

**The Rubber Industry  
Roadmap  
Southern  
Philippines**

# **Rubber Industry Situation**

# World Production

World consumption is about 17.1 million metric tons (MMT) annually. Synthetic rubber accounts for 10.3 MMT of the supply and natural rubber accounts for 6.8 MMT.

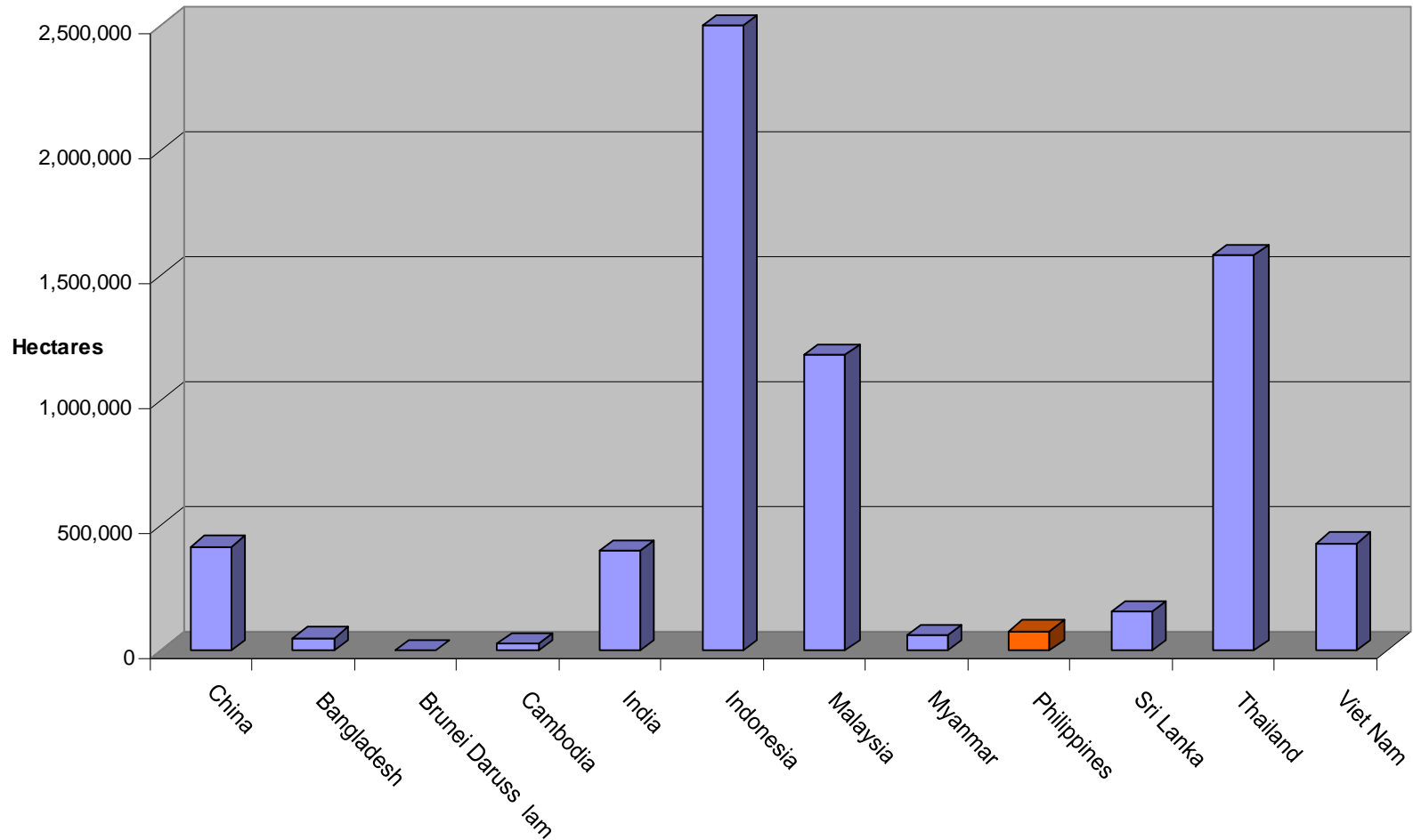
ASEAN countries corner 80% of the world natural rubber market, the Philippines share of the transaction is very minimal.

# World Production

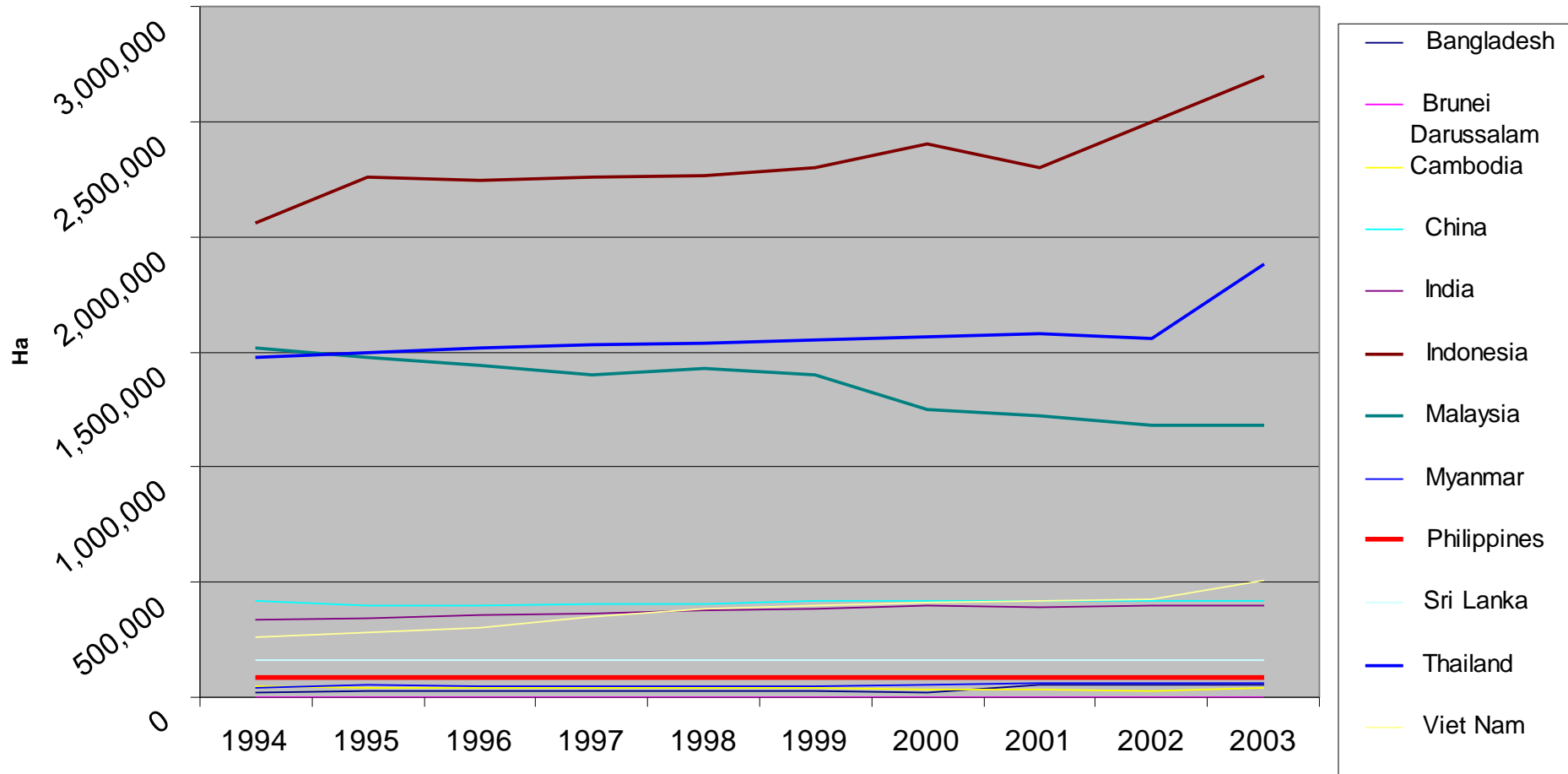
- The major producers are Thailand (37.93%), Indonesia (21.63%), India (8.63%) and Malaysia (7.82%).
- The Philippines accounts for only 0.92% of world production.
- Hectarage is increasing in most countries except Malaysia and the Philippines.
- Yields are generally increasing (Phil is #5 at 0.8 t/ha).

Source: DTI-BOI, April 27,2004

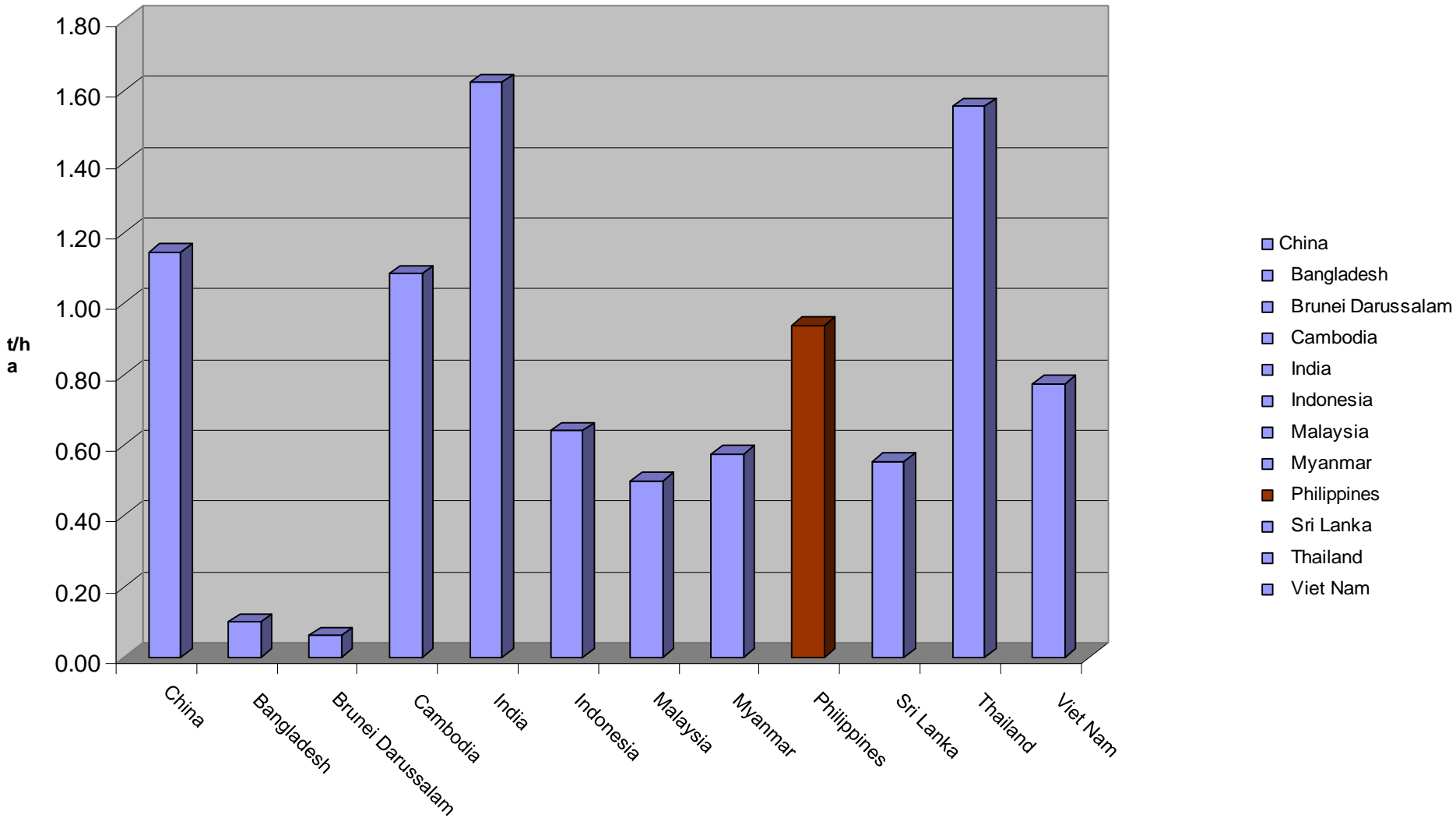
# Area Planted to Rubber in Asia (FAO, 2002)



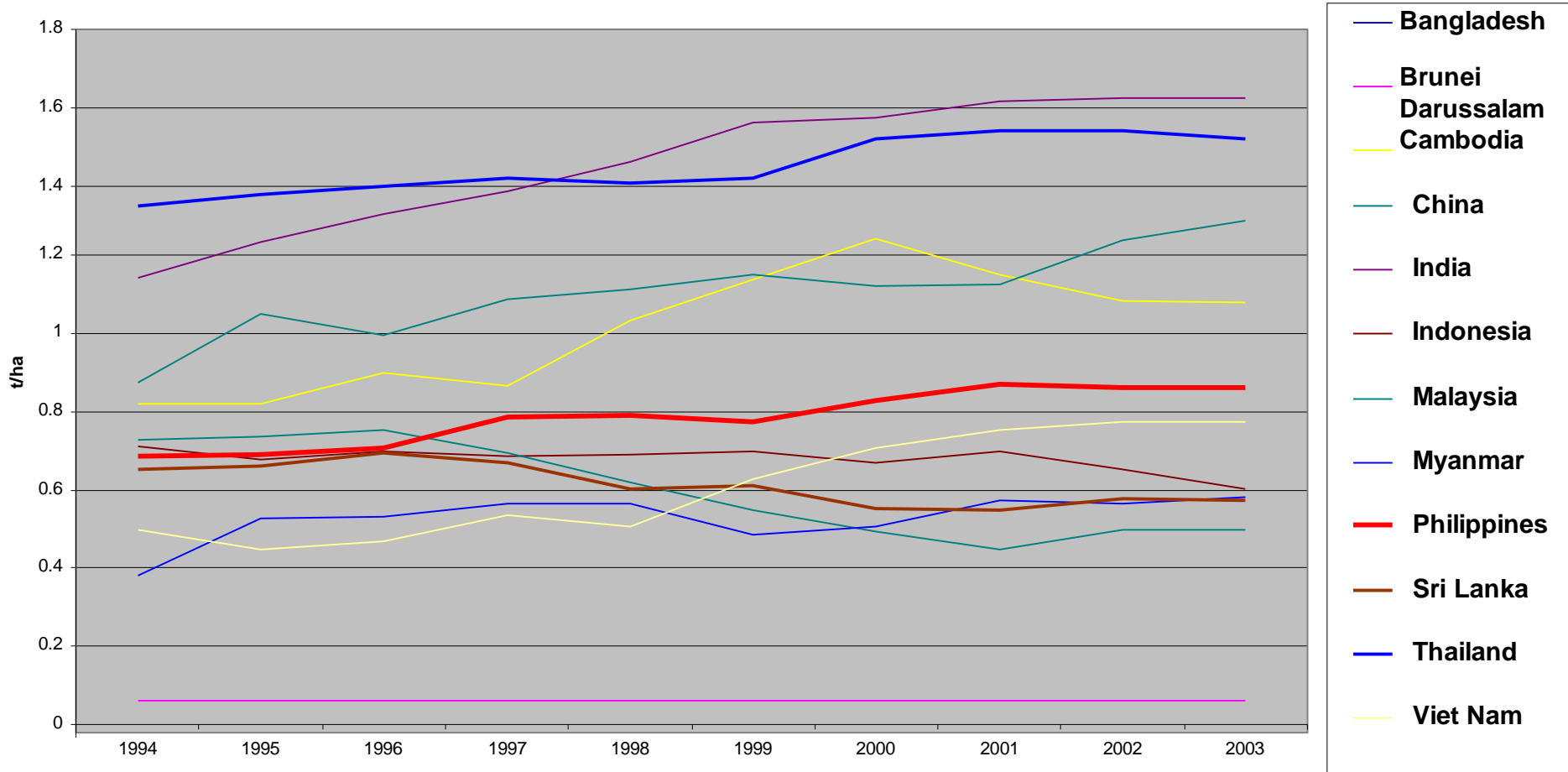
# Trends in Rubber Hectarage in Asia (FAO)



# Yield of Rubber in Asia (FAO, 2002)

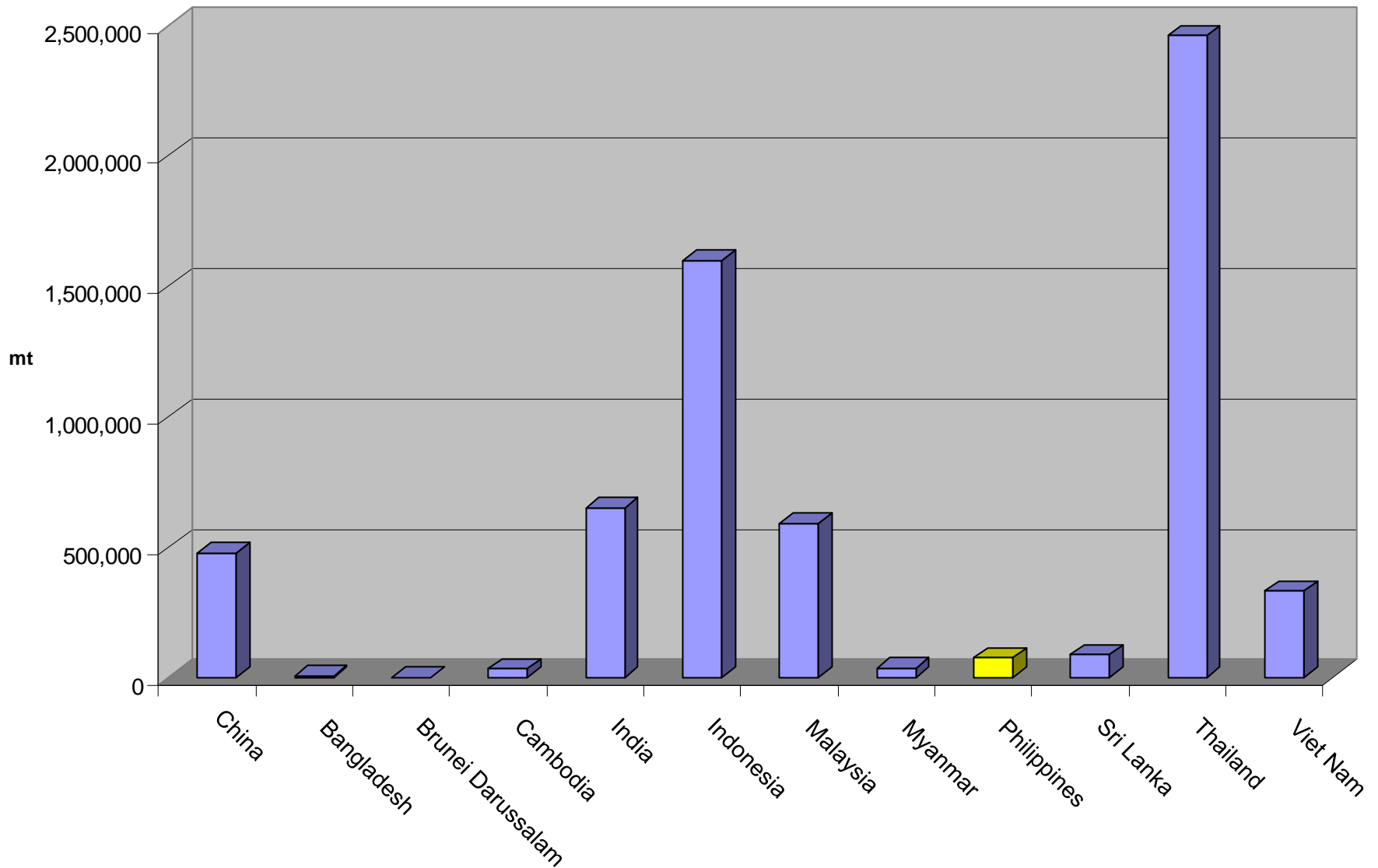


# Trends in Rubber Yields in Asia (FAO, 2002)





# Rubber Production in Asia (FAO, 2002)



# World Export (FAO, 2002)

- World export volume was 6.331M mt in 2002 valued at US\$ 4.24B.
- Average price is US\$ 670/mt.
- Leading exporters are Thailand (44%), Indonesia (23.6%), Malaysia (14%).
- Philippines exports only 0.7% of world volume.

# World Natural Rubber Exports (FAO, 2002)

Country	Volume (Mmt)	Value (\$M)	US\$/ mt	% Share
Thailand	2.785	1,737.3	623.7	44.0
Indonesia	1.496	1,038.4	693.9	23.6
Malaysia	0.887	655.8	739.4	14.0
Vietnam	0.449	229.0	510.5	7.1
C'ote d'Ivoire	0.126	86.6	686.6	2.0
Liberia	0.108	76.0	703.7	1.7
<b>Philippines</b>	<b>0.045</b>	<b>18.2</b>	<b>408.0</b>	<b>0.7</b>
Cambodia	0.044	28.3	637.4	0.7
Others	0.390	372.2	952.3	6.2
<b>Average</b>	<b>6.331</b>	<b>4,241.7</b>	<b>670.0</b>	

Farm gate @P7/kg cuplumps

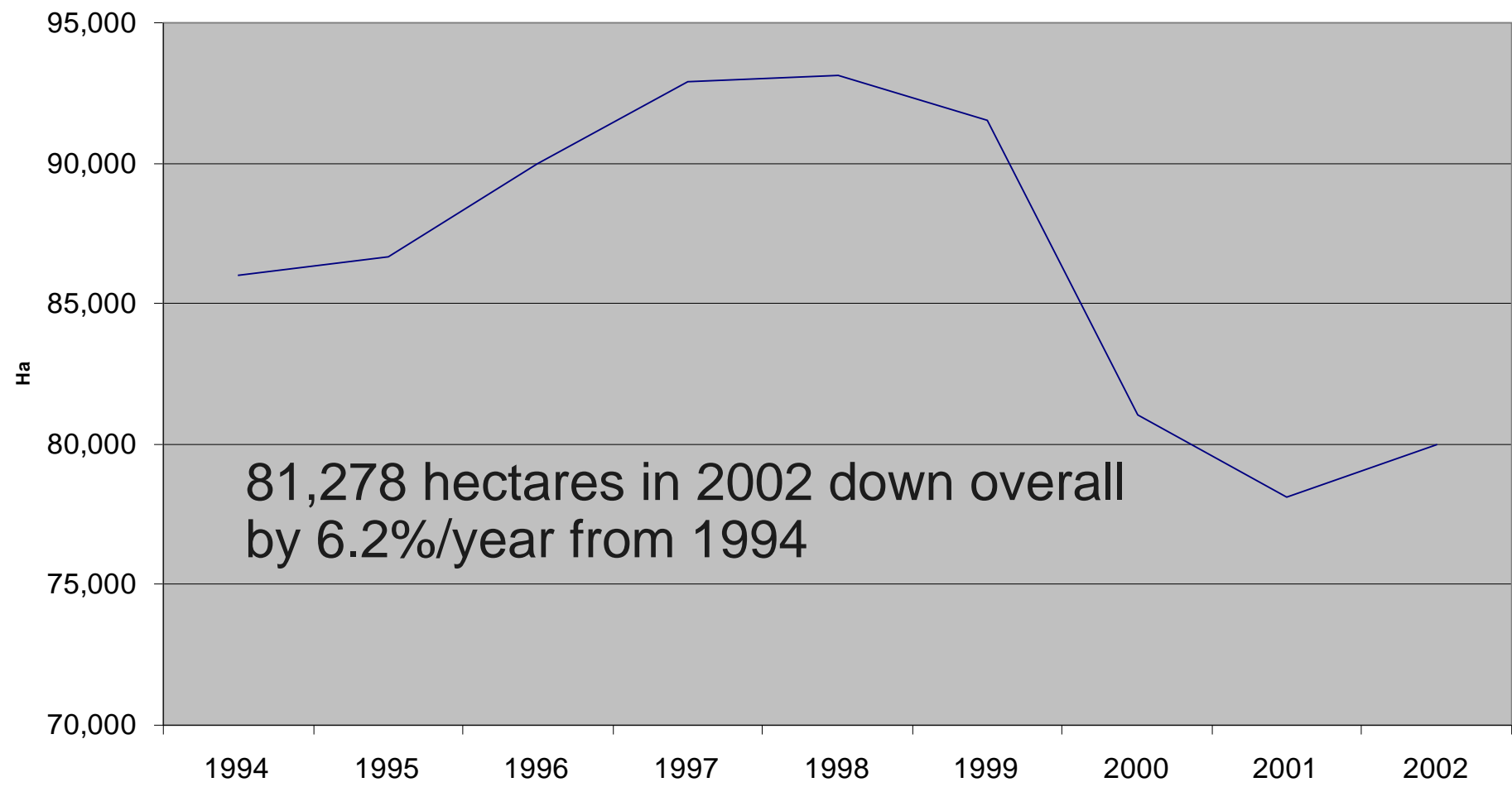
# World Import (FAO, 2002)

- World import total was 6,173.30M mt valued at US\$ 4.421B
- Leading importers are:
  - USA (19.7%)
  - China (17.3%)
  - Japan (12.6%)

# World Natural Rubber Imports (FAO, 2002)

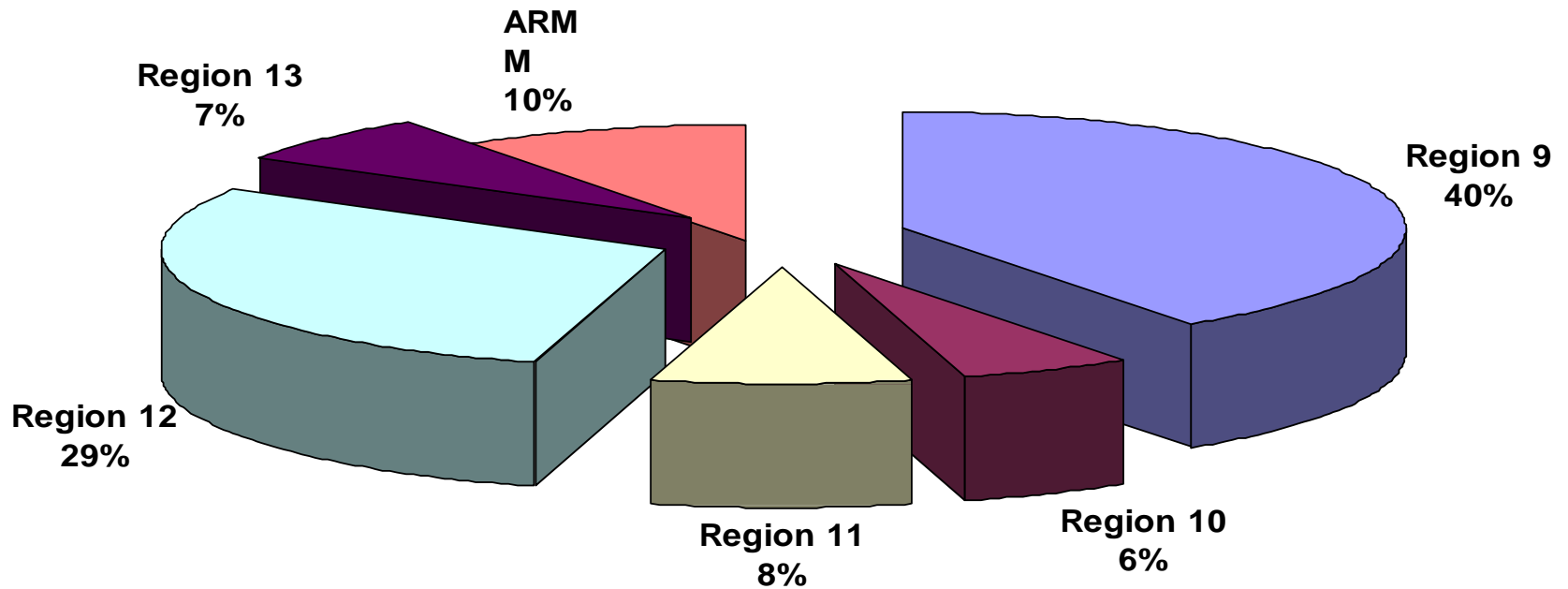
<b>Country</b>	<b>Volume (M mt)</b>	<b>Value (US\$ M)</b>	<b>USD/mt</b>	<b>%Share</b>
USA	1,213.26	751.2	649.1	19.7
China	1,066.60	771.6	723.4	17.3
Japan	778.30	564.2	724.8	12.6
Malaysia	459.00	281.0	612.2	7.4
Korea	324.20	234.0	721.6	5.3
Others	2,331.80	1,819.1	780.1	37.8
<b>Total</b>	<b>6,173.30</b>	<b>4,421.0</b>	<b>(736.1)</b>	

# Rubber Area in the Philippines (BAS)

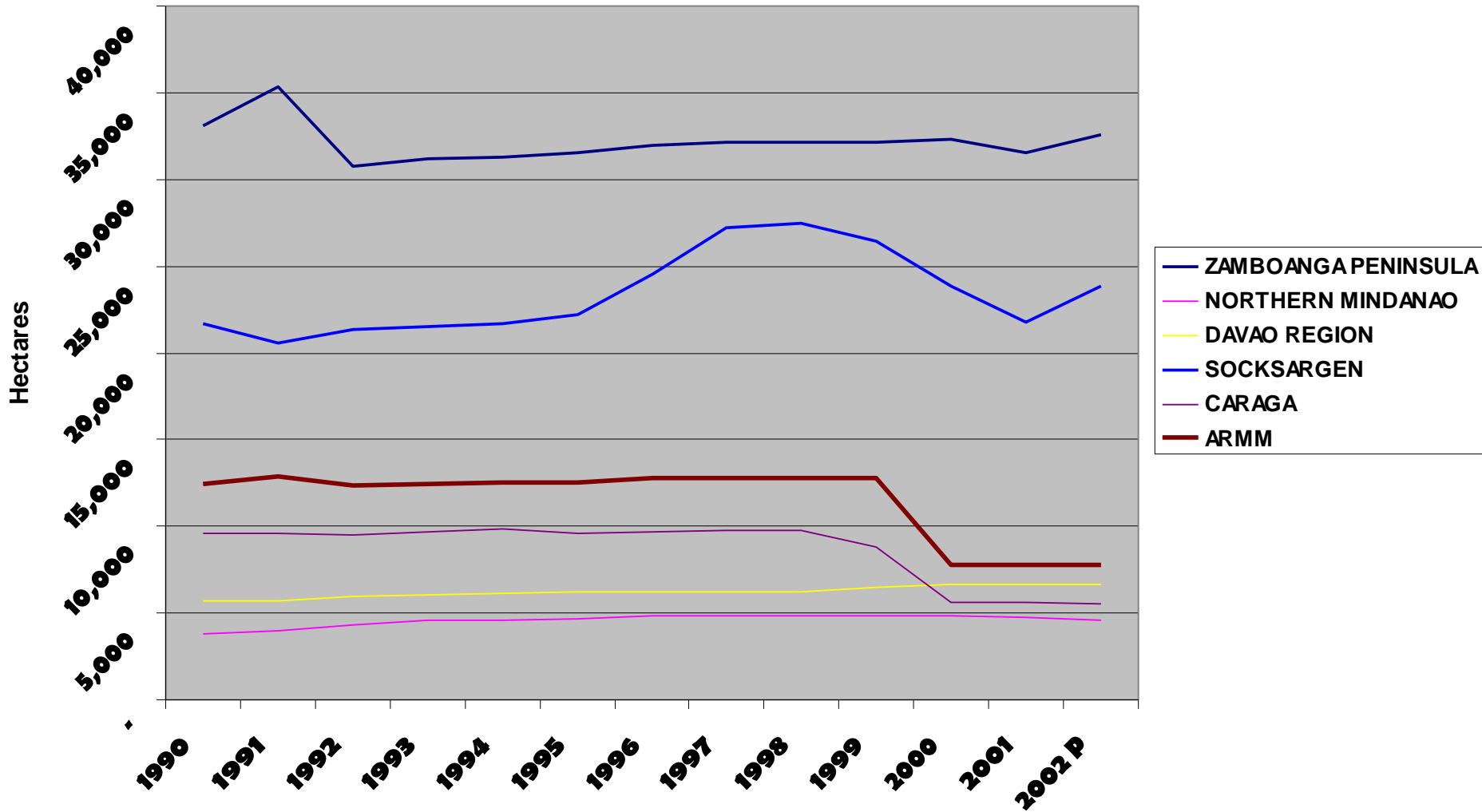


81,278 hectares in 2002 down overall  
by 6.2%/year from 1994

# Distribution In Rubber Area, 2002 (BAS)



# Rubber Area by Region, 1991-2002 (BAS)

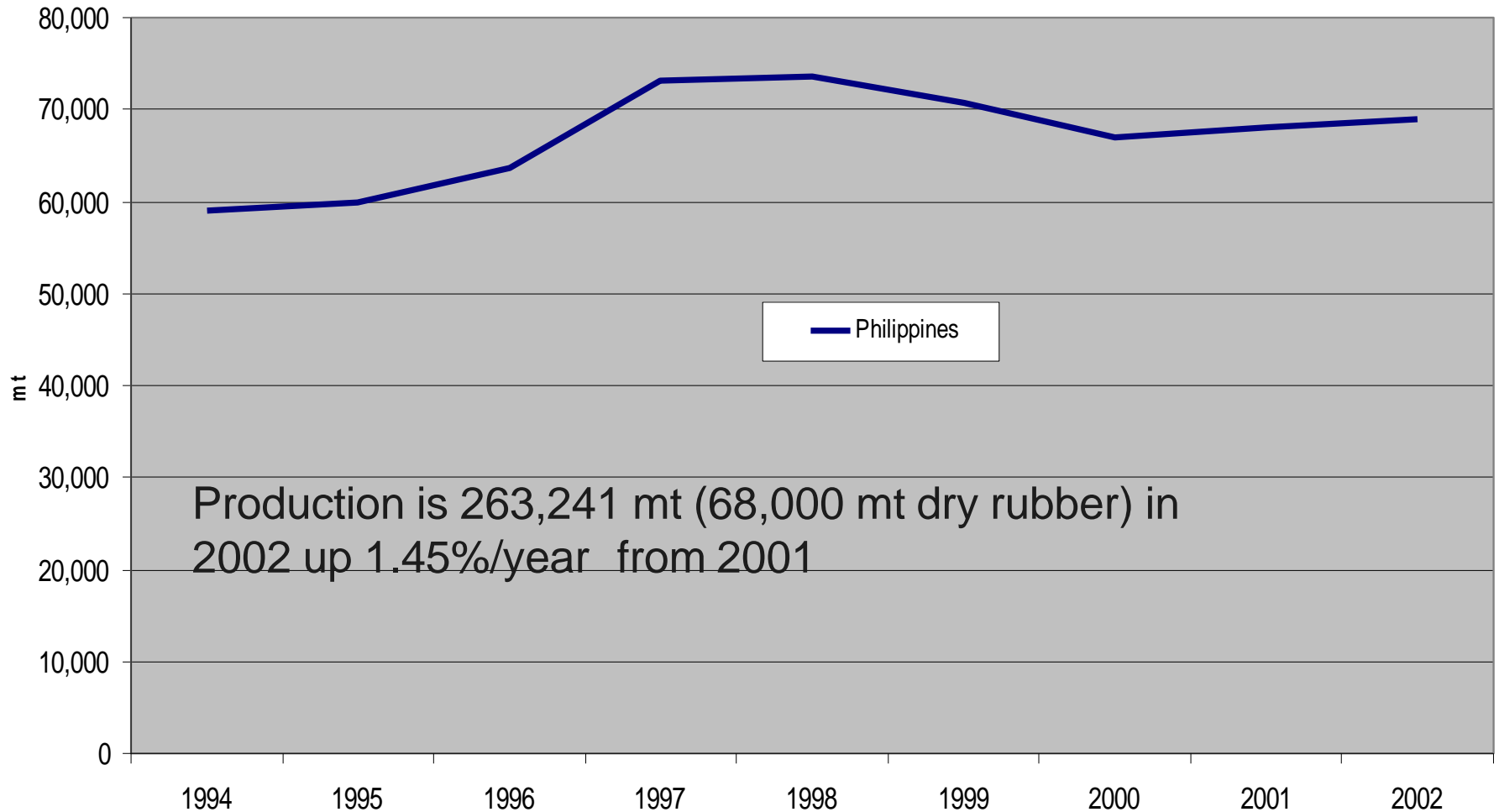




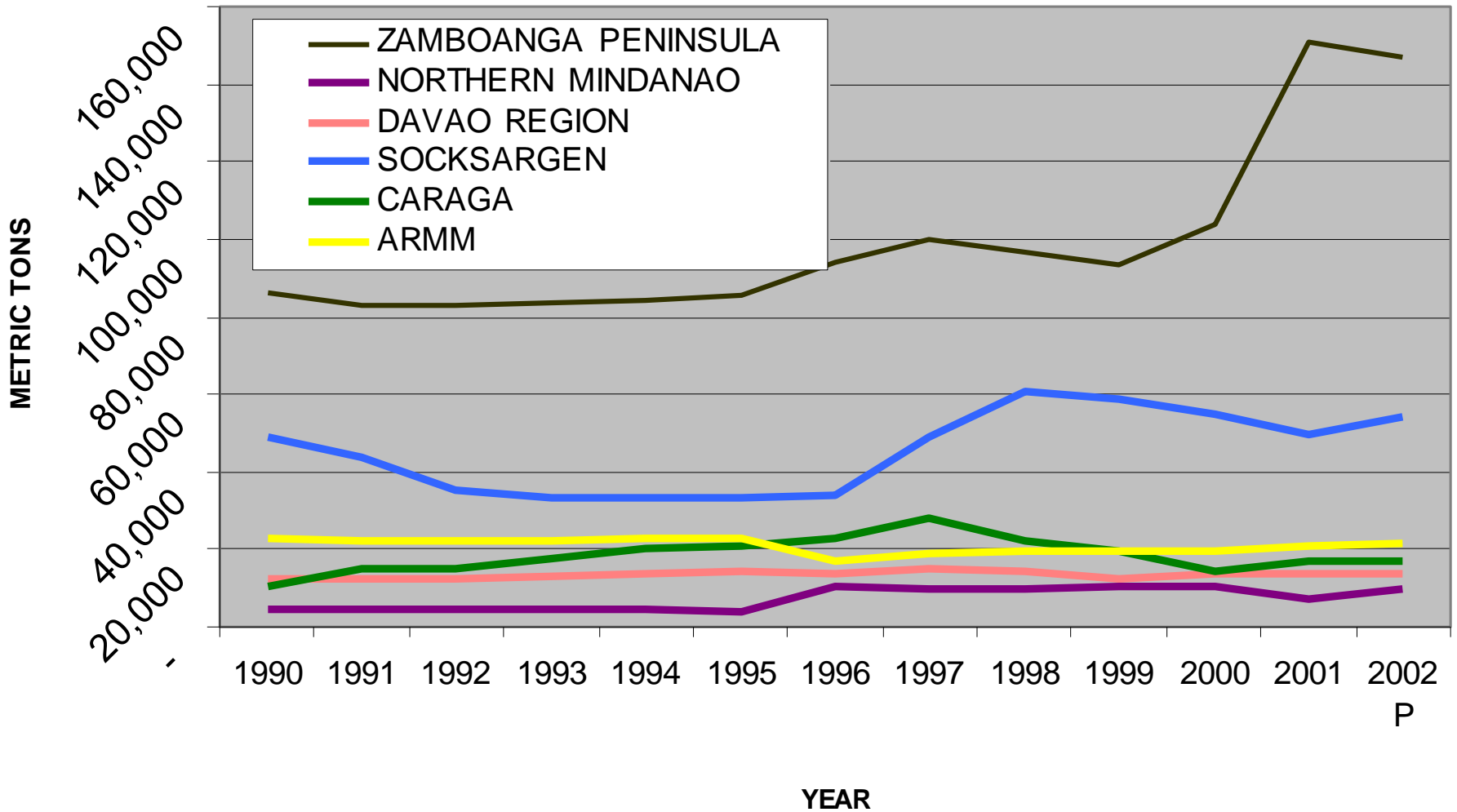
# Priority Areas

- Region 9 - Zamboanga Sibugay (19,576 ha) has 60% of rubber area of Region 9 (32,586 ha)
- Region 12- North Cotabato (23,196 ha) has 97% of the rubber area of Region 12 (23,878 ha)
- ARMM- Basilan (7,310 ha) has 94.5% of rubber area in ARMM (7,735 ha)

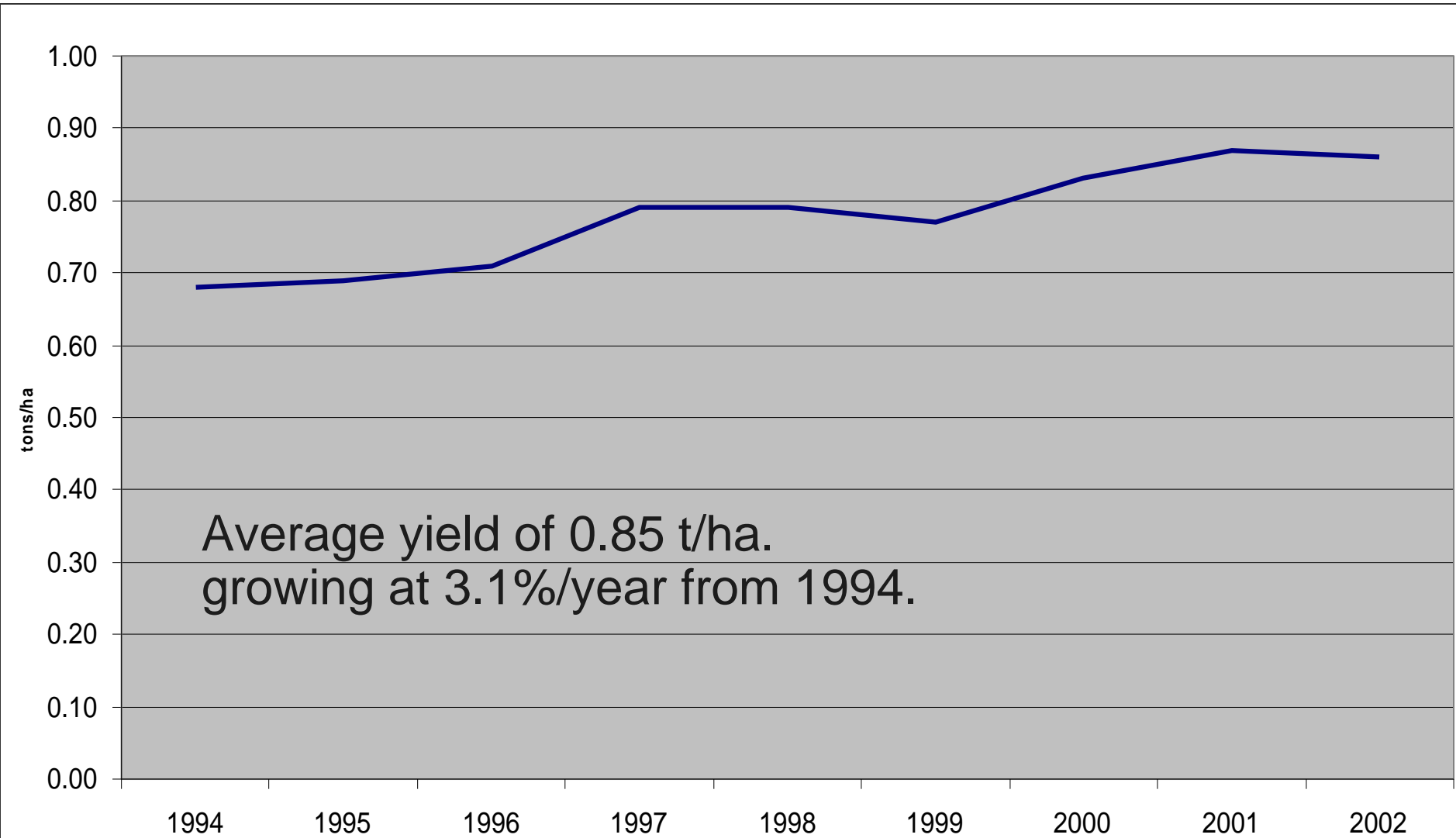
# Trend in Natural Rubber Production, Phil



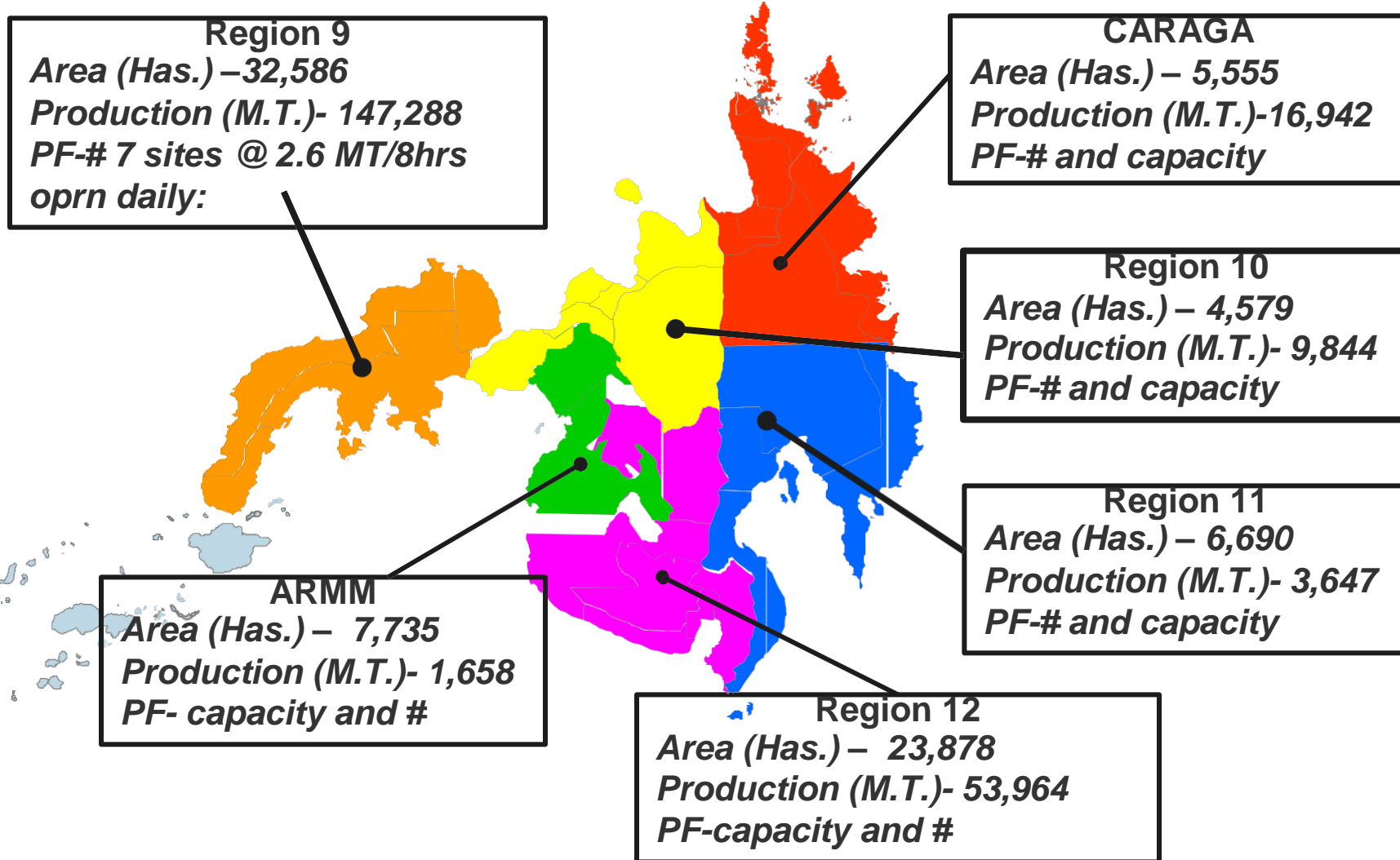
# Trend in Rubber Production By Region



# Trend in Yield (Dry Rubber)



# Map of existing production and processing facilities



# Utilization

- Local rubber consumption is growing at 3%/ year (DA-AMAS, 2004)
- Consumption in 2002 was 23,902 mt
- 70% of the Philippine natural rubber (NR) goes to the tire industry (PCARRD, 2003)
- 30% goes to non-tire such as: gloves, medical wears, toys, shoes, balls, rubber wood for floor tiles, furniture, ply woods, etc. (PCARRD, 2003)

# Export

- Exports 66% of natural rubber production to Malaysia (50.19%), China (5.26%), Singapore (17.74%), Taiwan (14.7%)
- Total volume of 44,722.9 mt
- Value in 2002 US\$18.8 M
- US\$ 408 /mt only!

# Imports

- 625.1 mt in 2002
- Valued at US\$ 0.937 M
- It is US\$ 1,499.3/mt!



# Marketing Practices

- Rubber is marketed as centrifuged latex, cup lumps, crepe sheets, crumb rubber and smoked
- Marketing is done through local and provincial assemblers then to processors/traders and manufacturers
- A significant amount is marketed backdoor to Malaysia (at about P5/kg higher than local price)

# Price Trend

- Price per kilogram of cup lumps locally is P25-30 per kilogram (2004) from a low P 8.61/kg in 1998
- Local prices is fluctuating in the local market due to of seasonality of demand in the foreign and backdoor marketing
- Overall, the market price is still good for the growers

# Rubber Value Chain Analysis

**Total Cost  
(P11.375/kg)**

**Harvesting/  
Sorting/Grading  
storage**

**tapping**

**Pest and disease  
control**

**Fertilization**

**Maintenance**

**12 year-old trees  
@ 0.85t/ha dry rubber or  
1.7/ha cuplumps  
500 trees/ha  
@175 tapping days/yr**

**P 0.04kg**

**P 8.04/kg**

**P 0.88/kg**

**P 2.34/kg**

**P 0.08/kg**

Tapping knives-300  
latex cup P7.50, spring  
1, spouts-1, pail-150,  
coag. pan-200, acid  
coagulant-6 L/ha/yrX  
P65

P78.125/day for 175  
tapping days/yr

termite control  
@P1500/li-ha

5 sacks/ha/yr  
@.5 kg/tree/yr  
P795/bag

@1laborer/24  
ha,1 MD P125/day

Infrastructure

Power & Water

R & D

Warehousing

Communication

Financing

# Grower's Income (2004)

- Mono cropped rubber
- Gross income of P40,800 ha-yr
- Net income of P21,457/ha-yr
- Family @ 3 ha/family- P64,372/yr excluding family labor
- Additional P13,975/ha-yr if all family labor
- P41,387/yr-family for 3 ha/family
- Total- P105,759/ha-family all family labor

# Income Breakdown For Rubber

Item                      Kg.

World Market



Wholesale at Mla



Transport buying to  
proc to Mla @ P10/kg

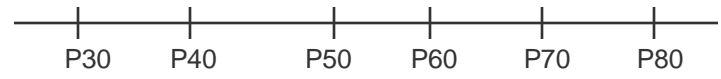
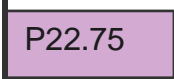


Processing @ P4.50/kg  
dry rubber



Production Cost P11.378/ kg. →

Farm gate P22.75/ kg.



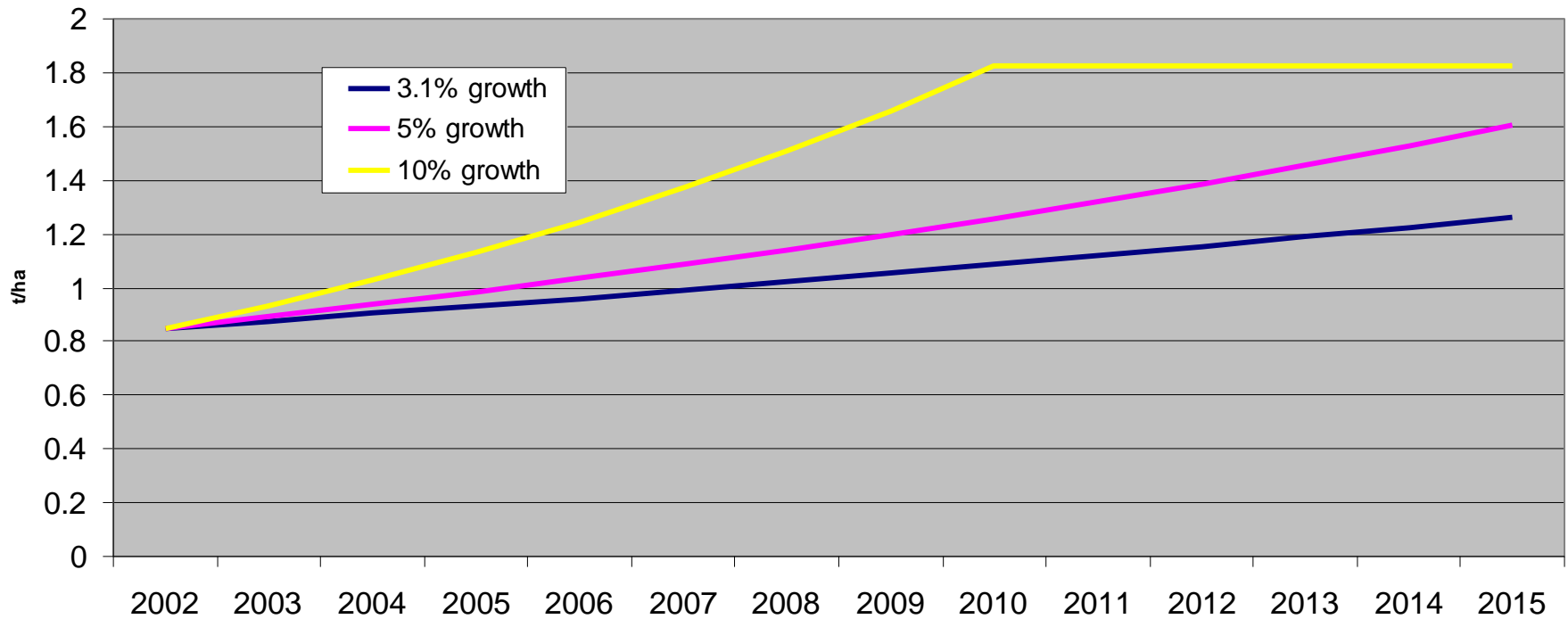
# Credit Assistance

- Very inadequate support for credit assistance
- No long-term loan schemes for rubber development (for non-ARC's)
- Rubber receives low government priority support

# Future Outlook

- World consumption will continue to increase led by Europe and China
- Natural rubber production will increase to 7M mt by 2005 but will just be maintained at around that level up to 2020
- Growth in consumption will increase to 5% in 2005, diving to 0% in 2010 and increase again by 5% in 2015
- Rubber prices will continue to increase up to 2015

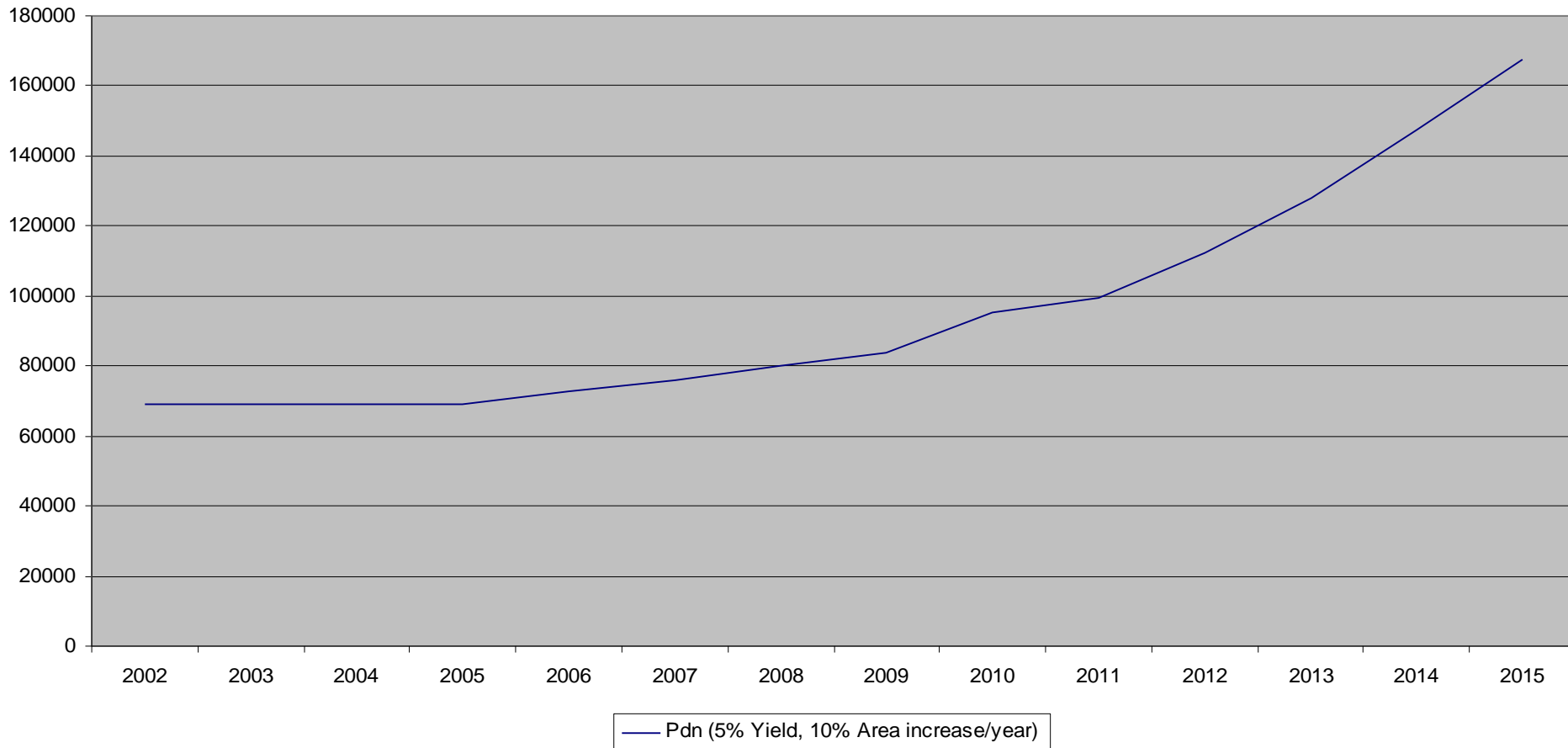
# Projection in Yield Increase



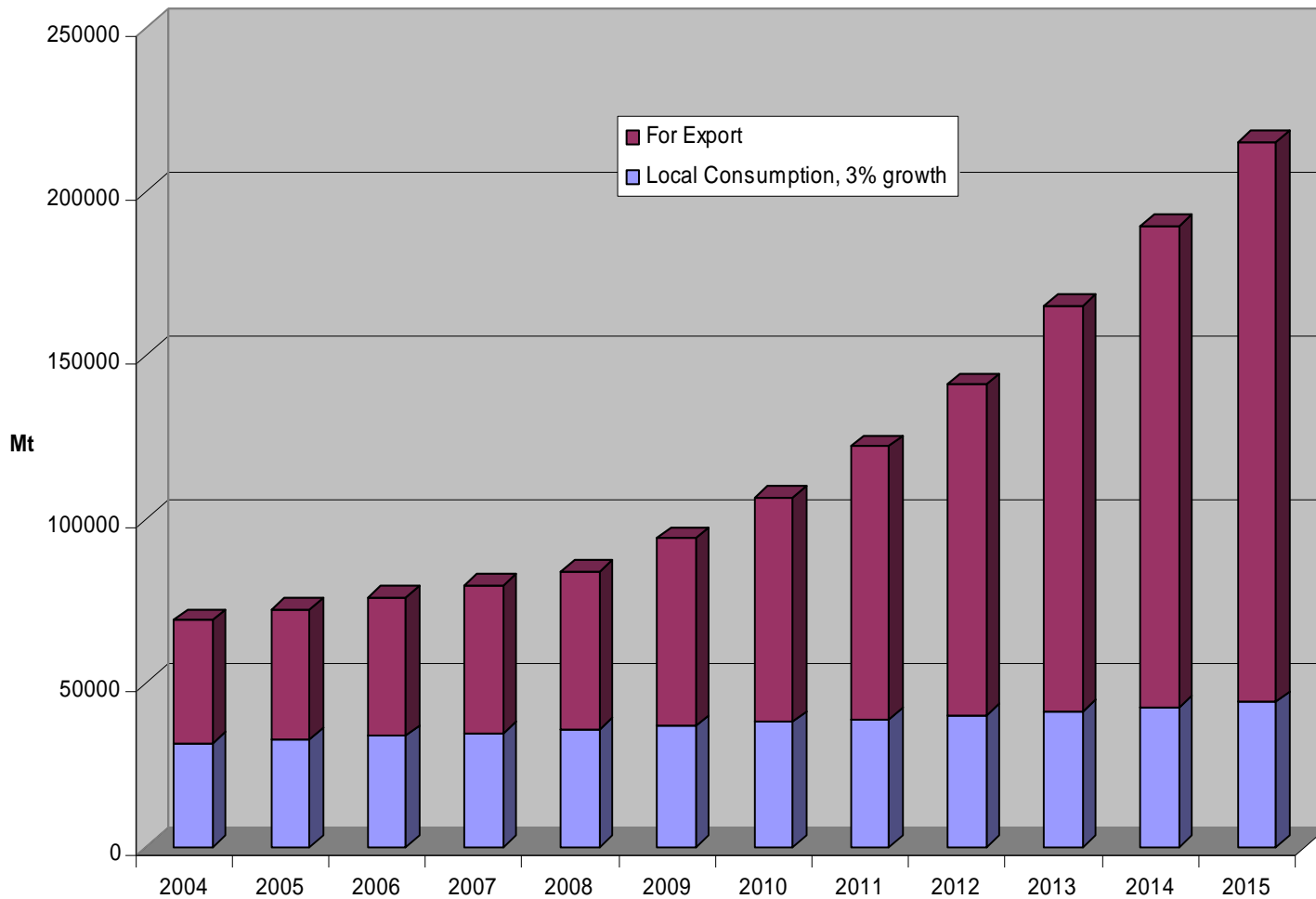


# Projection of Dry Rubber Production at 5% growth in yield and 10 % growth in area per year

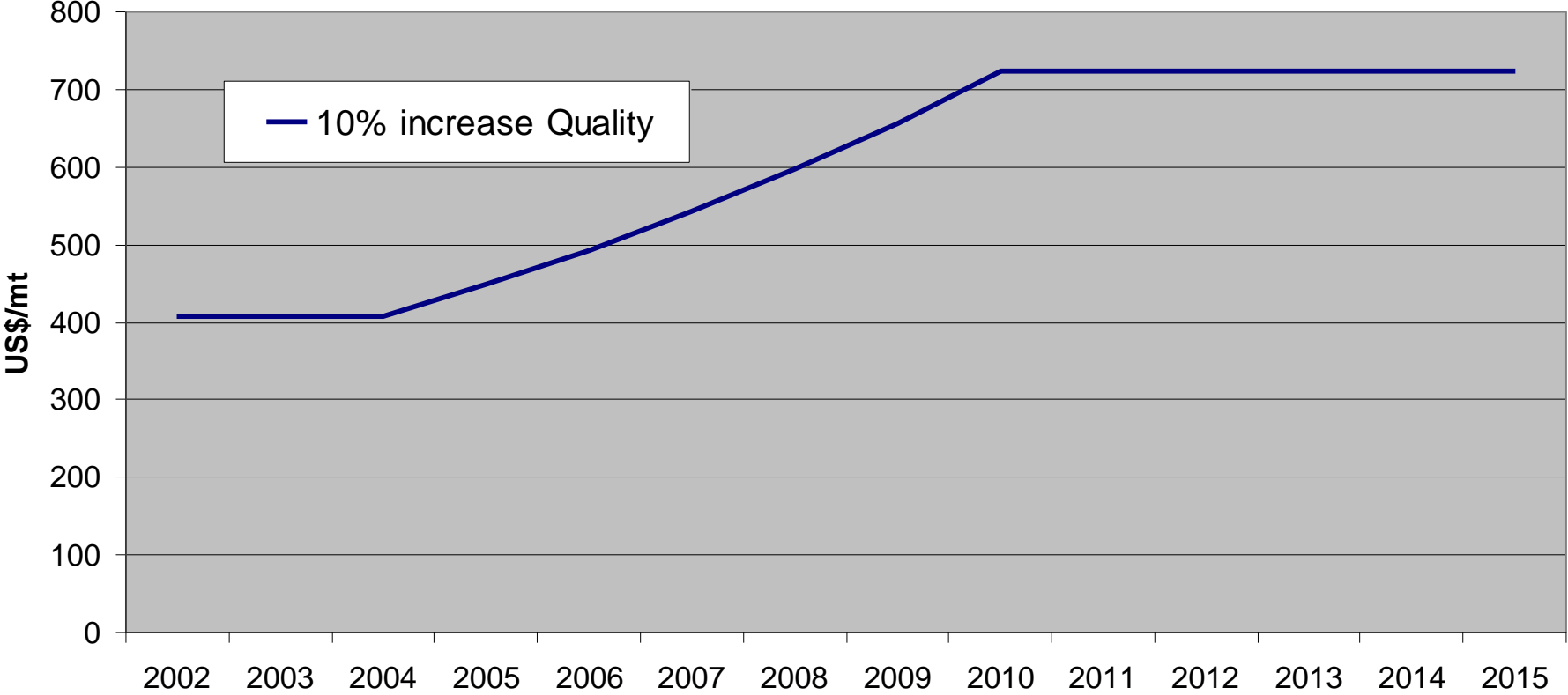
Pdn (5% Yield, 10% Area increase/year)



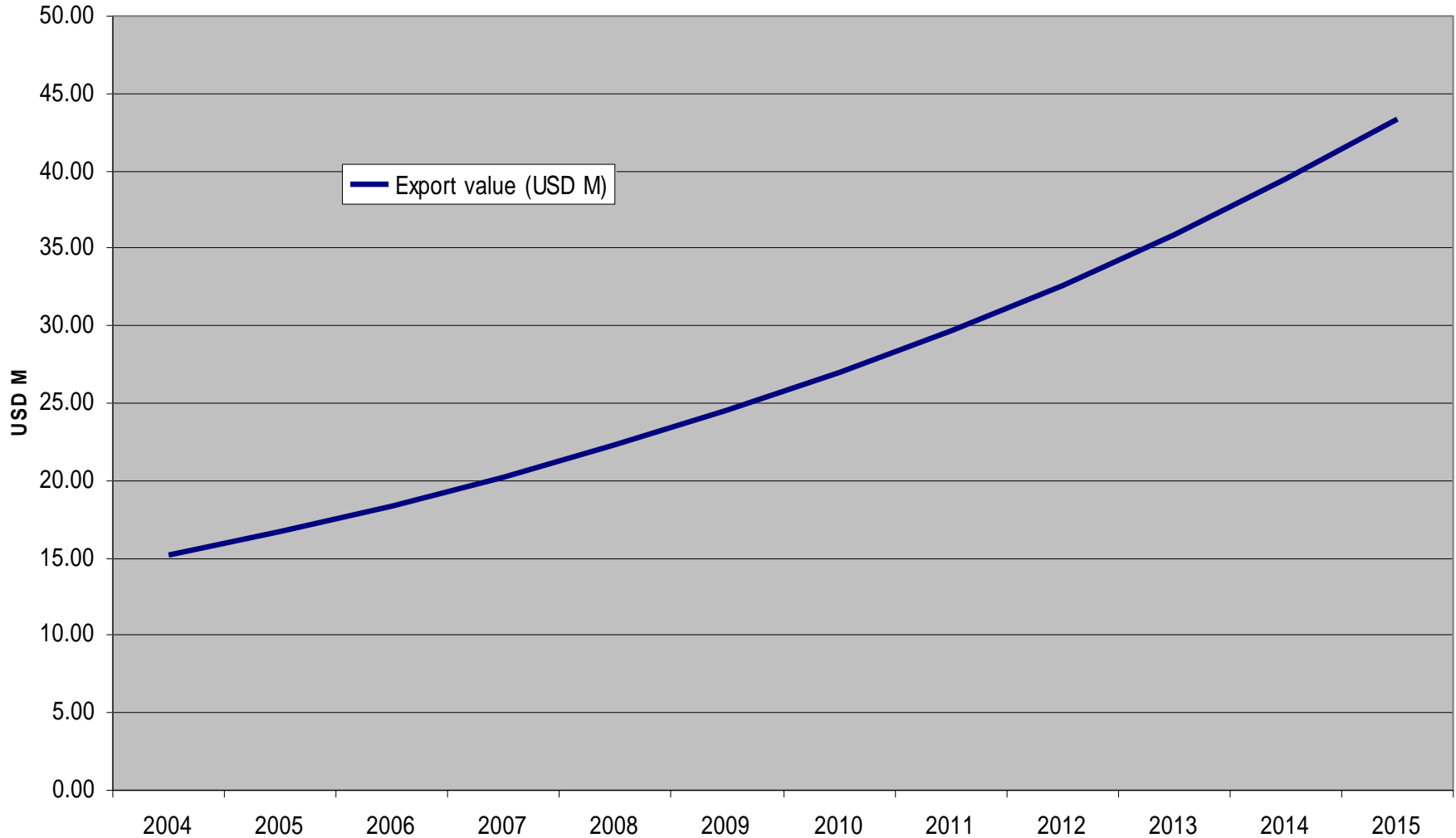
# Projection of Increase in Export at 3% growth in Local Consumption



# 10% Increase in Price/Year with Increase in Quality



# Projection Rubber Export Value (US\$M)



# Existing Interventions

- Bud wood gardens- 7 sites @ ½ ha/site
- Nurseries- 7 govt, 10 Basilan @ 300 ha cap/ site, R12, R10 (for completion)
- DAR-LBP joint financing program for replanting worth P355 M for ARC
- Market linkages thru DTI (for verification)
- RDE Network
- Rubber Board

# **SWOT Analysis**

**for the Rubber Industry**

# Strengths

- **500,000 total potential area for rubber production**
- **Typhoon-free areas**
- **Available technologies**
- **Available processing facilities**
- **Proximity of Mindanao to BIMP-EAGA**

# Weaknesses

- **Disorganized production and marketing system; (“kanya-kanya”)**
- **Lack of infrastructure support for production, processing and marketing;**
- **Poor accessibility of credit facilities**
- **Low productivity due to senile trees (70%);**



# Weaknesses

- **Low product quality**
- **Unstable peace condition**
- **Weak R&D and extension program**
- **Lack of market information**
- **Lack of national direction for the industry**
- **Aging pool of technical experts**

# Opportunities

- **Growing export market (demand) for Natural Rubber and rubber wood products**
- **Manufacturing - process to finish products**
- **Job generation**

# Threats

- **Highly competitive World market**
- **Back door marketing of raw rubber**
- **Competition from synthetic rubber.**
- **Competition from imported finished products**

# Vision

**A sustainable Rubber  
Industry that is  
technologically advanced and  
globally competitive**

# Mission

Promotion and development of a globally competitive rubber industry with the view of achieving increased (quality) production , farmer's income and efficient marketing system through the participation of the private sector, LGUs, and Government agencies

# Objectives

- To increase rubber production by 10% per year.
- To integrate and strengthen existing markets, and expand to new ones for natural rubber, rubber wood and manufactured products.
- To meet World market standards with respect to quality and consistency of processed rubber.
- To increase the income of rubber growers and those in the peripheral industries by 5-10%/year within 6 years.

How do we get there?

Objective 1-

Increase production by 10 % per year

## ***Strategies***

- Rehab of old areas to increase yield (5%) annually thru:
  - Replanting
  - Fertilization
  - Training of production and management personnel
  - Improve tapping and production technology
  - Pest and disease control



Objective 1-

Increase production by 10 % per year

## ***Strategies***

- Planting new areas (10%)
  - Recommended varieties
  - New planting design
  - Cash crops during the gestation period
  - Incorporation of Rubber in Agro-forestry (ISF, SIFMA, etc. ) program of DENR and LGU/NGO
  - Access to development and rehab loans

Objective 2 - To integrate and strengthen existing markets, and expand to new ones for natural rubber, rubber wood and manufactured products.

## ***Strategies***

- **Control smuggling of cuplumps**
- Strengthen MIS on Rubber
- Improve transport system
- Establish rubber wood industries
- Organize marketing clusters
- Target China as major export market

**Objective 3 - To meet World market standards with respect to quality and consistency of rubber.**

## ***Strategies***

- Level 1 (producer) - strengthen rubber organization re: internal quality control
- Level 2 (trader) - price incentive for good quality cup lumps/ dry rubber
- Level 3 (processor) - a) Upgrade efficiency and economy of existing processing facilities; and b) Establish additional processing facilities to absorb increased production
- Level 4 (manufacturing) - establishment of on-site rubber manufacturing plant
- Implementation of the Philippine National Standards (PNS) for Rubber

Objective 4 - To increase the income of growers and those in the peripheral industries in Rubber by 5-10%/year

## ***Strategies***

- Intensify rubber-based cropping systems research
- Introduce integrated and sustainable farming systems approach



# Projects for immediate implementation

- Control of backdoor marketing of raw rubber
- Implementation of PNS for Rubber
- Establishment of Bud wood gardens and Nurseries
- Accreditation of nurseries
- Credit facilitation-
- R&D





# GANNT Chart

Activities			Y	E	A	R						
	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	5
Intensify rubber-based cropping systems research												
Introduce integrated and sustainable farming systems approach												



# Financial Plan (1<sup>st</sup> 3 years)

## Financial Requirement (PhP M)

Component/ Activity	1st Year			2nd Year			3rd Year		
	Gov't .	LGU	Private	Gov't.	LGU	Private	Gov't.	LGU	Private
Budwood gardens @ P70000/ha	0.7 (10)	0.35 (5)	0.35 (5)	-	-	-	-	-	-
Nurseries	4.0	22.0 (13)	22.0 (13)	2.0	22.0 (13)	22.0 (13)	2.0	22.0 (13)	22.0 (13)
Rehabilitation	3.8	4.2	4.2	3.8	4.2	4.2	3.8	4.2	4.2
Facilitation/ org	0.21	0.21	-	0.21	0.21	-	0.21	0.21	-
Extension	0.5	0.3	-	0.5	0.3	-	0.5	0.3	-
Trade missions	0.5	0.25	0.25	0.5	0.25	0.25	0.5	0.25	0.25
Credit @ P50t/ha	(200)			(200)			(200)		
R&D	1.0	.25	.25	1.0	.25	.25	1.0	.25	.25
PNS	0.2			0.2			0.2		
<b>Totals</b>	<b>10.91</b>	<b>27.56</b>	<b>27.56</b>	<b>8.91</b>	<b>27.56</b>	<b>27.56</b>	<b>8.91</b>	<b>27.56</b>	<b>27.56</b>

# Action Plan

Objective 1 - Increase production by 10%

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE
1. Rehab of existing areas.					
1. Conduct consultation/workshop with stakeholders	3 priority regions (Region 9, 12, ARMM/ Basilan )		P158,400/ Consultation P36,000-(02) P12,000-(29)	Meals LGU  Travel DA	Reg'l. TWG/ Stakeholders  Mindanao- wide TWG
1a. Consolidation of Mindanao-wide output					
2. Site validation/assessment	3 priority regions (Region 9, 12, ARMM/ Basilan )		P316,800- (02)  Two wks validation /region  P56,000 all regions	DA	Reg'l. TWG/ Stakeholders

# Action Plan

Objective 1 - Increase production by 10%

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
3. Planting of New HY Clones	1 per rubber producing municipality	2005		DA/LGU	DA/LGU/ Planters
3a. Establishment of one (1) -ha nursery	Reg 9 <u>37</u>				
	10 __				
	11 __				
	12 __				
	13 __				
	ARMM __	To be filled up by the TWG			
3b. Establishment of one (1) -ha budwood garden	1 per rubber producing municipality				DA/LGU/ Planters
	Reg 9 __				
	10 __				
	11 __				
	12 __				
	13 __				
	ARMM __				

# Action Plan

STRATEGIES/ ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
<p>4. Credit Facilitation 50 has. per region per year</p> <p>4a. Assessment of potential borrowers</p> <p>4b. Link with lending institutions (QUEDANCOR/ LBP)</p>	<p>300 growers annually</p> <p>300 growers annually</p>			<p>QUEDANCOR/ LBP</p>	<p>DA/ACPC/ LGU- Planters (AEWs)</p> <p>DA/LGU/ Planters/ Coops/ Associations</p> <p>MTWG</p>

# Action Plan

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
5. Training on Rubber Mgt.	27,007 Rubber Planters by Region: 9- 10,863 10- 1,526 11- 2,230 12- 7,959 13- 1,851 ARMM- 2,578		P 1,755,455 Breakdown by Region: 9- 706,095 10- 99,190 11- 144,950 12- 517,335 13- 120,315 ARMM- 167,570	DA	Stakeholders/ DA-ATI/LGU

**Regions in red- lower priority**

# Action Plan

STRATEGIES/ ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSI BLE ENTITY
6. Strengthen rubber extension services	Rubber Agri Extn workers by region Reg 9- 37techn 10- 11- 12- 13- ARMM-		Ests: 3 days trng for bark mgt, tapping system n disease control @ P800/day allowance	LGU/DA	LGU/DA/ PHILRUB BER

Regions in red- lower priority

# Action Plan

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
7. Training of trainors					
8. Replanting using High Yielding varieties (To be selected from the 10 recommended var. by PHILRUBBER)	R9-__ha, R10=__ , R11 R12 R13 ARMM / Basilan = __ ha			LBP/ QUEDA NCOR	LGU, Coops/far- mers

Regions in red- lower priority

# Action Plan

Objective 1 - Increase production by 10%

STRATEGIES/ ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSI BLE ENTITY
9. Planting of new areas					
a. Advocacy for the utilization or conversion of marginal rice & corn areas	R9, 37 mun. R12, ARMM (Priority Areas)		P44,500 _____ _____	DA LGU	DA/LGU
b. Training on Rubber / Rubber- based farming systems (integrated w/ the training on tapping/trainors training)	1 per rubber producing municipality in the priority areas R9, R12, ARMM		P120,000 _____	DA LGU	DA-ATI PHILRUB BER/ LGU



# Action Plan

Objective 1 - Increase production by 10%

STRATEGIES/ ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSI BLE
2. Planting of new areas					
a. Conduct consultation/ workshop with potential rubber farmers  a.1 Consolidation of Mindanao-wide output	R9, _____ R12, _____ ARMM _____  3 Regions			Meals LGU Travel DA  DA	Mindanao - wide TWG  Mindanao - wide TWG
b. Site validation / assessment	R9, 37 mun R12, _____ ARMM _____				

# Action Plan

Objective 1 - Increase production by 10%

STRATEGIES/ ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSI BLE ENTITY
2. Planting of new areas					
c. Planting of New HY Clones c.1 Establishment of 1-ha nursery	1 per rubber producing municipality R9, 37 mun R12, _____ ARMM_____			HVCC by Region	LGU
c.2 Establishment of 1-ha Bud wood garden	1 per rubber producing municipality R9, 37 mun R12, _____ ARMM_____				

# Action Plan

Objective 1 - Increase production by 10%

STRATEGIES/ ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSI BLE ENTITY
2. Planting of new areas					
d. Credit Facilitation					LGU-

\_\_\_\_\_ha per region

R9, 37 mun R12, \_\_\_\_\_ ARMM \_\_\_\_\_ R10  
R11  
Caraga R9, 37 mun R12, \_\_\_\_\_ ARMM \_\_\_\_\_  
R10 R11  
Caraga

#### d.1 Assessment of borrowers

**Regions in red- lower priority**

# Action Plan

Increase production by 10%

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
2. Planting of new areas					
d.2 Link with lending institutions (QUEDANCOR / LBP)	R9, 3 ports R10, R11, R12, R13, ___ ARMM___				MW-TWG/ DA/LGU

Regions in red- lower priority

# Action Plan

Objective 1 - Increase production by 10%

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
2. Planting of new areas					
g. Planting using High Yielding varieties (No. of Hectares)	R9, R10, R11, R12, R13, _____ ARMM			LBP QUEDAN COR	PHILRUB BER DA LGU/ Coops

Regions in red- lower priority

# Action Plan

STRATEGIES/ ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
<p>1. Reduce Smuggling of Cup lumps</p> <p>a. Mobilize Customs, Immigration, Quarantine and Security (CIQS) Task Force on control of smuggling rubber cuplumps</p>	<p>Regions with high incidence of rubber smuggling</p> <p>R9, 3 ports R10, R11, R12, R13, ___ ARMM___</p>		<p>R9 P36,000 (02)</p> <p>_____</p> <p>_____</p>	<p>DA</p>	<p>Other Law Enforcement Agencies/ LGU</p> <p>BPI- Quarantine Reg'l TWG</p>

# Action Plan

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
a.1 Orientation on the Rubber program & the need to Prevent rubber cuplumps smuggling	R9, 3 ports R10, R11, R12, R13, ___ ARMM___			DA	Reg'l TWG
a.2 Develop and improve surveillance mechanisms involving shipping companies	R9, 3 ports R10, R11, R12, R13, ___ ARMM___			DA	Reg'l TWG



# Action Plan

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
a.3 provide incentive in the form of <ul style="list-style-type: none"> <li>- Travel</li> <li>- Cash Incentives</li> </ul>	Designated focal person of Regulatory Offices only with S.O R9, 3 ports R10, R11, R12, R13, ___ ARMM___			DA	DA

**Regions in red- lower priority**

# Action Plan

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
b. Improve local buying price of unprocessed rubber (cup lumps)					
b1. Establishment of mobile buying stations/ bagsakan ctrs of major buyers/ processors at production areas.	R9, 37 Mun R10, R11, R12, R13, ___ ARMM___			LGU/ Coop/ Cluster/ Processors	LGU/ Coop/ Cluster/ Processors

**Regions in red- lower priority**

# Action Plan

STRATEGIES/ ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
b2. Expand the adoption of improved quality rubber	R9, 37 Mun R10, R11, R12, R13, ___ ARMM___			Reg'l TWG/ LGU/ Coop/ Cluster	Reg'l TWG/ LGU/ Coop/ Cluster

**Regions in red- lower priority**

# Action Plan

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
2. Strengthen Management Information System (MIS) on Rubber					
<p>a. Strengthen existing system of BAS re MIS</p> <p>a.1. Inclusion of rubber price and other info in the existing monitoring of BAS up to municipal level; &amp;</p> <p>b. designate LGU rubber technician/ farmer-leader as municipal rubber focal person.</p>	<p>R9, 37 Mun R10, R11, R12, R13, ___ ARMM ___</p> <p>R9, 37 Mun R10, R11, R12, R13, ___ ARMM ___</p>			<p>DA</p> <p>LGU</p>	<p>DA-ITCAF BAS RAFID FITS</p> <p>LGU</p>

# Action Plan

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
<p>c. Strengthen media linkage in the dissemination of rubber prices</p> <p>d. Strengthen coordination with DTI re: price monitoring.</p> <p>    d1. Establish price monitoring center at the barangay/ municipal level</p>	<p>R9, 37 Mun</p> <p>R10,</p> <p>R11,</p> <p>R12,</p> <p>R13,</p> <p>ARMM</p>			<p>DA</p> <p>DTI/LGU</p>	<p>DA-ITCAF</p> <p>BAS</p> <p>RAFID</p> <p>FITS</p> <p>DTI/LGU</p>

**Regions in red- lower priority**

# Action Plan

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
<p>e. Creation of a Rubber Information Technology System in the production areas</p> <p>e1. Identify a focal coop or organization located within the market cluster to be the central source of information</p>	<p>R9, 37 Mun  <b>R10,</b>  <b>R11,</b>  R12,  <b>R13,</b>  ARMM</p>			<p>DA-BAR</p> <p>LGU/ Coop/ Cluster</p>	<p>DA-BAR/ DA-ITCAF/ BAS/ RAFID/ FITS Center</p> <p>LGU/ Coop/ Cluster</p>

# Action Plan

Objective 2 - To integrate and strengthen existing markets, and expand to new ones for natural rubber, rubber wood and manufactured products.

STRATEGIES/ ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIB LE ENTITY
<p>e2. Provision of IT facilities to focal coop/ strategic research station</p> <p>e3. Introduce e-commerce or use of Internet for rubber</p> <p>e4. Develop a Mindanao Rubber Industry Web Site</p>	<p>R9 -37 mun</p> <p>R10_____</p> <p>R11_____</p> <p>R12 _____</p> <p>R13_____</p> <p>ARMM__</p>			<p>DA-BAR/ DA/ LGU</p>	<p>DA-BAR/ DA- ITCAF/ BAS/ RAFID/ FITS/ DA/ LGU/ Coops</p>

# Action Plan

Objective 2 - To integrate and strengthen existing markets, and expand to new ones for natural rubber, rubber wood and manufactured products.

STRATEGIES/ ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
3. Improve transport system thru:  3a. Construct/rehabilitation Farm-to-Market Roads	_ km / region R9 - ____ R10 ____ R11 ____ R12 ____ R13 ____ ARMM ____			CDF/ LGU/ Coops	Reg'l. TWG/ LGU Coops

**Regions in red- lower priority**



# Action Plan

STRATEGIES/ ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSI BLE ENTITY
3b. Increase/ improve transportation facilities  3b.1. Credit facilitation	R9 - ____ <b>R10</b> ____ <b>R11</b> ____ R12 ____ <b>R13</b> ____ ARMM__			CDF/ GFIs LGU/ Coops	Reg'l. TWG/ LGU Coops

**Regions in red- lower priority**

# Action Plan

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
<p>4. Develop rubber wood industry (utilization of senile rubber trees)</p> <p>a. Strengthen research in the dev't. of rubber wood by-products and other rubber-related researches.</p> <p>b. Promote/ encourage investors in rubber wood utilization.</p> <p>b1. Techno-demo</p> <p>b2. Fora</p> <p>b3. Trade Fairs</p>	<p>R9 - __</p> <p>R10 __</p> <p>R11 __</p> <p>R12 _</p> <p>R13 __</p> <p>ARMM</p>				<p>Reg'l TWG DTI TESDA LGU Coops</p>

**Regions in red- lower priority**

# Action Plan

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
5. Organize marketing clusters a. Organize small-holder rubber organizations or cooperatives/ associations within market clusters	R9 –37 mun R10 R11 R12 ___ R13 ___ ARMM__				LGU Coops DA-ATI SEC CDA
b. Develop capability thru trainings	R9 –37 mun R10 ___ R11 ___ R12 ___ R13 ___ ARMM__				LGU Coops DA-ATI

**Regions in red- lower priority**

# Action Plan

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
c. Establish market linkages in domestic and foreign markets	Local R9 –37 mun R10____ R11____ R12 ____ R13____ ARMM__			DA-AMAS	DA-AMAD/ LGU/ Stakeholders
	International			Agricultural Attaché	DA-AMAS/ Agricultural Attaché MW-TWG

**Regions in red- lower priority**

# Action Plan

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
6. Target China as export market 6a. Establish business arrangement with Chinese buyers/ investors				DA	DA-AMAS/ Agricultural Attaché/ MTWG

# Action Plan

<b>STRATEGIES / ACTIVITIES</b>	<b>TARGET</b>	<b>SCHEDULE</b>	<b>BUDGET</b>	<b>FUNDING SOURCE</b>	<b>RESPONSIBLE ENTITY</b>
6b. Conduct exploratory reciprocal trade missions to China (in-bound & out-bound)	2			DA	DA-AMAS/ Agricultural Attaché/ MTWG
6c. Forge bilateral agreements	1			DA	DA-AMAS/ Agricultural Attaché/ MTWG

# Action Plan

Objective 3 - To meet World market standard with respect to quality and consistency of rubber.

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
<p>1. Level 1 (Producer)            – Improve internal quality control</p> <p>a. Training on Internal Quality Control with Values Re-orientation</p> <p>a.1. Require new sets of materials used in the tapping up to gathering of harvested latex to collecting stations</p>				<p>DA-ATI/            LGU/            LBP            QUEDAN-COR</p>	<p>DA/            LGU/            ATI/            Coops/            Cluster</p>

# Action Plan

Objective 3 - To meet World market standard with respect to quality and consistency of rubber.

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
a2. Development of quality assurance protocol a3. Credit Facilitation*				LGU/ Coops	Coops/ Cluster

\* *Applies to all levels.*



# Action Plan

Objective 3 - To meet World market standard with respect to quality and consistency of rubber.

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
2. Level 2 (trader) - price incentive for good quality cup lumps/ dry rubber content (DRC)					
<ul style="list-style-type: none"> <li>Require traders to post price bulletin</li> </ul>	R9 -12 Coops R10 _____ R11 _____ R12 _____ R13 _____ ARMM_____			Stakeholders/ LGU/ Coops	LGU DTI DA-AMAD

## Objective 3 - To meet World market standard with respect to quality and consistency of rubber.

# Action Plan

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
3. Level 3 (Processor) – Improve processing facilities a) Upgrade existing bunker fueled processing facilities	Cotabato R9-6 plants R10____ R11____ R12 ____ R13____ ARMM__			LBP/ QUEDA NCOR/ ACEF	Stakeholders / LGU
b) put up additional processing facilities	-Zamboang a Sibugay and Cotabato			LBP/ QUEDA NCOR ACEF	Stakeholders / LGU

# Action Plan

Objective 3 - To meet World market standard with respect to quality and consistency of rubber.

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
<p>4. Level 4 (Manufacturing)</p> <p>- Establishment of on-site rubber manufacturing plant</p>					
<p>a. Establish additional rubber manufacturing plants in strategic areas</p> <p>1. Feasibility Study preparation</p> <p>Boots– Reg. 10</p> <p>Gloves/Tires– Reg. 9</p> <p>Rubber wood– Reg 12</p>	<p>R9-6 plants</p> <p>R10_____</p> <p>R11_____</p> <p>R12_____</p> <p>R13_____</p> <p>ARMM__</p>			<p>LGU/ Coops/ Cluster/ Stakeholders/ GFIs</p>	<p>Stakeholders / LGU</p>

# Action Plan

Objective 3 - To meet World market standard with respect to quality and consistency of rubber.

<b>STRATEGIES / ACTIVITIES</b>	<b>TARGET</b>	<b>SCHEDULE</b>	<b>BUDGET</b>	<b>FUNDING SOURCE</b>	<b>RESPONSIBLE ENTITY</b>
b. Sustain marketing strategies/linkages with producers, buyers and other stakeholders					LGU/ DA/ Stakeholders

# Action Plan

Objective 3 - To meet World market standard with respect to quality and consistency of rubber.

<b>STRATEGIES / ACTIVITIES</b>	<b>TARGET</b>	<b>SCHEDULE</b>	<b>BUDGET</b>	<b>FUNDING SOURCE</b>	<b>RESPONSIBLE ENTITY</b>
5. Strict Implementation of Rubber PNS (quality standard) a. Establishment/ strengthen Municipal/ Provincial/ Regional Boards					

# Action Plan

Objective 3 - To meet World market standard with respect to quality and consistency of rubber.

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
<p>b. Creation of a body with a regulatory function to oversee the rubber industry.</p> <p>b1. Formulate policy direction of the Rubber Industry</p> <p>b2. Represent the Philippines in the World Rubber Organization and other int'l. dev't. boards.</p>					

# Action Plan

smallholders and those in the peripheral industries in Rubber by 10% per year

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
1. Intensify rubber-based cropping systems research and other related researches					
a. Funding for rubber-based farming systems researches b. Manpower dev't. researches c. Create research divisions at the LGU Level.	R9-37 Mun R10 _____ R11 _____ R12 _____ R13 _____ ARMM__			DA/ LGU	DA/ LGU

# Action Plan

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
d. Upgrade research facilities for rubber at Research Stations	R9-37 Mun R10____ R11____ R12 ____ R13____ ARMM__			DA/ LGU	DA/ LGU

**Regions in red- lower priority**



# Action Plan

STRATEGIES / ACTIVITIES	TARGET	SCHEDULE	BUDGET	FUNDING SOURCE	RESPONSIBLE ENTITY
2. Intensify rubber-based cropping systems extension activities					
a. Facilitate the adoption of POTs thru a1. Credit Facilitation a2. Conduct of FFS/ TOT	R9-37 Mun R10____ R11____ R12 ____ R13____ ARMM__			DA/ LGU	DA/ LGU/ Stakeholders

# Action Plan

<b>STRATEGIES / ACTIVITIES</b>	<b>TARGET</b>	<b>SCHEDULE</b>	<b>BUDGET</b>	<b>FUNDING SOURCE</b>	<b>RESPONSIBLE ENTITY</b>
3. Encourage/ promote peripheral enterprises of the industry (e.g. transport, warehousing, etc.)					