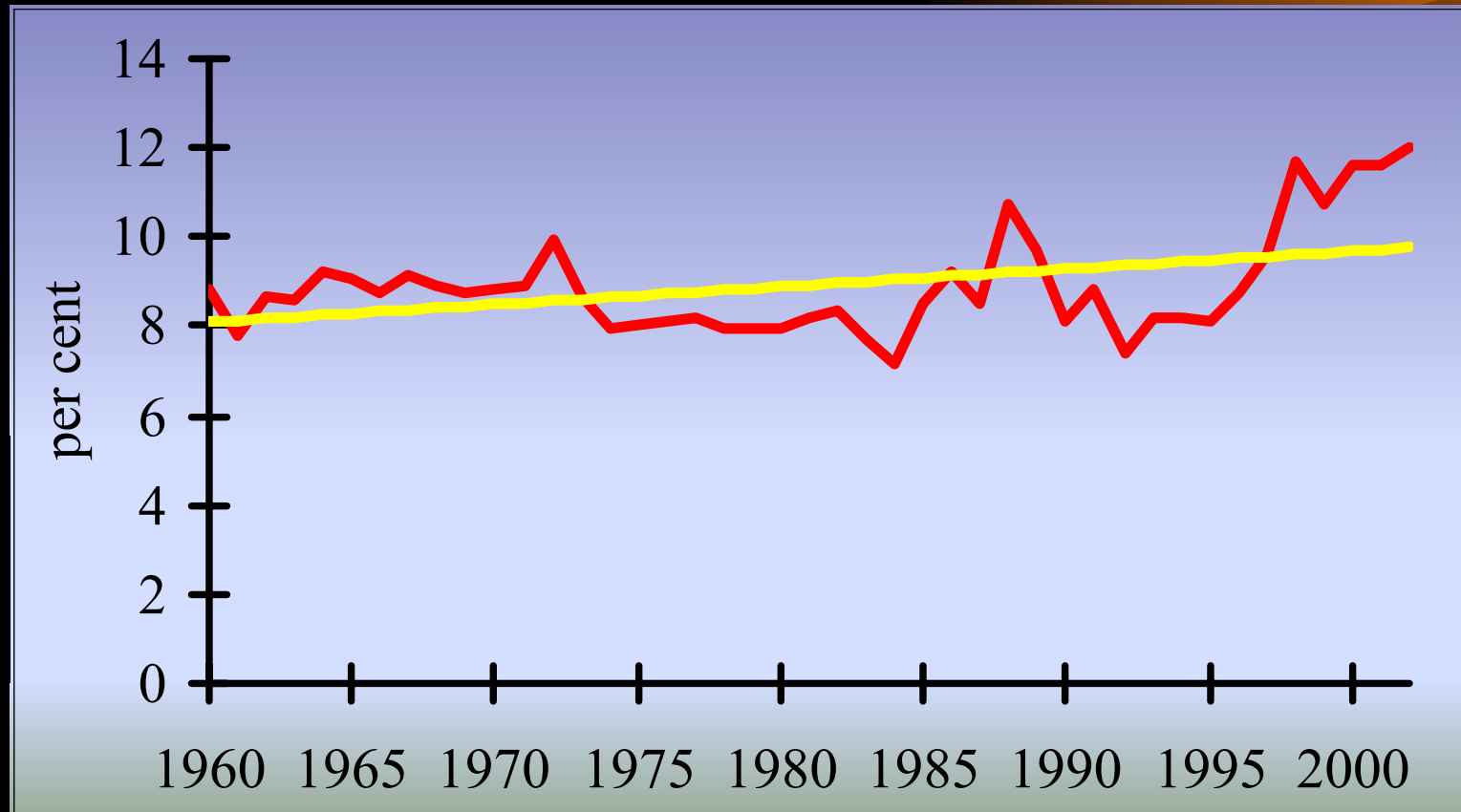
NR latex and its share of total NR consumption - Taiwan



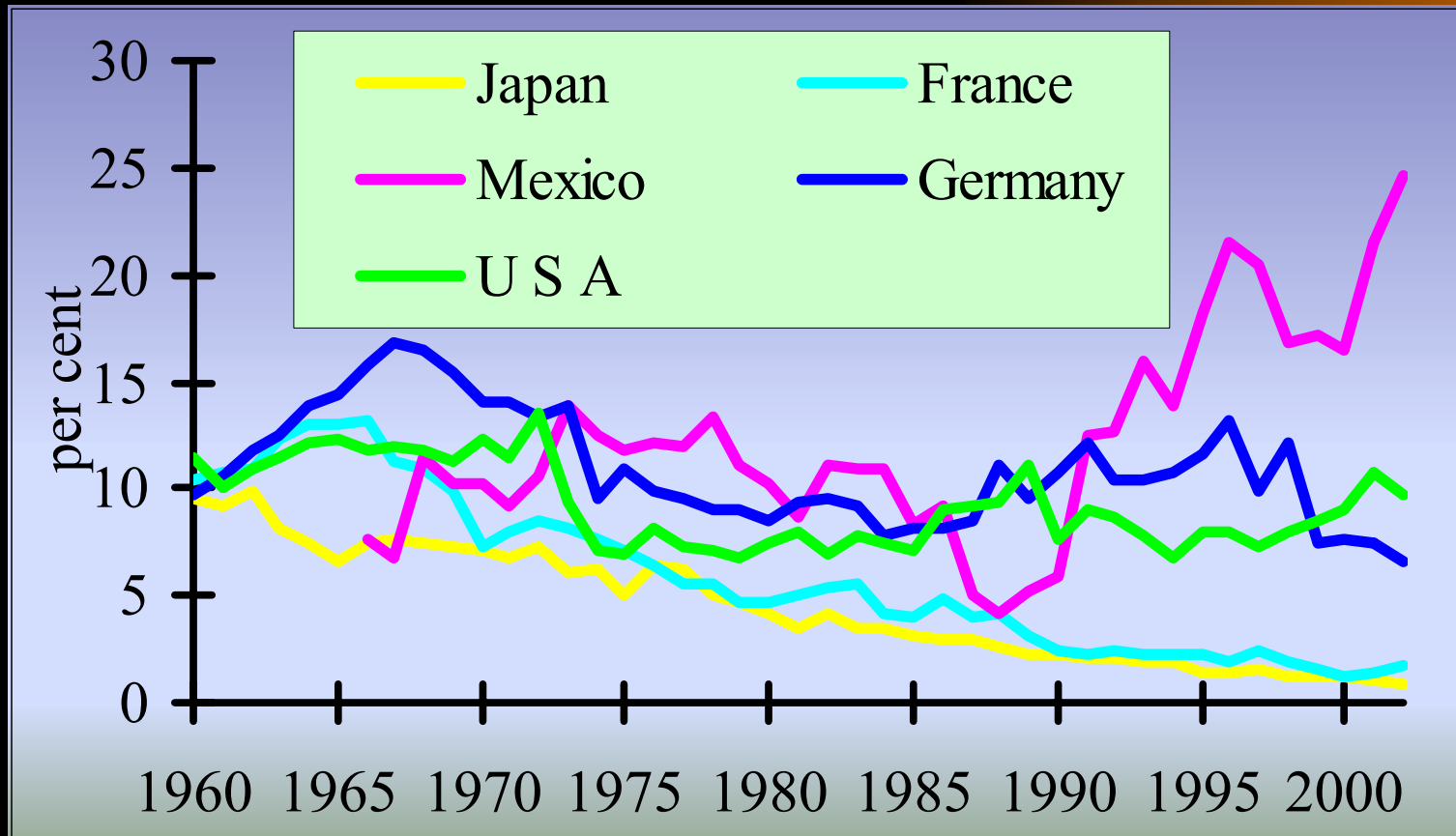
Share of NR latex in total NR consumption, 1960-2002



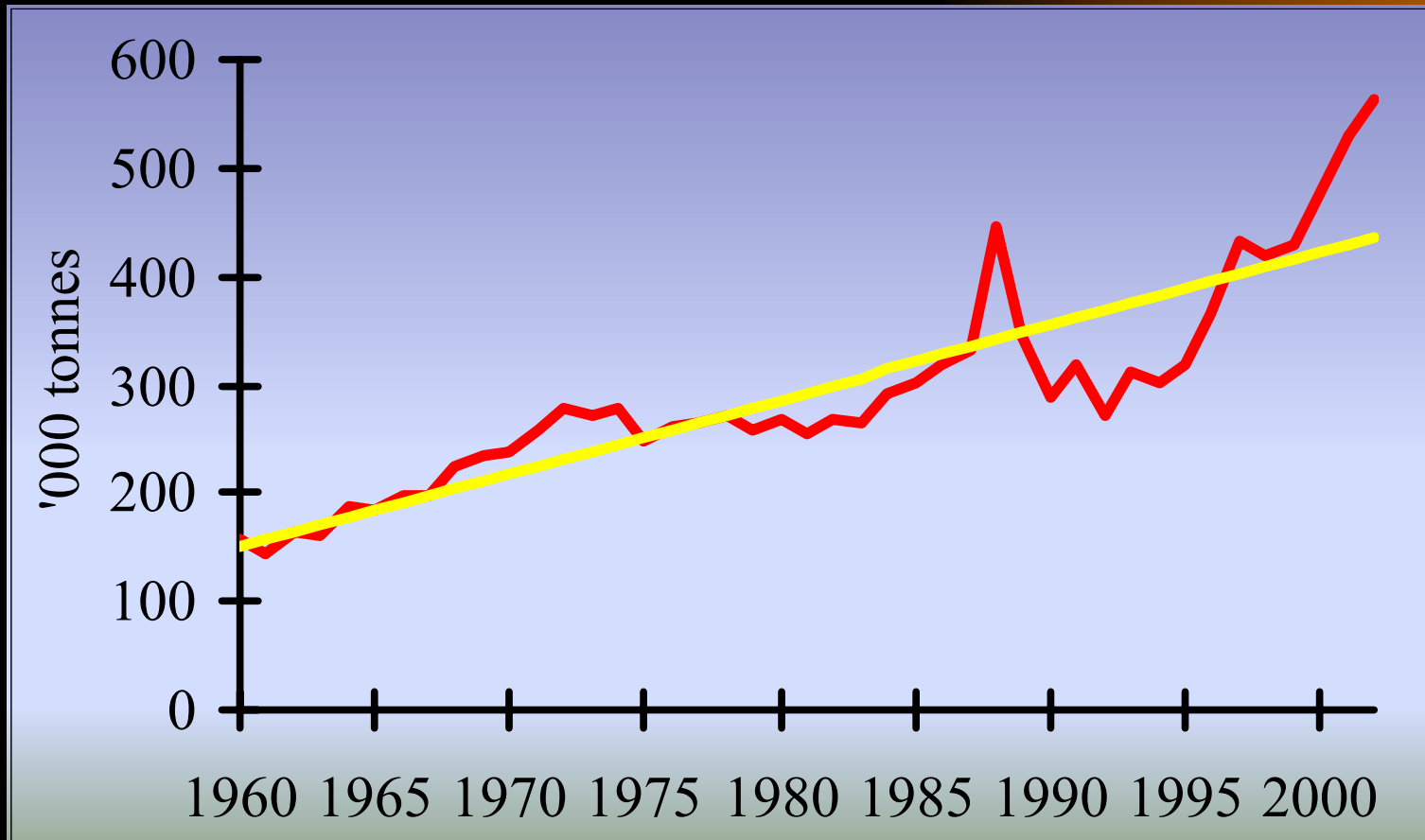
Share of NR latex imports in total NR imports, 1960-2002



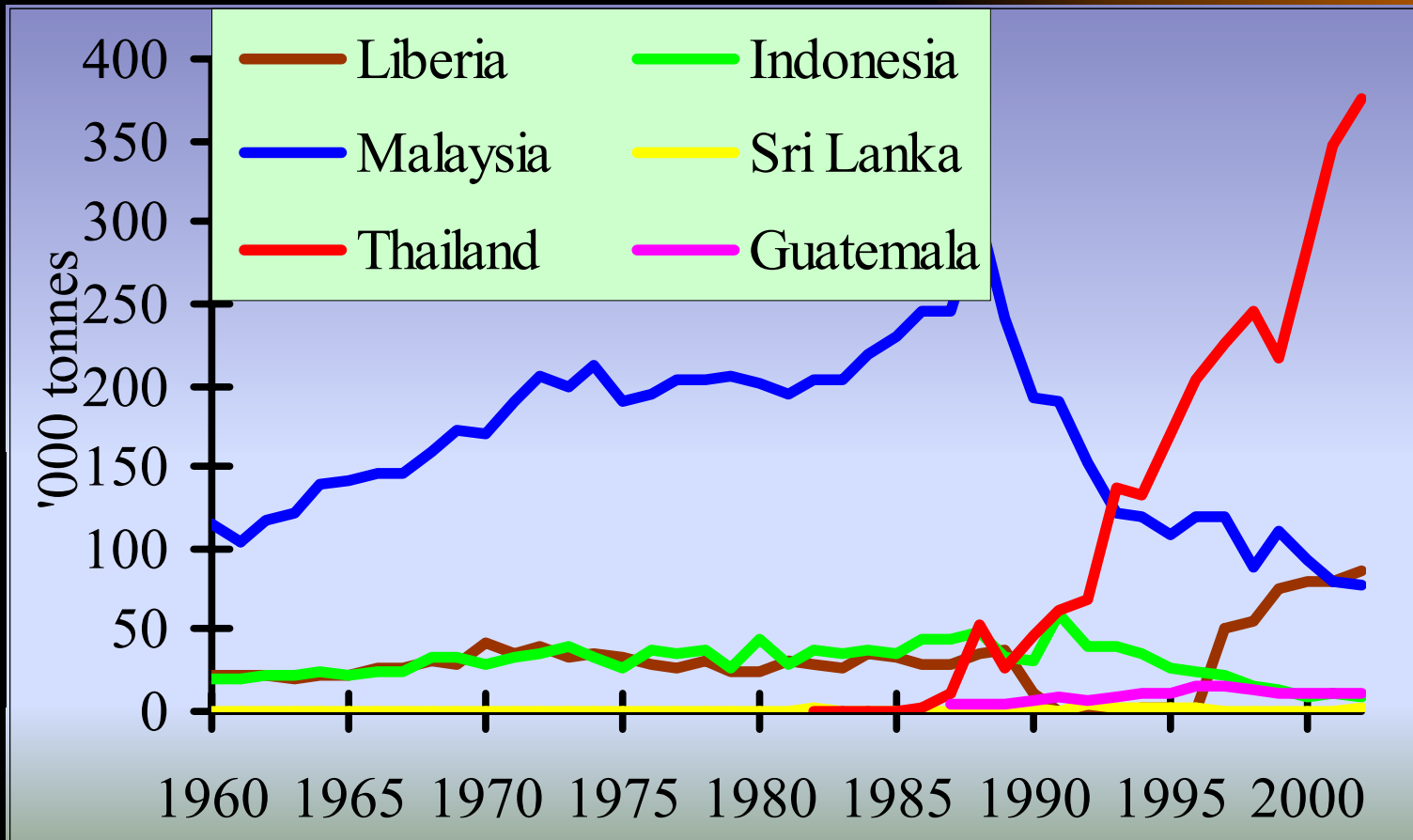
Share of NR latex imports in total NR imports, 1960-2002



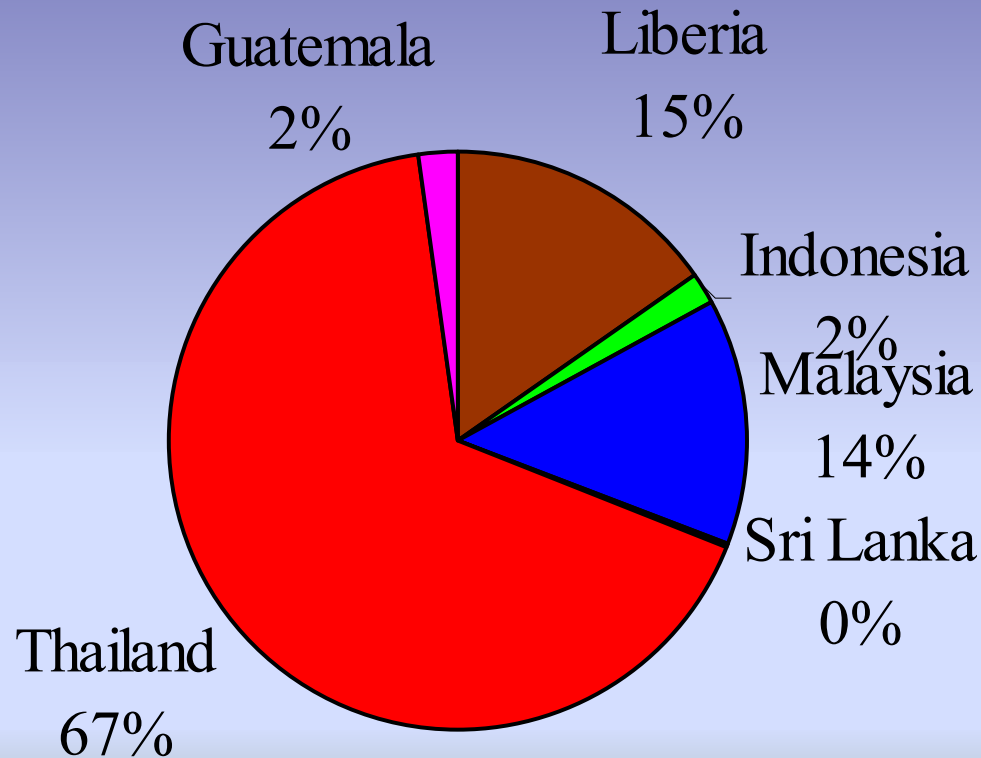
Aggregate NR latex exports, 1960-2002



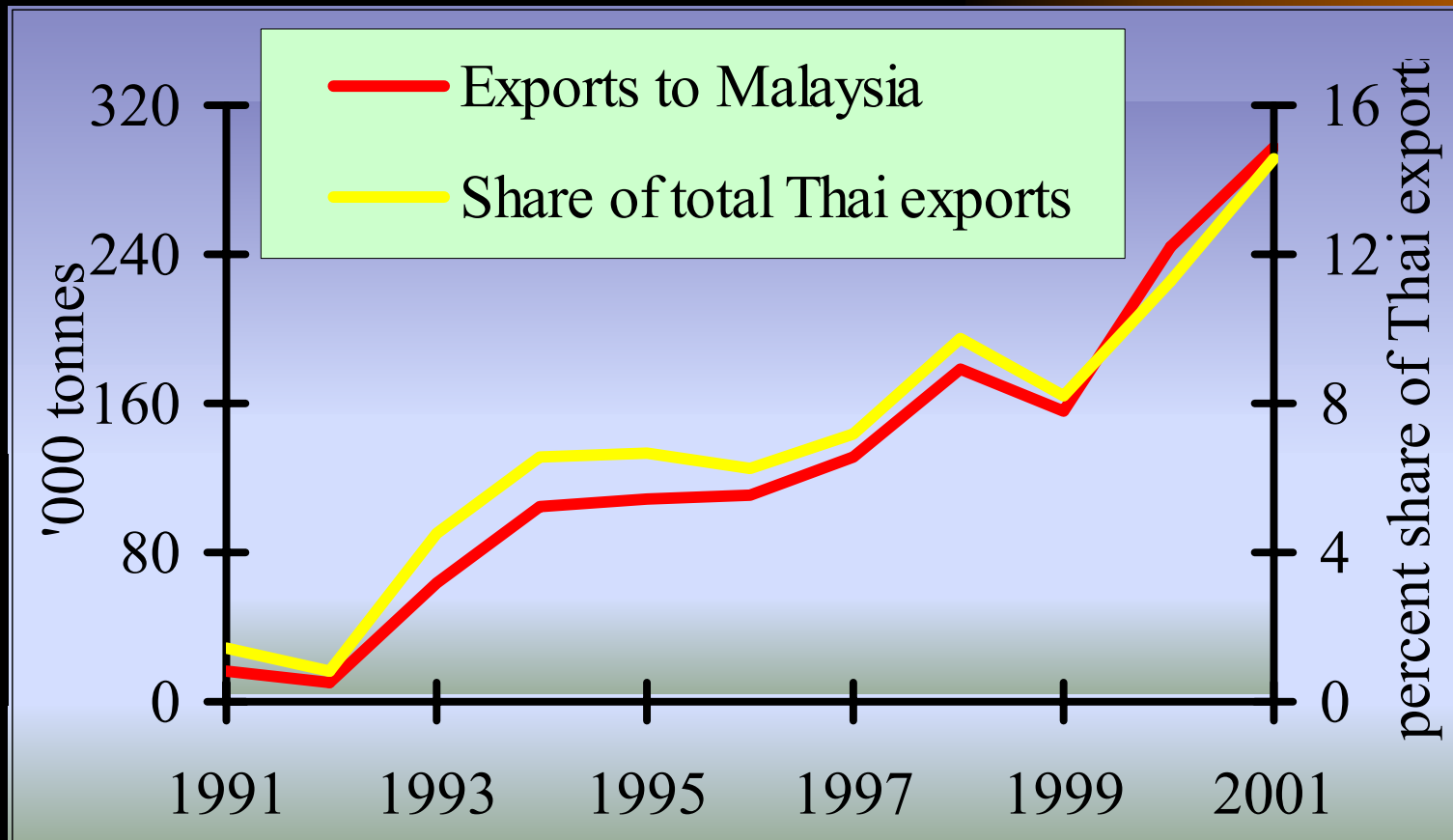
NR latex exports, 1960-2002



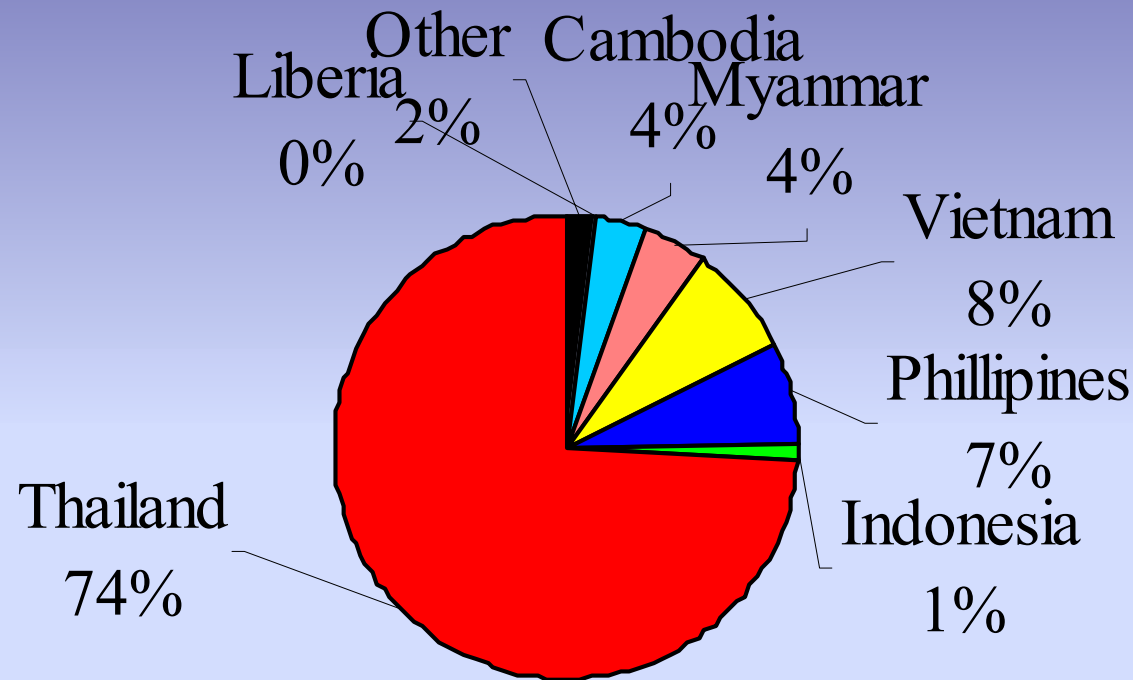
Distribution of NR latex exports, 2002



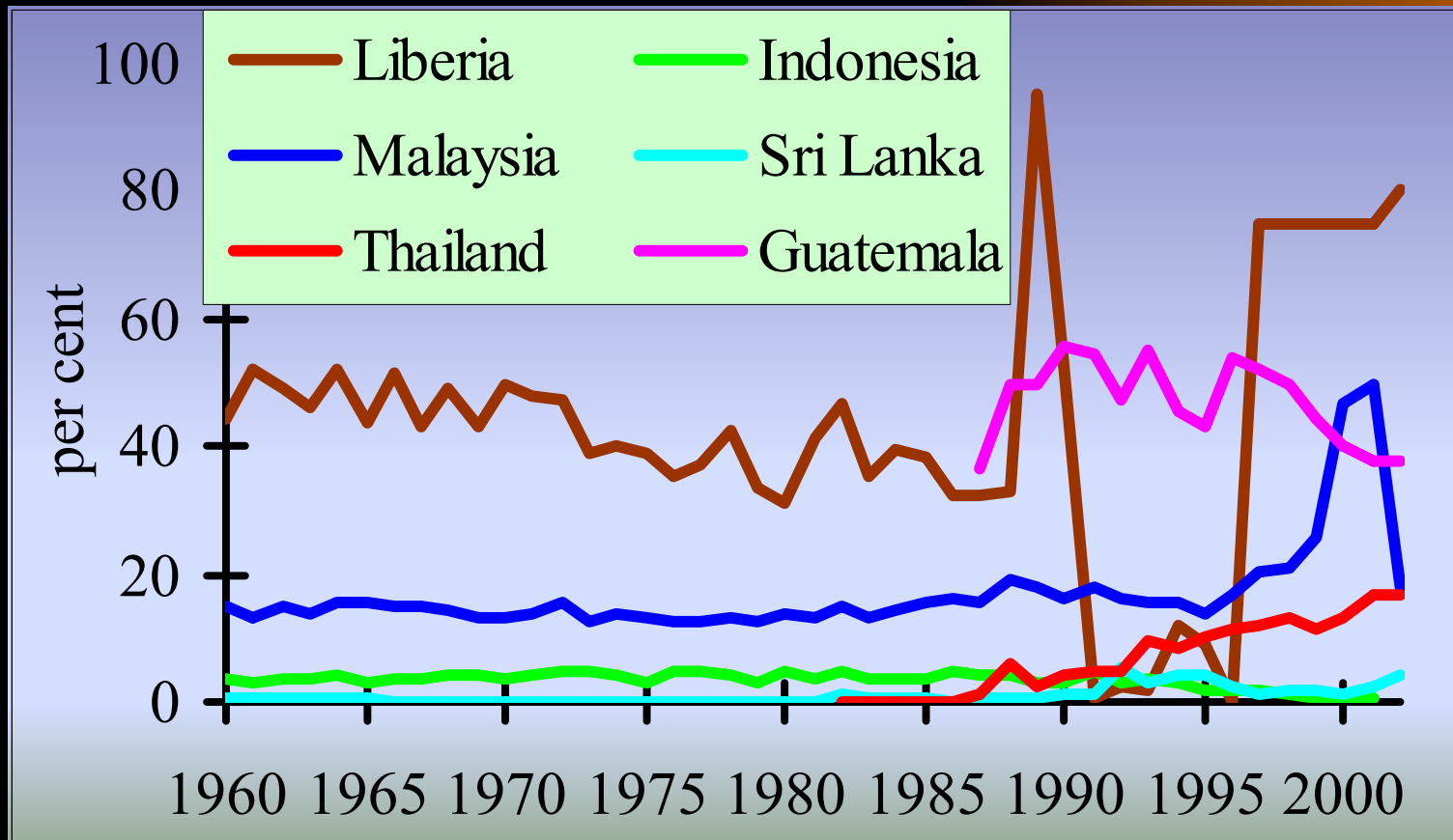
Thai exports to Malaysia and share of total exports, 1991-2001



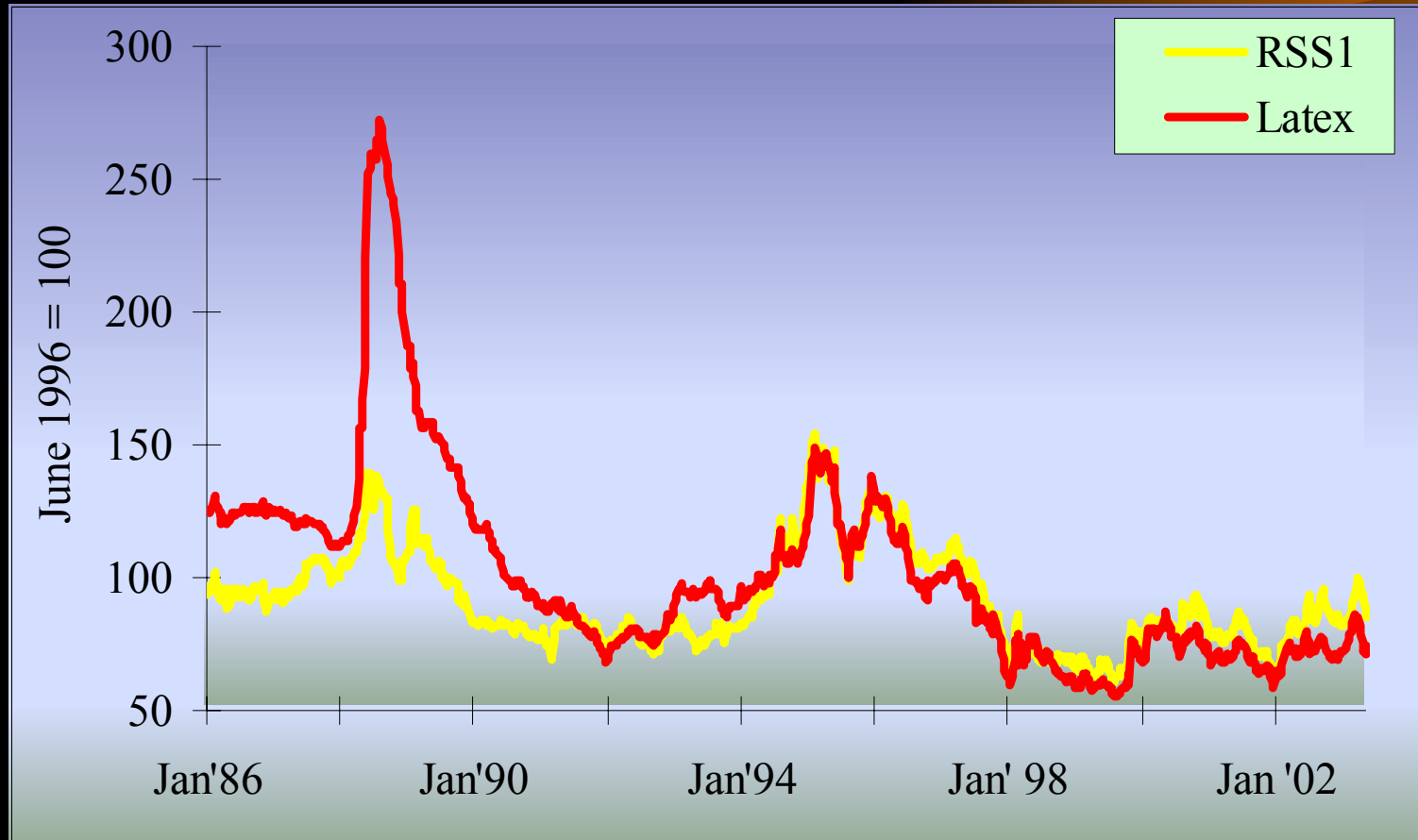
Malaysian imports of NR by origin, % shares 2002



Share of NR latex exports in total exports, 1960-2002



Latex and RSS1 prices, Jan '86-May '03



Synthetic rubber lattices



- Major SR lattices and their uses
- Coverage of world SR statistics
- Some specifics on SR lattices

Synthetic rubber lattices and their end uses

- NR latex – Examination, household and surgical gloves; balloons; condoms; thread
- XSBR – Paper coating; carpet adhesives; impregnations and adhesives
- SBR latex – Foam products; carpet foam; binder/adhesives
- CR latex – Household and industrial gloves; adhesives; coatings
- NBR latex – Industrial gloves; textile industry

Relative size of competing end use industries, % share

Type of applications	NR	X/SBR	NBR	CR
Dipped products	65	-	30	15
Adhesive binders	12	11	20	50
Thread	9	-	-	-
Carpets and rugs	5	40	-	-
Moulded foam	7	1		10
Paper	-	44	30	5
Non wovens	-	4	20	20
Other	2	-	-	-

End uses of SBR lattices and % share of total demand, 2001



End uses	% share of total demand
Paper coating	35
Carpet backing	51
Other uses	14

Demand for SR-latex by major application, 2001

Market segment	Demand ('000 tonnes)
Paints and coatings	2160
Paper and paperboard	1840
Adhesives and sealants	1700
Carpets	880
Non-wovens	330
Textiles	330
Other applications	735

IRSG coverage of world synthetic rubber statistics

- *Rubber Industry Report*
- *Rubber Statistical Bulletin*
- Positive: Enhanced coverage of world rubber statistics
- Negative: Information on SR lattices more opaque

Capacity for major SR latex types, 1999 ('000 tonnes)

Region	SBR latex	Carbox	NBR Latex	Sub	Total	Share
		SBR latex		Total	SR	
North America	105	584	22	711	3,750	19.0
Western Europe	170	577	40	787	2,683	29.3
Central & Eastern Europe	159	-	-	159	3,087	5.2
Latin America	18	50	2	70	669	10.5
Asia	146	200	26	372	3,114	11.9
Others	5	7	1	13	106	12.3
Global	603	1,418	91	2,112	13,409	15.7

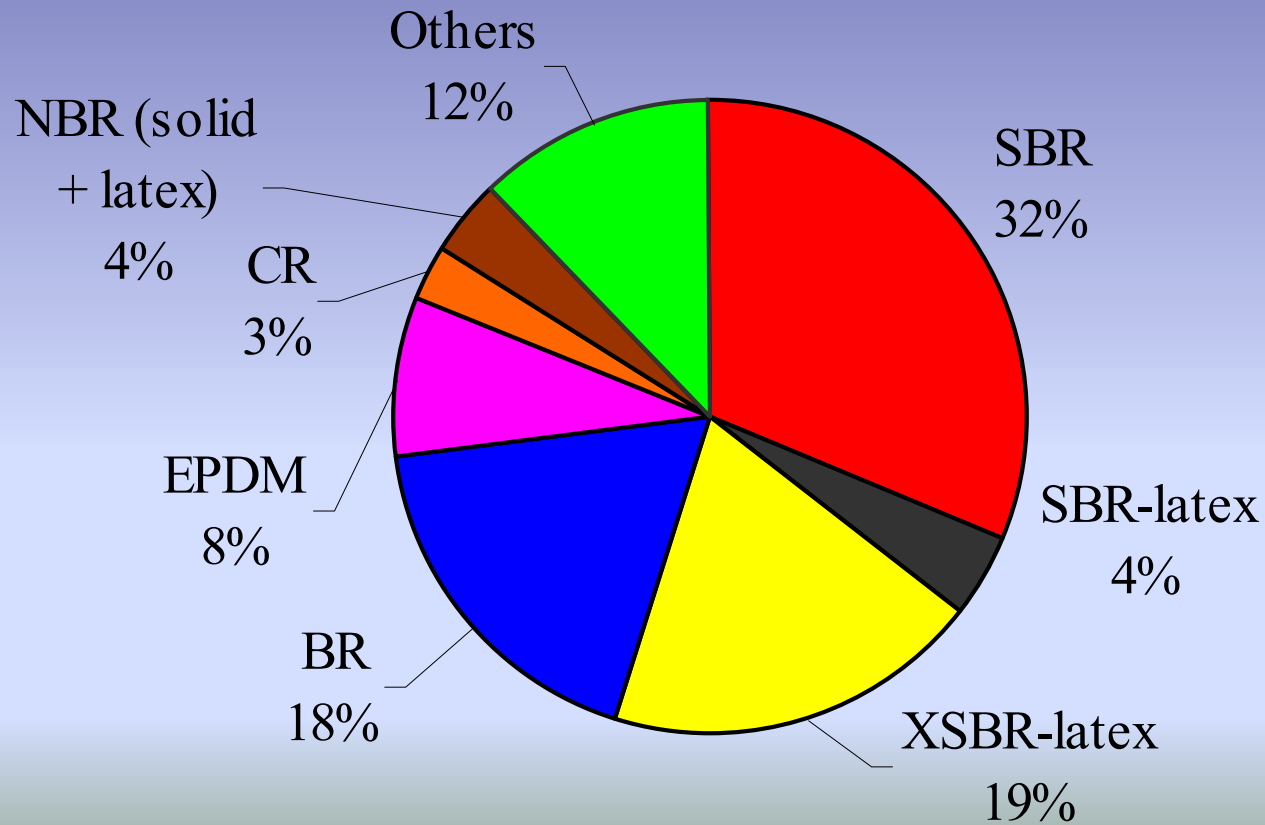
Share of latex capacity by region, 1999, % share

Region	SBR latex	Carbox'd	
		SBR latex	NBR Latex
North America	17.4	41.2	24.3
Western Europe	28.2	40.7	44.0
Central & Eastern Europe	26.4	-	-
Latin America	3.0	3.5	2.2
Asia	24.2	14.1	28.4
Others	0.8	0.5	1.1
Global	100.0	100.0	100.0

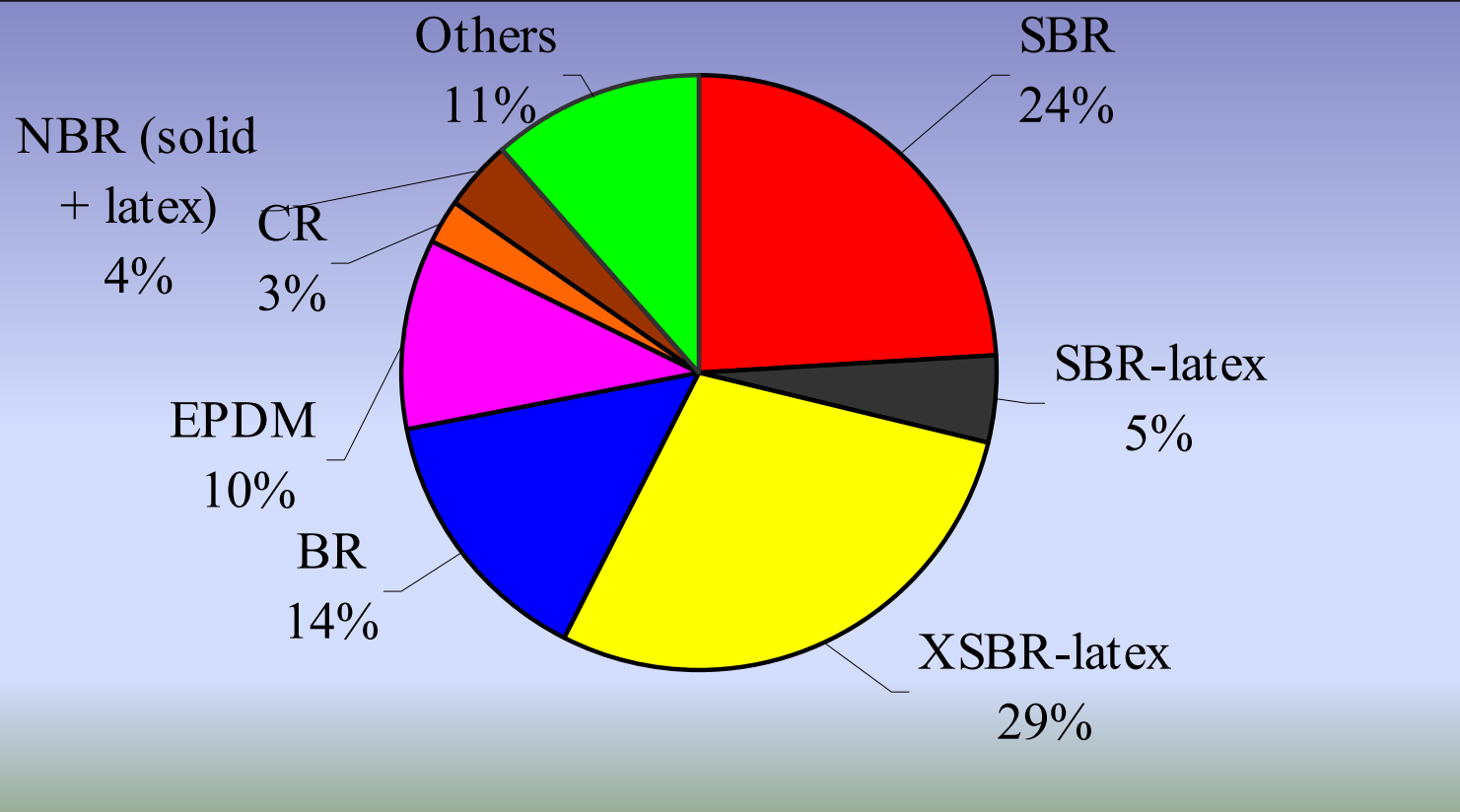
Elastomer market volume in selected regions, 1998 ('000 tonnes)

	W. E.	N. A.	Asia	L. A.	C. E.	Total
SBR	612	952	770	380	152	2,866
SBR-latex	116	90	145	9	5	365
XSBR-latex	720	696	270	55	12	1,753
BR	363	565	536	147	47	1,658
EPDM	259	301	168	25	6	759
CR	64	71	88	20	12	255
NBR (solid + latex)	102	106	92	21	19	340
Others	285	456	261	56	60	1,118
Grand Total	2,521	3,237	2,330	713	312	9,113

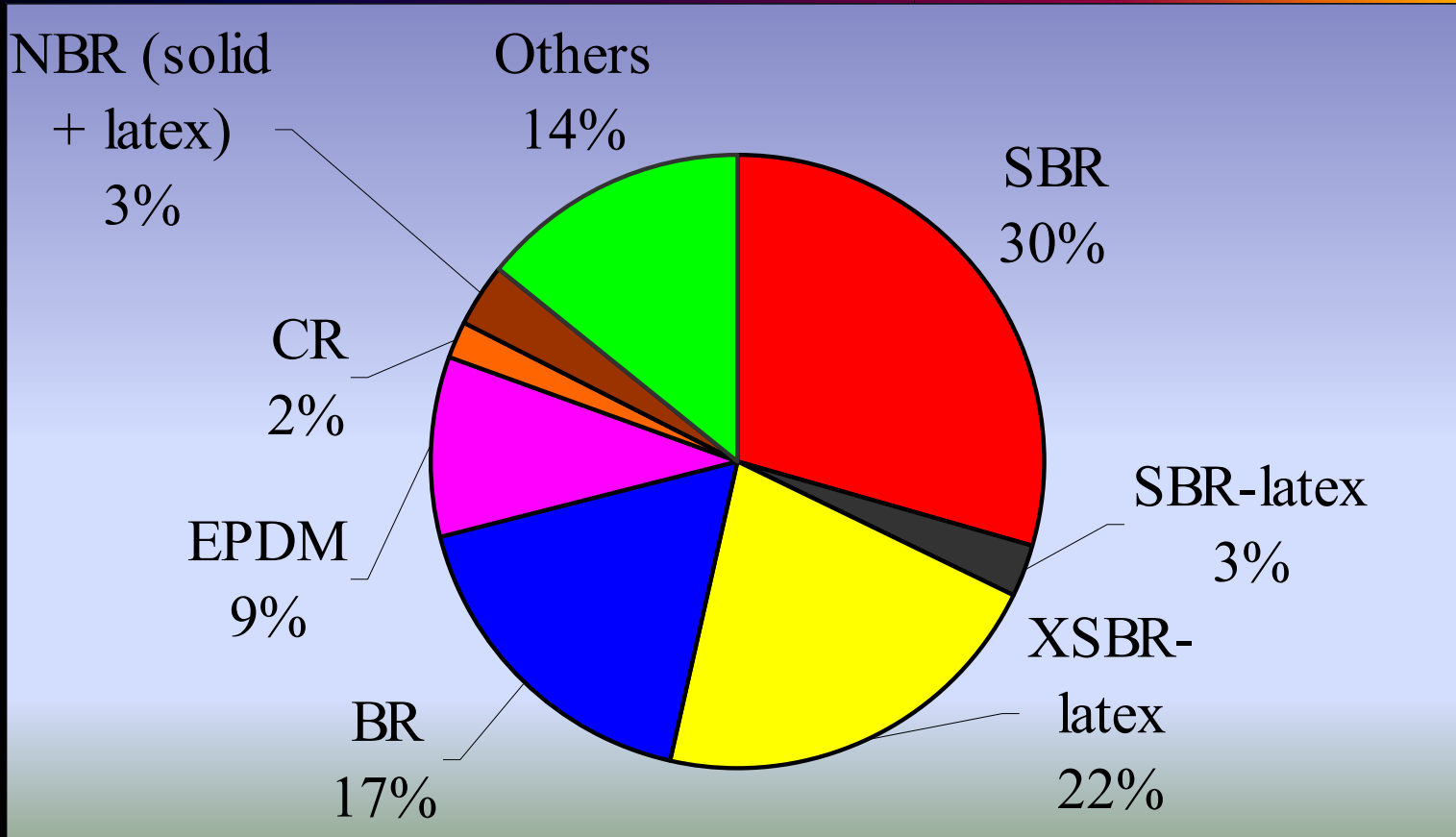
Synthetic rubber market shares, World



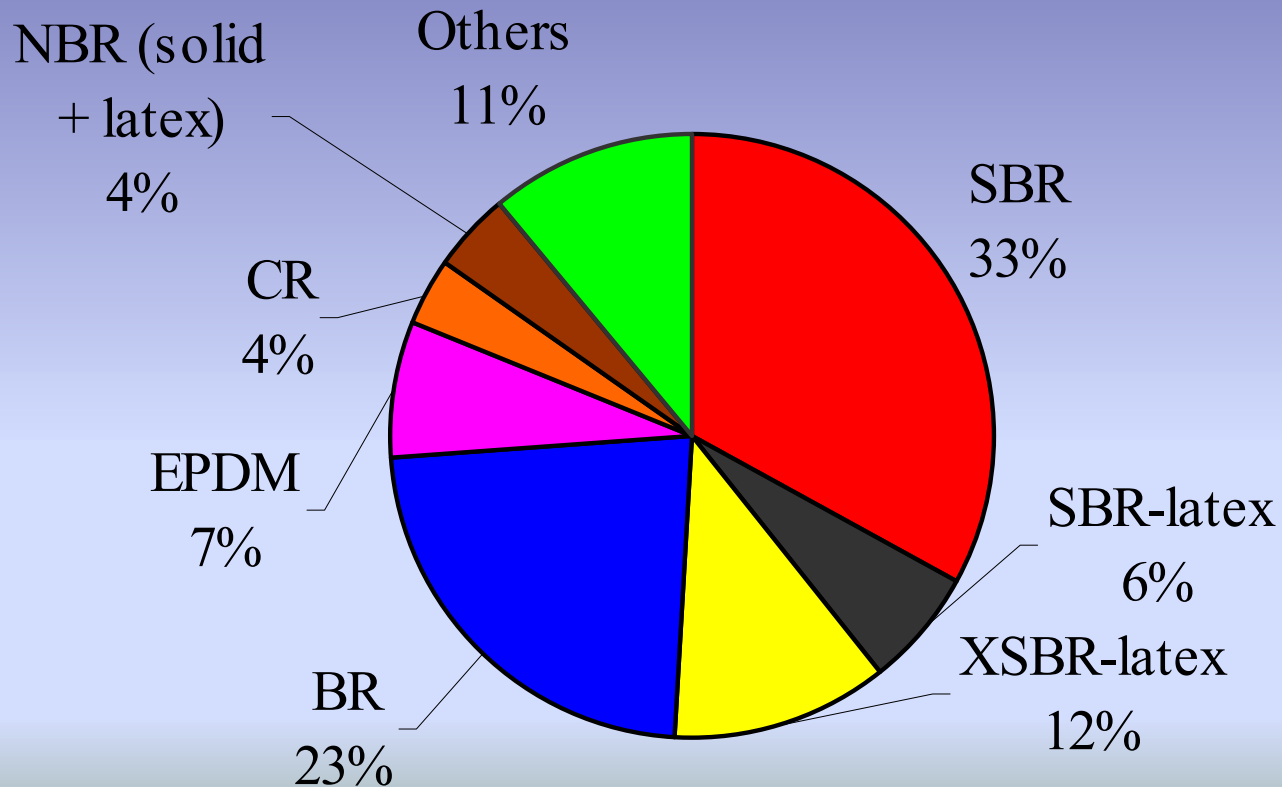
Synthetic rubber market shares, Western Europe



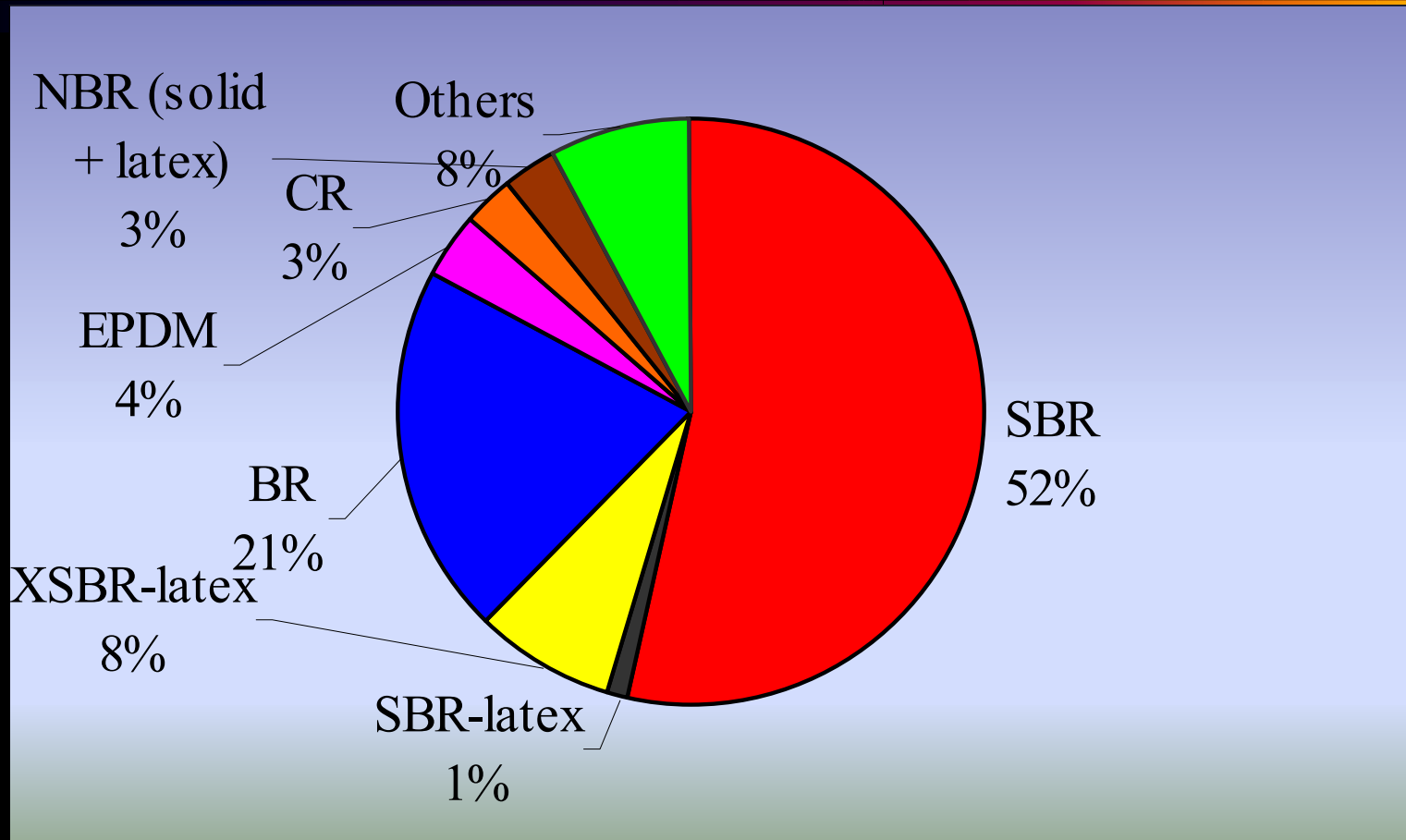
Synthetic rubber market shares, North America



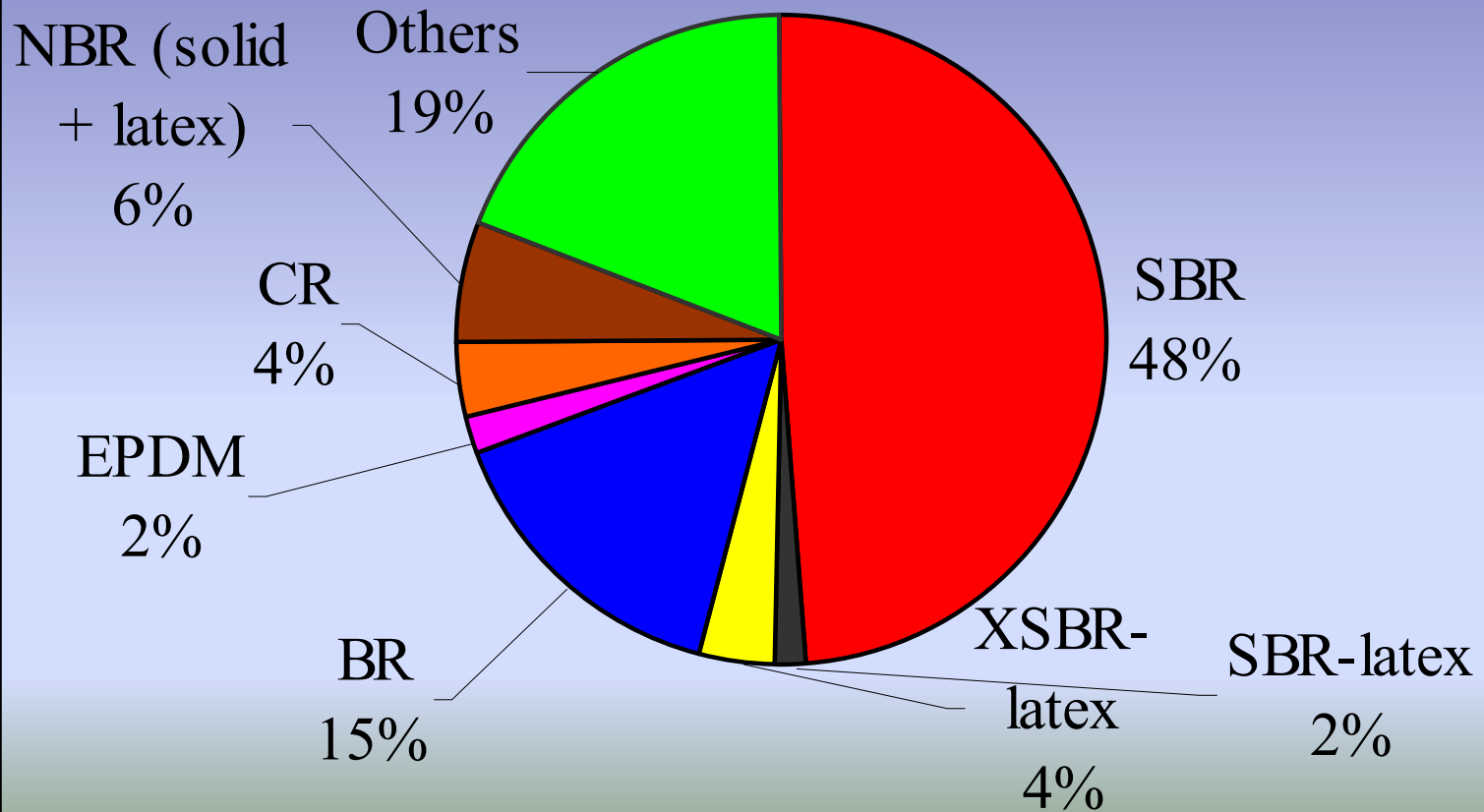
Synthetic rubber market shares, Asia



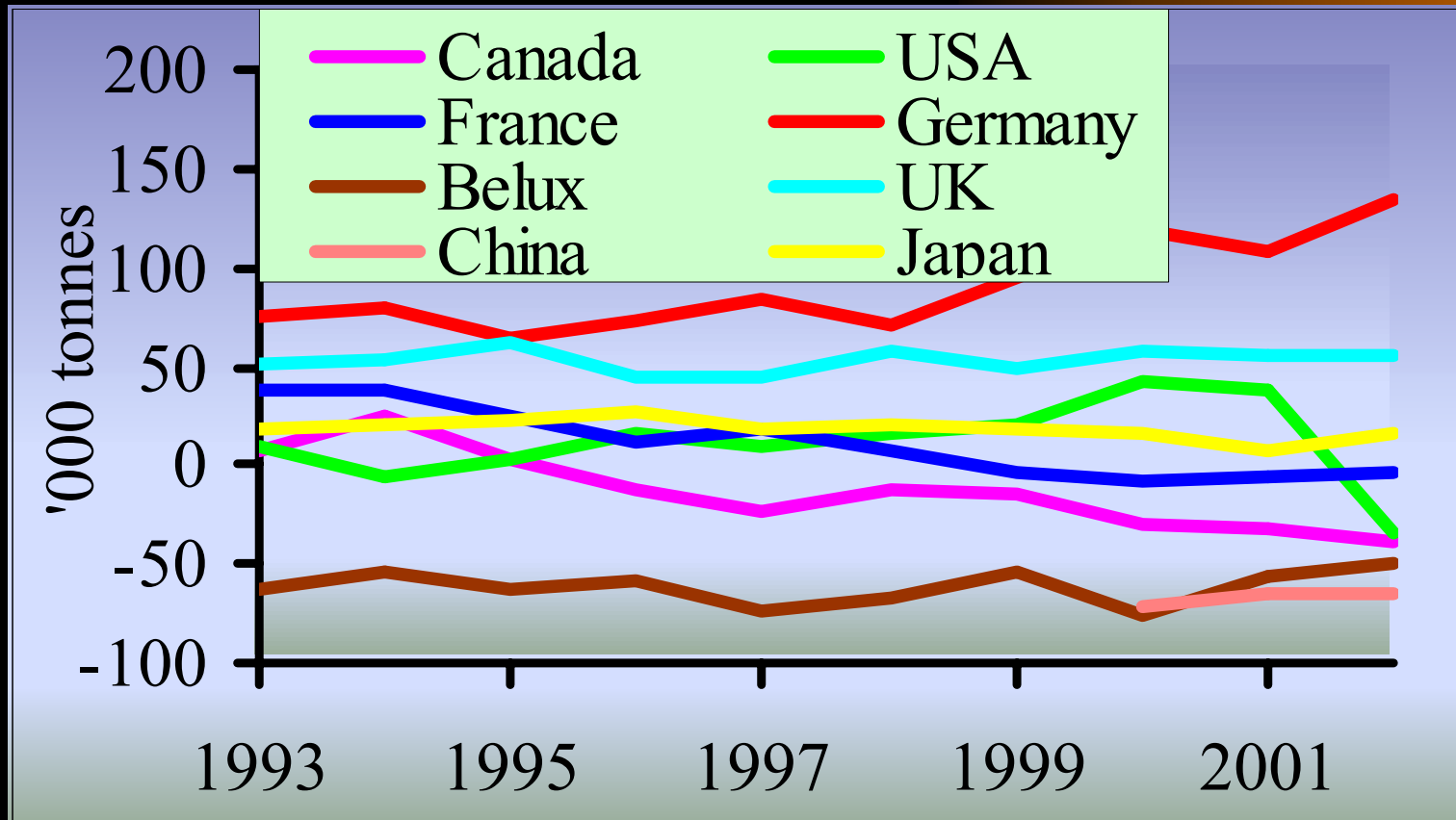
Synthetic rubber market shares, Latin America



Synthetic rubber market shares, Central Europe



Net exports of SR lattices for selected countries, 1993-2002



Capacity and demand: considerations



- Costs of production
- Relative size of end use sectors in the regions
- Transportation considerations, as with NR latex

US gross exports of SBR, BR and SBR-latex, 2001 ('000 tonnes)

Exports to Region	SBR	% share	BR	% share	SBR- latex	% share
NAFTA	109.5	56.0	52.7	24.8	58.6	73.6
Latin America	24.7	12.6	37.9	17.8	6.1	7.7
Europe	27.9	14.3	97.0	45.6	12.9	16.2
Asia	30.3	15.5	13.4	6.3	0.8	1.1
Others	3.2	1.6	11.6	5.5	1.2	1.5
Total	195.5	100.0	212.7	100.0	79.7	100.0



Final notes and conclusions

NR latex: key points to note

- Rapid growth in NR latex sector in 1980's
- Centre of gravity of NR latex sector in Asia
- Diversification into downstream sector – Malaysia
- Thailand largest producer of raw latex and supplier to Malaysia
- Other countries promoting rubber goods production

SR lattices: key points to note

- Data limitations
- The role of SR lattices and NR latex
- Significant capacity for SR lattices – industrialised countries
- Demand also significant – North America, Western Europe and Asia
- Trade flows limited
- Growth factors: latex allergy and large developing markets