1 GENERAL ECONOMICAL OVERVIEW

1.1 Key economic indicators

Since the end of 2000 there is a slowdown in world economic growth. This is for a substantial part due to an abrupt end to the high economic growth of the US. While the US GDP growth in 2000 was still at 4,1%, in 2001 it is estimated to decrease to 1½%. For 2002 an acceleration of GDP growth to 2½% is forecasted.

In Europe a decrease in economic growth seems likely. While in 2000 there still was a GDP growth of 3,4%, for 2001 and 2002 the forecast is respectively 1¾% and 2¼%. This recovery of economic growth in 2002 is also depending on the recovery of the US economy.

Both the economic developments and forecasts of the emerging economies have deteriorated as a consequence of the strong dependency on the US economic situation (especially the computer industry). But just like the forecasts for the US, they will probably recover a little in 2002.

Since 1998 the growth of the Dutch economy has been 3,5% or more per year.
As shown in table 1, the Dutch economy also performed relative well in 2000. The economic growth decreased from 3,7% in 1999 to 3,5 % in 2000. After 2000, the expectations about the economic growth declined. The Dutch economy is now estimated to grow by 2% in both 2001 and 2002.

Investments are expected to bring a much smaller contribution to growth than in previous years. The volume of investments is expected to keep rising in 2001 and 2002, but the growth will be less relatively to previous years. Specifically, investment growth is forecasted to decline from 5,4% in 2000 to ¾% in 2001, while recovering in 2002 to 1¼%. The investment quote is forecasted to decline from the historically high level of almost 20% in 2000 to 19% in 2002.

Consumption growth is forecasted to decrease from 3,8% in 2000 to 2¼% in 2001, and recovers partly in 2002 to 3½%. This is due to the tax reforms of 2001.

Table 1
Main indicators of Dutch economic performance

	2000	2001	2002
		% change from last year	
World trade of goods	9,4	3	5¾
Gross Domestic Product	3,5	2	2
Consumption	3,8	2¼	3½
Investment market sector	5,4	¾	1¼
Exports of goods	10,8	3½	5¼
Imports of goods	9,5	4	5¾
Employment	2,4	1¾	¾
Unemployment	3,6	3¼	3¾
Public surplus (EMU-definition, % of GDP)*	2,2	1,2	0,9

Source: Centraal Planbureau, 2001.
* In 2000 inclusive 0.7% GDP profits UMTS-auction

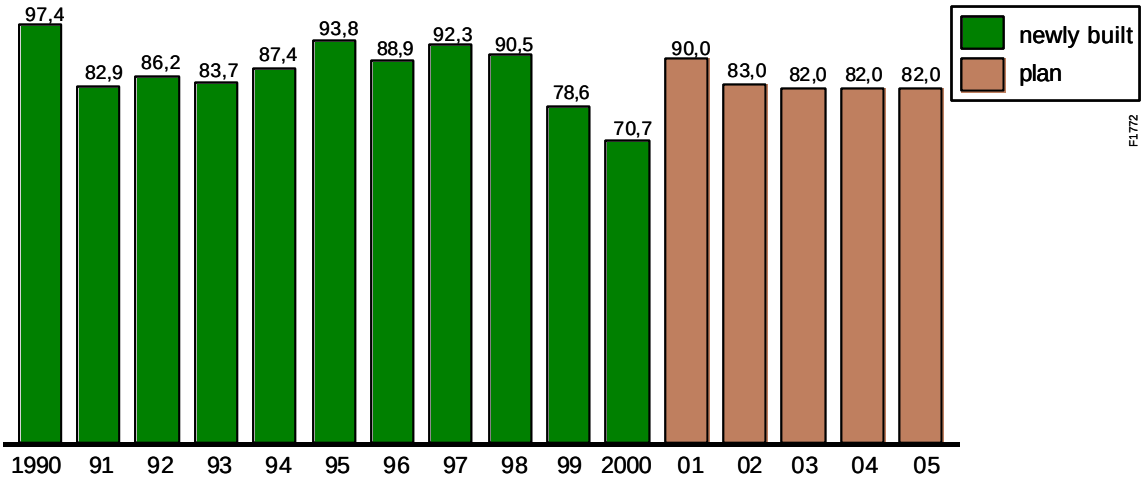
The labour market of the last few years can be characterised by a very strong increase of employment, which was even larger than the strong increase in labour supply. As a result, the unemployment decreased from 7,8% in 1995 to 3,6% in 2000. For 2001 and 2002 a moderate growth of employment of respectively 1¾% and ¾% is forecasted, as a consequence of the recent slowdown in economic growth. The number of new jobs will be lower than in the past years, as it has become more difficult to find new workers and because of the poorer economic environment. Unemployment doesn't change much over the estimated years, from 3,6% in 2000 to 3¼% in 2001 and 3¾% in 2002. The frictions on the labour market are reflected in the increasing growth of the wage rate, from 3,3% in 2000 to 4¼% in 2001. For 2002 the forecast is a 3¾% growth, which is due to the tax reforms of 2001 which are expected to lead to a moderate wage development. The labour market is expected to stay very tense.

In 2001 inflation increased sharply to 4½% (2,6% in 2000), which is in part due to the tax reforms. The causes of the high inflation this year are therefore for the larger part temporarily. For example, the effect of the increased tariff of indirect taxes (part of the tax reforms) will disappear in 2002. The decreasing dollar exchange rate and the poorer economic growth in the world, lead to decreasing import prices in this and next year. The increase of the consumer price index is estimated at 2½% in 2002. The introduction of the euro has no major influence on inflation. Even when the costs are fully accounted for, the effect is estimated at only ¼%-point for 2001.

1.2 Construction

The decrease in housing construction in 1999 and 2000 has several causes which are investigated at the moment. It is expected that in 2001 and further on the activities in the building sector for housing construction will be slightly under the level of the nineties.

Figure 1
Newly built houses and current plan for residential construction in the Netherlands (number of houses built each year, thousands)



Source: CBS, Ministry of Housing, Spatial Planning and Environment

Table 2
Recent developments and prospects of the construction sector in the Netherlands

	1998	1999	2000	2001[1]	02-05[1]
			Annual Percentages Change		
Investment in houses	-0.1	0.9	4.4	2.6	0.7
Of which: new construction	-1.3	-0.3	5.2	2.8	-0.8
repair and renovation	2.3	3.1	2.9	2.2	3.2
Investment in non-residential buildings (public & private)	7.4	10.7	5.0	2.1	-1.3
Investment in civil engineering (public & private)	0.8	9.7	11.4	0.2	1.1
Price change of production carpentry & joinery industries	0.9	1.3	0.75	1.5	
Average mortgage rate new mortgages	5.6	5.1	5.9		

1) Forecast

Source: National Statistics (CBS), Ministry of Housing, Partial Planning and Environment / Centraal Planbureau

2 REVIEW OF DUTCH FORESTRY SECTOR

2.1 Roundwood

In 2000 the removals in the Dutch forests reached the level of 0.88 million m^3 industrial roundwood under bark, about the same quantity of 1999. The Dutch forest industries consumed 1.04 million m^3 roundwood under bark. Of domestic roundwood Poplar is the most important species with about 30% of total volume. Douglas fir, spruce and larch account for about 40%.
In 2000 Dutch exporters of roundwood sold 220.000 m^3 industrial roundwood under bark abroad.

2.2 Pulpwood

Total domestic demand for pulpwood and chips increased 7% in 2000. Both roundwood and chips consumption increased by 13.000 m^3. The input of Dutch roundwood decreased with 8%.

The production of newsprint and to a lesser extent that of folding boxboard, determines the demand on domestic pulpwood. The industry expects a higher consumption (5%) in 2001.

The export of fibrewood for the pulp and paper- and fibreboard and particleboard industry decreased with 10%. About 30% was re-export.

2.3 Paper and board industry

Table 3
Fibre furnish of the Dutch paper and board industries

	1995	1996	1997	1998	1999	2000
	1000 m^3 roundwood equivalents under bark					
Roundwood	167	143	144	157	160	171
Chips	138	106	110	130	135	137
Market pulp	2,602	3,101	3,401	3,411	3,127	2,658
Recovered paper	6,886	6,845	7,478	7,365	7,719	7,846
Total fibre input	9,793	10,195	11,133	11,063	11,141	10,812

Source: SBH, VNP

With a growth rate of 4.1 percent 2000 was a good year for the Dutch economy, described in some circles as showing an industrial comeback with production growth at 4.5 percent. Consumer prices, the most important inflation indicator, increased by 2.6 percent.

At 2.4 percent the increase in sales in the Dutch paper and board industry in 2000 was considerably lower than the national average. The growth rate was similar to that in 1999. While in 1999 the turnover lagged behind sales, in 2000 the situation was reversed. Under pressure from the major increase in raw material prices which began in 1999, in 2000 both average price levels and turnover increased by 14 an 17 percent respectively. As a result of these price rises, average prices in 2000, in absolute terms, are back at the same level as they were in 1989. More expensive raw materials and the devaluation of the euro to the dollar have severaly squeezed the margins of the Dutch business.

In the year 2000 raw material price rises and further internationalization of the market have dictated the climate in the sector. Many companies were unable to pass-on the rapid price rises in their sale prices. The outlook foor 2001 is overshadowed by the fall back in the United States' economy. What effect this will have will only become clear during the course of this year.

The development in the Dutch paper and board industry is given in table 4.

Table 4
Recent developments of the Dutch paper and board industries

	1995	1996	1997	1998	1999	2000
	Annual Percentages Change					
Production:						
Thermo-mechanical pulp (integrated)	24.2	-19.1	9.6	-8.8	11.0	16.0
Newsprint	16.2	-6.3	10.4	-7.0	8.0	10.0
(Other) graphic papers	-9.3	2.7	4.9	0.0	2.0	3.0
Case materials	-0.8	5.1	2.8	2.0	8.0	0.0
Wrappings upto 150 gsm	-12.0	7.1	11.6	-3.0	17.0	-8.0
Folding boxboard and other paper & Board for packaging	1.0	-1.4	6.9	4.0	2.0	2.0
Sanitary & household	-3.7	-1.3	6.1	0.0	14.0	-8.0
Total paper & board	-1.4	0.7	5.7	1.0	2.0	2.0
(Turnover (million NLG))	(4,344)	(3,843)	(4,117)	(4,238)	(4,320)	(5,068)
Price change of production of paper and board industries	12.7	-5.5	-1.25	2.75	n.a.	n.a.

Source: VNP

2.4 Sawn wood market

Softwood

In 2000 the growth of the Dutch economy continued, with positive effects on the import and consumption of sawn softwood. In 2001 however it gradually became clear that the long period of brisk economic growth was coming to an end. This slowdown also has effect on the building industry and the consumption of sawn softwood.

Table 5
Key facts of the Dutch sawn softwood market

	1995	1996	1997	1998	1999	2000	2001[1]
	x 1000 m^3 under bark						
Domestic Production	200	186	223	196	203	247	200
Net Imports	2323	2413	2413	2658	2629	2770	2675
Stock Change	-46	-50	-50	25	-68	-25	+25
Apparent Consumption	2569	2649	2686	2829	2900	3042	2850

1 Forecast
Sources: National Statistics (CBS) / Netherlands's Timber Trade Association (VVNH)

Hardwood

In 2000 the imports and consumption of sawn hardwood increased once again substantial. The consumption has increased with 25% in two years time.
The number of sawmills has been going down for years. There are several reasons for this decrease. The profits are small, lack of successors, increasing environmental restrictions etc. Mostly small-scaled sawmills are disappearing, the remaining sawmills taking over the market gap with as a result an increase in scale.

Table 6
Key facts of the Dutch sawn hardwood market

	1995	1996	1997	1998	1999	2000
	x 1,000 m^3 under bark					
Domestic Production	227	176	178	153	159	143
of which tropical	49	41	40	40	45	40
Net Imports	497	503	465	468	542	634
of which tropical	330	330	346	276	315	405
Apparent Consumption	724	679	643	621	701	777
of which tropical	379	371	386	316	360	445

Sources: SBH, National Statistics (CBS)

2.5 Dutch legislation and the wood market

Ban on use and import of wood treated with copper compounds.
On August 2 2001 the Minister of Housing, Spatial planning and Environment published officially the Draft-Decree for wood treated with copper based preservatives. Earlier this year in June this draft was notified by the Dutch authorities in Brussels.

The new draft-decree is more drastic than former proposals. This decree aims at banning the imports, trade and use of wood treated with copper based preservatives in the Netherlands. Producers of preserved wood should keep administration to prove that their products are not used in The Netherlands.

The total Dutch consumption of preserved wood is estimated 700.000 m3. About 350.000 m3 is domestic production and treated with copper based preservatives. The greater part is put on the Dutch market. A complete ban of preserved wood has great impacts on the production and also for the applications in the building industry, the construction of a wide range of garden products and for civil engineering.

The government presents four alternatives for the use of preserved wood: hardwood and softwood species without preservation, other less hazardous biocides, non-biocide preservation and the use of non wood materials. The industry has stated repeatedly that these alternatives are not available or not a real option.

The Dutch wood and trade industry places all their hope now in a rejection by the European Commission, because of the decree constitutes a barrier to trade.

Act on mandatory labelling of all forest products

A second development in The Netherlands which impacts the market for wooden products is the Act on mandatory labelling of all forest products. This draft legislation of the Dutch Parliament on 'red and green labelling' of timber and paper products sold in the Netherlands is reaching her final discussion. Since last year this draft is under discussion of The Upper House of Dutch Parliament. In April this year The Upper House received the Memory of Reply in which the initiator of the law answered all the questions and remarks earlier made by the members of the Upper House Commission for Spatial planning and Environment. Then the Upper House asked the government to give her stand of view on the draft bill, specifically in relation with the negative reactions earlier given by the European Commission. Mid September there is still no reply of the cabinet. The Upper House is waiting, but has the intention to come to a definite treatment in 2001.

3 RENEWABLES IN HOLLAND

General policy on bio-energy in the Netherlands

As a result of the Kyoto agreement the Dutch policy focus on a reduction in CO_2 emissions of 50 mln ton in 2012 of which 25 mln ton reduction in the domestic market. The reduction aim for the energy industry is 6 mln ton CO_2. Therefore a covenant has been closed between the Dutch government and the coal firing energy companies: the Coal Covenant. The aim of this covenant on renewable energy production is the input of 3 mln tons of solid biomass in the future.

Present use of biomass as renewable energy source

At this moment large scale bio energy conversion systems for co-firing for 132 MWe and 83 MWth is under construction or in operation and the total amount of biomass conversion is about 620.000 tons of biomass. The biomass streams for this large scale conversion is dryed sludge (about 130.000 tons, paper waste and sludge (120.000 tons) and waste wood (370.000 tons).

Small scale wood combustion systems have a total power and heat production of about 10 MWe and 45 MWth and is using about 100.000 tons of biomass yearly, mostly demolition wood.

Based on fresh wood from forest and park maintenance two conversion systems produce at the moment 26,1 MWe power and 6,5 MWth heat and use about 310.000 tons of biomass annually.

In total 1 mln ton of biomass is used for the production of electricity and heat. To reach an extra biomass energy input of 2 mln tons/yr further development of biomass conversion systems is highly needed.

Potential woody biomass for RES in the Netherlands

Biomass from forestry.

In the Netherlands 8% of the area or .34 mln ha is covered with forest. Annual forest growth is 2.2 mln m^3 and the harvest is about 1.4 mln m^3. In potential 0.8 mln m^3 wood/yr is available for bio energy purposes. A realistic approach will result in 400-600.000 m3 wood/yr from forestry.

Biomass from waste and rest wood.

A yearly amount of 1 mln m3 waste wood is available on the market, of which 370.000 ton is already been used by the energy companies. 500.000 tons of demolition wood is being exported every year for energy production in Sweden and for particle board production in Italy, Germany and Belgium. 140.000 tons is used in the Netherlands as raw material for wood based press products.
Except from the export volumes of 500.000 tons of waste wood, no more waste wood is available for energy purposes.

600.000 tons of rest wood from timber industry is used as highly qualified product in the poultry, pig and horse stables and is not available for bio energy.

Conclusion for the woody bio energy market in the Netherlands

At this moment a total amount of about 1 mln tons of biomass is yearly used for renewable energy sources in the Netherlands. The coal covenant ends up with 620.000 tons where the aim is 3 mln tons of biomass input. The extra availability of woody biomass for large scale energy production is estimated at 0.4 mln tons wood from forestry and 0.5 mln tons which is now exported for particle board and energy production. For implementation of the long term goal of 3 mln tons of biomass for renewable energy source a large import of biomass specific wood is needed.