CHAPTER 3: MARKET TREND IN FUTURE

3.1 Supply Factors

Key Influencing supply factors for the market trend shall be (A) wood materials or forest resources and (B) wood processing capacity in the country.

a) The main factor will be the supply of the materials, as it is easily understood that if there is No material, then there is no products in anywhere in the world.

FAO issued, at the beginning of the year 2006, "State of the World forest 2005", while the data itself was from the year 2000 – 2002, with the following forestry data of Vietnam, (even though the data need s to be up-dated;)

Table 3.1: Comparison of basic forest data

Item	Vietnam	World
Population (2003)	81 million	6.3 billion
Forest Area (2000)	9,819,000 Ha.	3.8 billion Ha.
Changes of forest Area 1990 – 2000	**+51,000 Ha.**	**−9,391,000 Ha.**
Accumulated wood Volume (2000)	372 million M^3	386 billion M^3
Total wood fuel production (2002)	26 million M^3	18 billion M^3
Total sawn timber production (2002)	2,950,000 M^3	390 million M^3
Total pulp production (2002)	314,000 Tons	184 million Tons

Source: FAO State of World forest 2005

The world population, as well as in Vietnam, is steadily growing, but the area of forest is diminishing day by day, so that in 10 years, there is less forest Area with the size of Vietnam territory.

But each country has been developing and trying to improve the living standards of people. This creates an increase in the demand for wood fuels, construction timber and of pulp for paper making.

The growth of wood resources is far less than the growth of the population. This compares with the situation in the oil industry, where the price of crude oil had jumped 300 to-400 percent in last 5 years, which resulted in a hike of the price of oil related products. As reserves of crude oil are really limited current consumption is not sustainable.

Reference:

Vietnam Population: 8,100,000
Consumption of paper per capita; 20 Kgs (0.02 M/t)/person/year (Assumption)
Vietnam Tttal paper consumption = 81,000,000 X 0.02 M/t = 1,620,000 M/t/year
If consumption of paper per capita increases by 10 Kgs (+0.01 M/t);
1. 810,000 M/t/year of additional paper production facility is necessary.
2. Where are the materials? *supply is Key Factor.*
3. Shortage of paper shall be covered by the import?
Afforestation may be the only SOLUTION.

b) Wood processing capacity for wood products in Vietnam is relatively small scale. There are over 1,200 wood processing factories, which are rather scattered, and the Facilities as well as Technologies are practically out-dated. The production skills are still not high enough, but they have been trying to develop and apply comprehensive processing technologies to use any wood species, to utilize waste products and to diversify the products to meet the demand from domestic and export markets.

Largest production capacity is the followings;

Table 3.2: Annual production capacity for wood product factories

Product	Factory Names	Location	Annual Capacity
Wood chip	Vietnam Japan Chip J/V (Private)	Da Nang	140,000 Bdt[2]
Paper pulp	Vietnam Paper Corp.(State)	Bai Bang	100,000 M/t
Paper	Vietnam Paper Corp.(State)	Bai Bang	100,000 M/t
Particle board	Vietnam Forest Corp.(State)	Thai Nguyen	16,500 M^3
MDF	Vietnam Forest Corp.(State)	Gia Lai	54,000 M^3
Furniture	Viet Giai Co (Private)	Dong Nai	1,200 Containers

Source: Vietnam Paper Corp, Vietnam Forest Corp.

There are a number of factories for producing same product but the above are the biggest in each product industry.

[2] Bdt = Bone Dry M/t

It is known generally that (1) wood chip factory in Australia, paper pulp factory in Indonesia, paper factory in Japan, each with the capacity of over 1,000,000 M/t/year or (2) particle board, MDF in Indonesia/Malaysia, each with the capacity of over 300,000 M^3/year.

So, factories with bigger supply capacities will be required in the very near future.

The followings must be clearly understood;

1) When there is a factory of larger production capacity, there is a background of sufficient supply of the resources to the industry, the wood materials in this case.
2) The scales of production will create and affect economical competitiveness of the products.
3) There is also a competition situation in International trade.
For example, Indonesia, Malaysia or other several countries have started to control the export of raw wood materials and are trying to divert those materials into their own factories for the purpose of up-grading the competitiveness of their products in their export markets, while Vietnam has been importing such materials.

3.2 Demand Factors

Demand Factors are generally consisted of: (a) product Quality, (b) product price, (c) market Volumes, (d) Income level & Consumer Tastes

According to Statistical data from the World Trade Atlas/JETRO, Trading Relations between the countries have been steadily increasing world-wide, which resulted in the growth of markets, and in creating demands, including the demand for wood products.

	Export	Import
EU-15	1.62	1.65
USA	1.23	1.46
Japan	1.47	1.47
China	2.86	2.71
Korea	1.88	1.83
Taiwan	1.53	1.70
Malaysia	1.56	1.50

Table 3.3: Growth in wood product market scales (2005/2001)

As seen on the Table 3-3, both Import and Export of wood products for each country has increased over 1.5 times in the last 5 years.

China has seen large expansion in both domestic consumption and export markets.

There is a market, if suitable products are available to meet the need.

There is a scarcity of competitive timber resources in EU-15, U.S.A and Japan. However there is also a huge demand for wood products in these markets. China and India have the potential to become large volume markets due to the size of their populations.

The following Table 3-4, shows that Vietnam has a high trade deficit due to the high cost of imports, while Table 3-5 indicates an increasing demand for imported wood products and materials. Vietnam has to be very careful

of such Imports;

Table 3.4: Trade balance of Vietnam

Unit: US$ million

Item	2001	2002	2003	2004	2005
Export	15,027	16,706	20,176	26,503	32,441
Import	16,162	19,733	25,226	31,953	36,978
Deficit	-1,135	-3,027	-5,050	-5,450	-4,537

Table 3.5: Trade balance of wood products

Unit: US$ million

Item	2001	2002	2003	2004	2005
Export	335	435	567	1,139	1,562
Import	158	179	273	538	650
Surplus	177	256	294	601	912

Source: General Department of Customs

3.3 Price Factors

Price is the key balancing factor for supply and demand in all sectors of the economy. If the price goes up, there may be more supply or there may be less demand in the market. Further diversification of the economic activities in world trading is closely linked through prices.

1) The wood chip market trend is a good example of price mechanisms

Table 3.6: Wood chip price trend

Table 3.6 and Table 3-7 indicate price trends in the wood chip export business;

The price of wood chip indicated here is based on **CIF price***

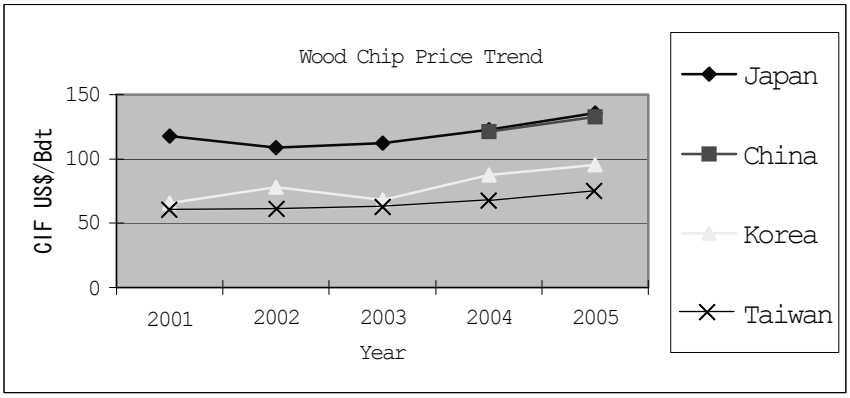


Table 3.7: wood chip price trend 2001 - 2005

Unit: CIF US$/Bdt

	2001	2002	2003	2004	2005
Japan	117.89	108.80	112.09	122.82	135.72
China				121.37	132.58
Korea	65.55	77.78	67.92	87.54	95.12
Taiwan	60.79	60.64	62.38	67.93	75.12

Source: World Trade Atlas/JETRO

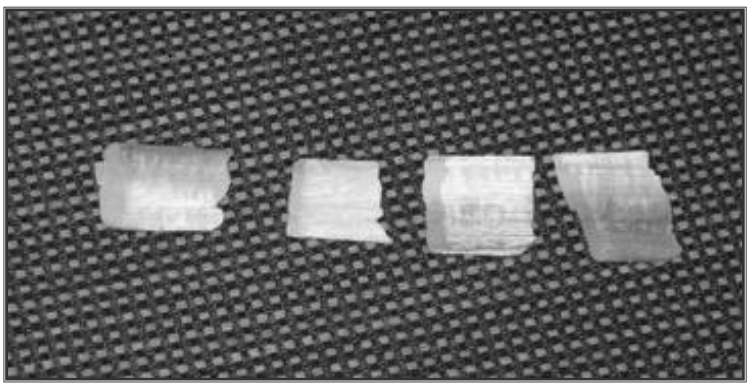
(US$) per Unit of Bdt (Bone Dry M/t). The data was collected by the customs authorities of each country. Export data for wood chip was not yet available in Vietnam. In chapter 1, the full data on the export quantity is shown.. Importing countries are so far limited to Japan, China, Korea and Taiwan.

Reference:

FOB price & CIF price is generally used for International Trades as the Unit price;
FOB = "Free on board" includes product costs + Transport cost + Port Handling cost
CIF = "cost, Insurance and Freight" includes FOB + Marine Insurance + Ocean Freight

2) The following supply and demand factors have influenced the price trend as shown by Tables 3-6 & 3-7 above;

a) There was an economic recession in Japan during 2001 and 2002, so that the demand for wood chip was generally weaker, resulting lower prices.
b) There was some economic recovery from 2003, resulting in a rising price trend.
c) China started buying wood chip from Vietnam in 2004, competing with Japan.
d) The price level in Korea and Taiwan seems strange, as it appears to be too low or cheap.
e) From the Year 2004 – 2005, the price of crude oil increased wood chip supply from Vietnam has been getting tight due to strong demand from China and a world wide scarcity of resources for the supply of wood.
f) In 2006, there was further price Increases due to the demand from China as well as oil-Linked cost Increases, while detailed statistics are not yet available.



The FOB price of wood chip in Vietnam was not clear but was said to be around US$100/Bdt, while it was about US$80/Bdt 2 – 3 years ago. This meant that many wood material suppliers intended to sell wood material to wood chip factories or to construct their own factory to export wood chip.

The net selling price of wood material to such wood chip factories by the forest owners or farmers on standing base is not known. But evidently the price increased more than 20 – 25% in just 1 or 2 years,. This means there is no reason for forest owners or farmers to deliver their timber to other factories unless they have a contract to fulfill

It was not possible to collect clear price data for imported wood products, but it is clear that many local wood processing factories have short supply of raw materials, for the following reasons. (1) The price of local wood material is high and (2) there is a short of the material, but main reason seems to be that the factories are insisting on a low material price, to compete with imported wood products.

As shown on Table 3-2, the scale capacity of wood product factories is generally small, so that there is risk for each factory.

Export of wood chip has marked export volume of over 1.15 million Bdt in 2005, which is nearly 1.9 million (wet) tons of wood material and 100% Acacia and/or Eucalyptus species due to demand from overseas customers.

Many wood processing factories, such as particle board, MDF or even furniture factories are claiming a shortage of raw materials in Vietnam. Those factories cannot be competitive in purchasing power (or purchase price) for wood materials.

Photo No. 3.1 Wood chip factory at paper mill

The materials for wood chip can be converted to raw materials for pulp and paper, as wood chip is a practical material for pulp making. If, or when the factory capacity increases, then the export of wood chip will have an impact on export volumes.

There is a Project with such an Idea.

Photo No.3.2 Wood material can be transported to the paper mill by barges

3.4 Application of New Technologies

To be competitive in open domestic and export markets, under ASEAN or WTO (World Trade Organization), the factories need to have excellent efficiency and/or a fairly large production capacity.

The following can be advantages or problems;

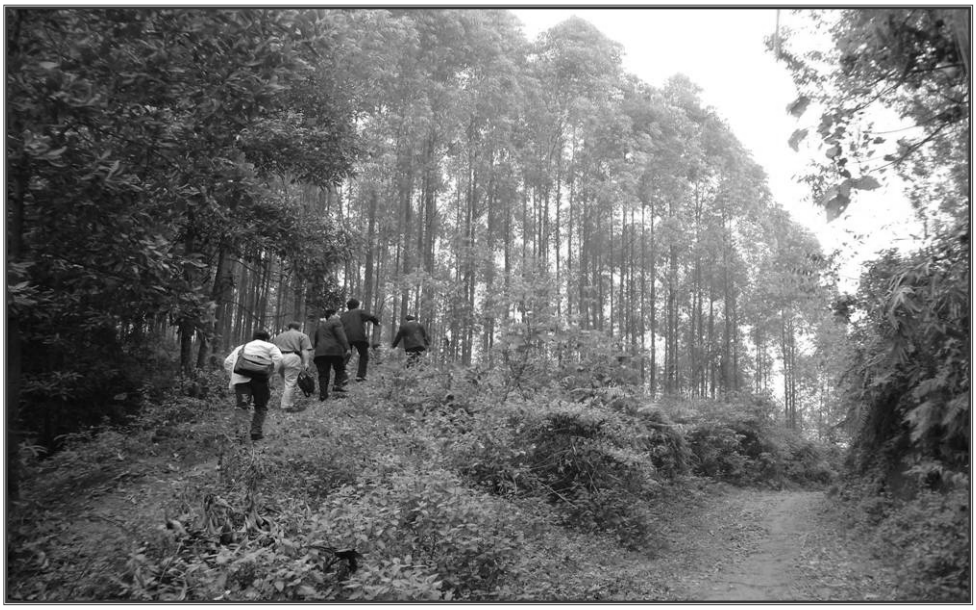
i) To have a larger or bigger production scale, such as a paper factory with a production of 1.0 million Tons/year, or a particle board factory of 500,000 M^3/year. But if and when the materials and investment are available. This is not realistic.

ii) To have sophisticated equipment for production, requiring fewer workers, less energy, and efficient transport system. This may require quite high investment, though it will not be impossible.

iii) To sell the products at higher prices with quality and/or brand names. The sales volume may not be big enough to cover the cost. Only the furniture would be in this category. This will require long and continuous training of workers.

iv) Environmentally friendly afforestation / materials will be one of the solutions for staying alive in the market. However, at present especially in Vietnam Forestry Stewardship (FSC) or other forestry Certification Systems have not yet developed to contribute toward good promotion of products.

Photo No.3.3 Eucalyptus plantation in Yen Bai Province



a) There are other realistic alternatives including the production of glued wood laminates. This process uses smaller timber pieces, pasted together to form larger material for construction or furniture manufacture. This may be a one of the ways to utilize smaller diameter afforestation trees. Many factory owners started to apply this system for their wood products to avoid using imported materials or to obtain smaller size timber, which is comparatively cheaper for the factory.

Photo No. 3.4 (Acacia) Laminated Finger Joint board (Lam Dong)

Reference; Laminated Lumber

Laminated Lumber is produced using glued Finger Joint Sheets, board or Blocks to obtain thicker and durable pieces of Lumber. It is also called Glue Laminated Sheet / board / Block.
With this technology, small diameter trees can be transformed for fabrication of construction timber as well as furniture, which will be suitable for Vietnam.

Photo No. 3.5 Sawn timber (Pine) production (Lam Dong)

As commented on several occasions, in this document the main difficulties for the Vietnamese wood processing industry are as follows:

i)	Factories are generally small with low production volumes.
ii)	Processing technology is rather out-dated.
iii)	Back-up wood resources are rather limited.
iv)	Limited wood resources are distributed to many small factories.
v)	Factories are generally located far from markets.

While application of New Technology requires;

i)	Abundant wood resources
ii)	Sufficient financing arrangement with minimum cost
iii)	Higher minimum skill level and higher pay than the present level
iv)	Appropriate infrastructures for minimizing transportation costs

The investment cost for applying new technology for factories is not cheap, but if there are wood resources available it is easy to attract capital investment.

3.5 Factors for Agro-forestry products

a) Typical agro-forestry products are tea, coffee, fruit and bamboo though the definition of Agro-forestry item is not yet clear..

The following table contains typical examples of Agro-forestry;

Table 3.8: Examples of agro-forestry

	Horizontal layout
	Household multi-layer fruit garden.
	Scattered timber species in meadow
1) Example of Agro-forestry layout	Trees planted along contour lines
	Strips of trees along contour lines
	Strips of trees in naughts and crosses to prevent damage from sand & wind
	Top hill: forest; side hill: industrial trees and perennial fruit trees, and bottom hill: household's garden, fields and pond.
2) Example of Vertical layout	Intercrop shade-tolerant agricultural crops and medicinal plants under the forest canopy.
	Plant pineapples under the canopy of iron wood forest
3) Example of Intercrop by time allocation	Plant coffee under the canopy of timber trees
	Plant cassava under the canopy of first year forest when the canopy has not closed
	Rotation between forest and upland farm cultivation

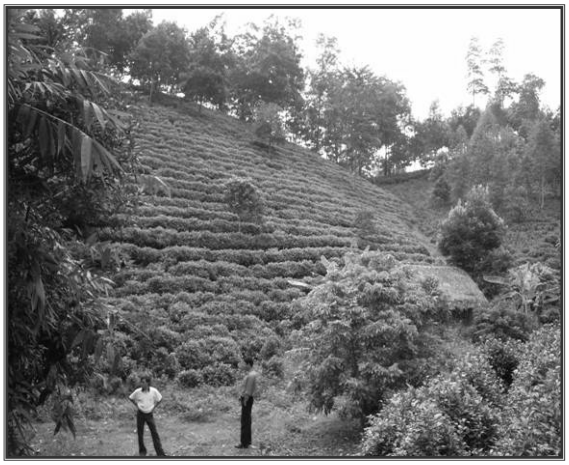


Photo No. 3.6 Agro-forestry (Dai Tu, Thai Nguyen)

Agro-forestry has three main parts;

a) Long Term Timber Trees;
b) Agricultural Species or
c) Animals (Livestock), Shrimp, Honeybees or Fish

When 2 of these 3 products are farmed together having mutual influence on the existence and development of each other, it is called: (i) Agro-forestry, (ii) Animal Husbandry –forestry and (iii) Fishery-forestry.

b) As in Chapter 1 Table 1.17, Table 1.18 and Table 1.19, the scale of the Agro-forestry production or market is not big enough to influence the National Economy. But it does influence people in both city and rural areas by impacting on the income of the Farmers / Producers and on the availability of products for domestic and export markets.

Table 3.9: Export quantity of main agro-forestry products

Unit: 1,000 Dry Tons

Year	Coffee	Tea	Cashew	Other fruit and vegetable
2000	733.9	55.7	34.2	213.1
2001	931.1	67.9	43.6	344.3
2002	722.2	77.0	61.9	221.2
2003	749.4	58.6	82.2	151.5
2004	974.8	99.4	105.1	178.8

Source: Statistical Year Book 2004

Observation of international markets show that coffee is known as Vietnam's main agro-forestry product.

A key issue for agro-forestry will be direct impact it has on the income of farmers. Many agro-forestry products are yearly cash crops. These crops are influenced by the climactic conditions and price changes (Up & Down). These factors will influence income in both domestic and international markets.

Photo No.3.7 Non timber forest products

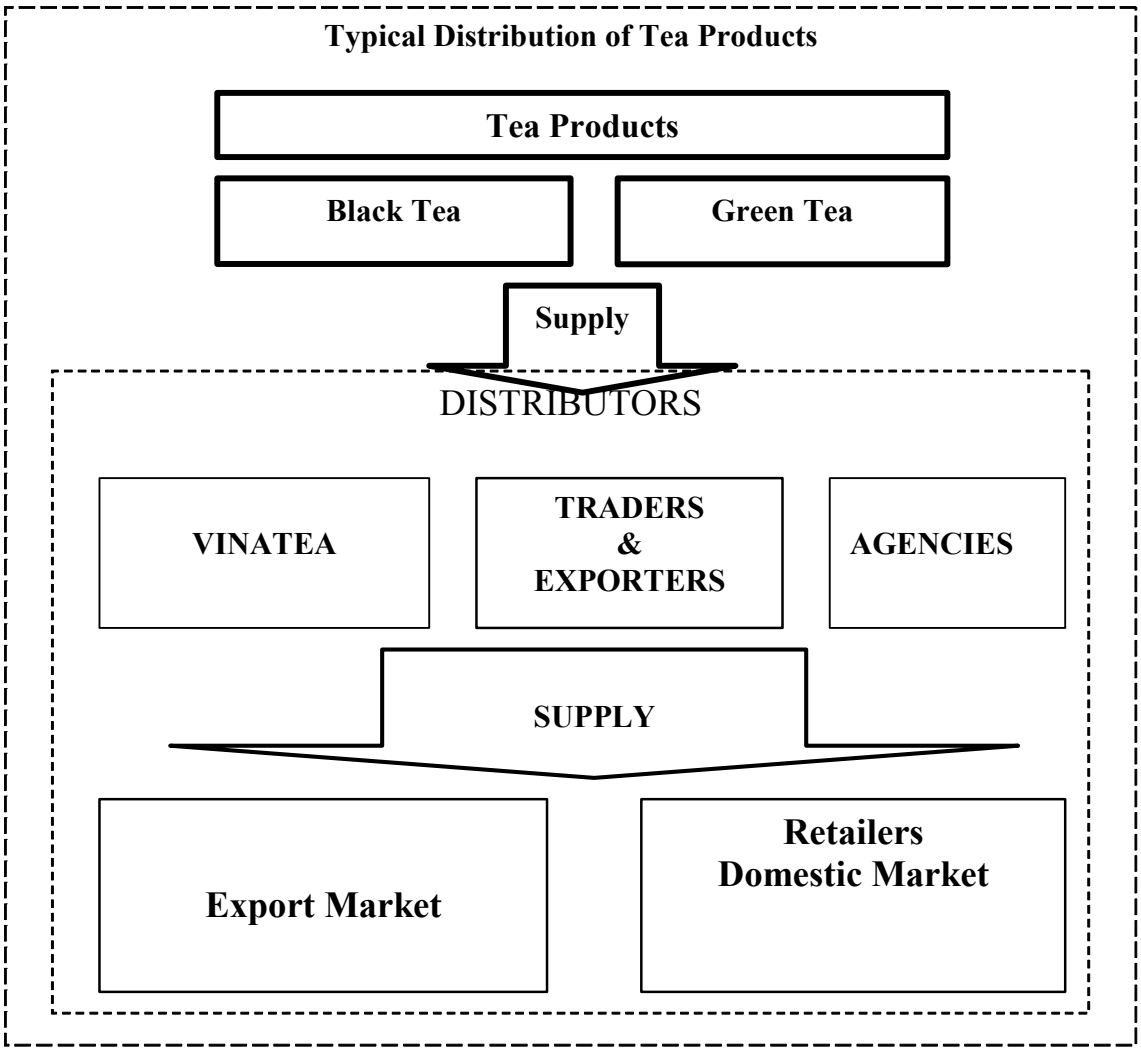
Note: The terms Agro-forestry products and Non timber forest products (NTFP) can clearly be differentiated by the different characteristics of the products.

c) Distribution System

A strong Distribution System is critical for Agro-forestry production as such a system can provide farmers with market information that can help them take protective measures for minimizing losses.

Sales are the key for all production projects. Selecting the types of products and target customers is most important for successful business.

For Example in the Tea industry, VINATEA is actively promoting sales mainly to the Export market,



while agencies and traders focus on local markets.