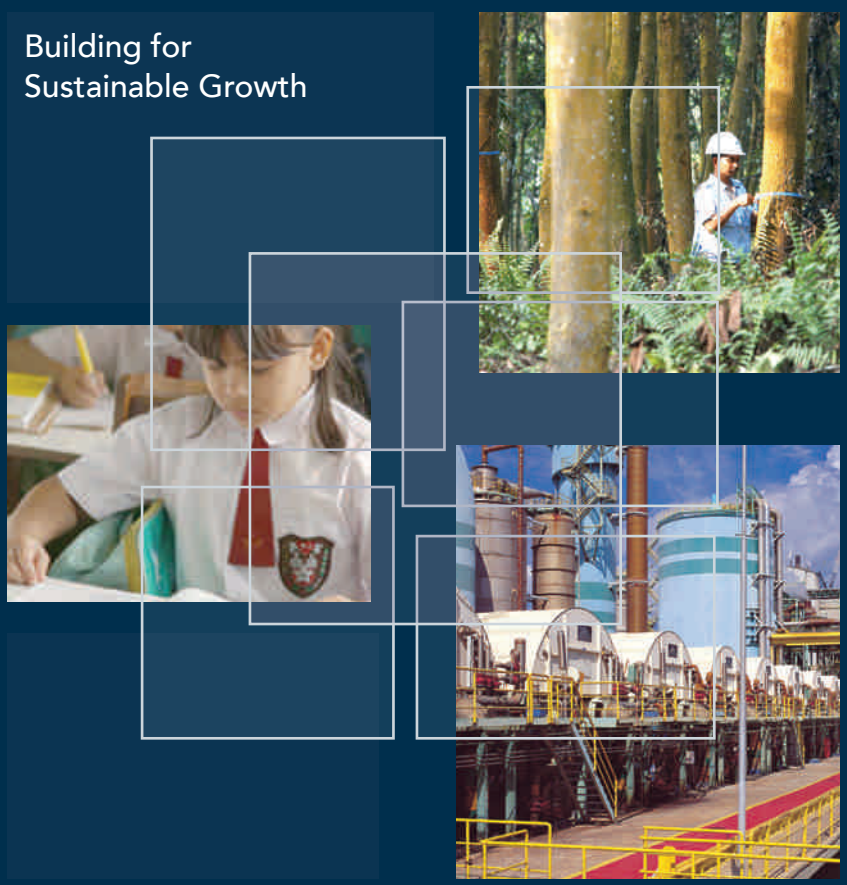
APRIL

2002 Sustainability Report

Building for Sustainable Growth



2002 Sustainability Report

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APRIL's Invitation

APRIL (Asia Pacific Resources International Holdings Limited) is one of the world's leading manufacturers of pulp and paper with major operations in Indonesia, a stationery plant in China and a corporate office in Singapore.

In 2002 we produced approximately 1.74 million tonnes of hardwood pulp and 295,000 tonnes of paper.

This is the first time we have produced a Sustainability Report. It follows the framework outlined by the Global Reporting Initiative and documents what we have done, and are doing, to meet our social and environmental responsibilities.

We invite you to read this Report and give us any feedback you may have. We welcome constructive dialogue and operate an open door policy whereby interested people may visit our facilities and see how we operate.

Bureau Veritas has reviewed and assessed the reliability of selected environmental, social and related information and associated performance data included in the Report and has provided a level of assurance commensurate with the accuracy of information and/or the efficacy of systems deployed in the collection and compilation of such information. Please refer to page 60 for the full report.

APRIL Vision for a Sustainable Future

Our vision is to be one of the largest, best managed, most profitable and sustainable pulp and paper companies in the world, and be a preferred supplier to our customers and the preferred company to our people.

President's Statement

This is our first Sustainability Report and, I believe, marks a significant public commitment to the responsible management of the environment in which we operate. Our belief in sustainability has evolved over a number of years. It concerns our intention to conduct legitimate commercial operations in a sustainable manner in a part of the world that contains areas of potential environmental concern as well as local concentrations of socio-economic deprivation. Our commitment therefore goes beyond concern for the physical environment and requires the insistent need for our resources also to enhance the education, skills and employment opportunities within our communities.

Our Challenge

Our commitment has already been turned into practices and systems that meet external quality standards to an extent. While this Report, therefore, is an honest summary of our challenges and of our achievements, it has also provided an opportunity to discuss the changes and improvements we need to make.

In order to continue to invest in the future, our main concern now is to use socially and environmentally responsible management practices to maintain and grow our successful business. We believe this is the most efficient way of managing risk and of addressing the concerns

of our employees, customers, suppliers, shareholders and the wider community. We are therefore prepared to admit our faults and talk about our operations openly. Anyone may come and see how we run our business.

With this Report, we state the main issues raised by our critics. In the past year, we have had more face to face meetings with our stakeholders than ever before. For the most part, we feel we are already addressing many of their concerns in a positive and proactive manner. However, we still have a lot to do and in this task we view external criticism as a way of testing and improving our procedures.

As a company we feel privileged to be operating in a part of the world that has so many unique characteristics. Sumatra does not simply contain one of the most diverse ecosystems on earth. In Riau province, where our plantations are located, it is also home to some 5 million people representing the spread of cultures and backgrounds that make up modern Indonesia. Our presence has attracted many thousands to move to the villages and towns in the vicinity of our operations area and we carry an obligation to help them contribute to society and grow individually.

Our Approach to Reporting

We intend to publish a Sustainability Report regularly and will refine the content as we review what works best. We plan that each report should be a snapshot in time with our CSR Updates providing quarterly updates of our environmental and social performance.

In its structure we have followed the framework provided by the Global Reporting Initiative for the social and environmental aspects of our operations where this has been possible, and have indicated where we know we fall short. Many of the performance measures we include coincide with those recommended in the GRI.

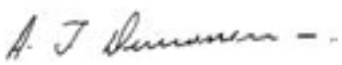
The GRI suggests that a sustainability report should stand up to external verification. As an illustration of our commitment to corporate transparency we have adopted this suggestion and selected Bureau Veritas to be our verifiers. Bureau Veritas (BV) is a highly respected, international quality and certification organization, with which we have had no previous business dealings. The results of their verification process can be found in the Assurance Statement towards the back of the Report.

Appreciation of Our People

The fact that we have been able to publish this Report is almost wholly due to the commitment of our people. We have become one of the leaders in our industry through their efforts. As we identify the need for more far-reaching sustainable business practices, and to embed new ways of thinking and working, the active involvement of our people will be crucial. I will be looking to our employees to be honest about our failings as well as ready to celebrate our successes.

Our Commitment

I personally am committed to the concept of sustainability and see it as one of my objectives to help APRIL achieve its vision by employing the appropriate principles. At the same time this is a challenge which can be more easily met with the involvement of all those with an interest in our activities. If this Report is seen only as a communications exercise it has failed. I see it as a step in the process of corporate transparency, constructive dialogue and continuous improvement in which I urge you to participate.



A J Devanesan

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About This Report

We have previously reported on our environmental and social impacts (see APRIL's Environmental Review, 1999; Nurture: APRIL's Environmental & Social Review 2000-2001; CSR Updates 2002-2003) but not within the framework of any external guidelines. This report focuses on APRIL's operations in Indonesia, where the bulk of our business activities are and where we have the most direct contact with the community and environment. In this Report we outline the challenges we face and our successes or lack thereof, to date, in addressing them. The report follows the framework outlined by the Global Reporting Initiative and is presented in the spirit of our open door policy of engagement with our stakeholders. We have invited Bureau Veritas to verify our environmental and social performance as stated in the Report.

United Nation's Definition of Sustainability

In 1987, the UN's World Commission on Environment and Development produced the Brundtland Report which defined sustainability as: "Development that meets the needs of the present generation without compromising the ability of future generations to meet their needs."

The Meaning of Sustainability

We recognize that the manner in which we manage our business impacts upon the physical environment, and the social and economic fabric of the communities in which we operate.

By employing socially and environmentally responsible management practices, it is our wish to generate a positive impact in overall terms. We actively use our people and resources to enhance the skills and opportunities of those affected both directly and indirectly by our operations. And we have developed environmental programs to help us achieve our aim of physical sustainability.

We believe our approach is the most efficient and effective way of managing environmental and business risk and of addressing the concerns of our employees, customers, suppliers, shareholders and the wider community, both now and in the future.

Therefore, our vision is:
"To be one of the largest, best managed, most profitable and sustainable pulp and paper companies in the world, and be a preferred supplier to our customers and the preferred company to our people."

The Global Reporting Initiative Sustainability Reporting Guidelines

This Report follows the general framework outlined in the GRI Guidelines. The GRI Guidelines are a voluntary framework for reporting on an organization's economic, environmental and social performance.

The Guidelines:

- Guide the preparation of organization-level sustainability reports
- Support benchmarking and assessment of sustainability performance with respect to codes, performance standards and voluntary initiatives
- Contribute to ongoing stakeholder dialogue

Performance Indicators

Performance indicators are measures of the impact or effect of the reporting organization, divided into integrated economic, environmental and social performance indicators. In this Report we have included data that accord with the Guidelines where we already have a collation process in place. We will address more of the GRI hierarchy of indicators during the coming year and may select our own to more fully cover our industry.

GRI Hierarchy of Indicators

Category		Aspect
Economic	Direct economic impacts	Customers/Suppliers/Employees Providers of capital/Public sector
Environmental	Environmental	Materials/Energy/Water; Biodiversity Emissions, effluent and waste Suppliers/Products; Transport
Social	Labor practices and decent work	Employment/Labor relations Health and safety; Training and education Diversity and opportunity
	Human rights	Strategy and management Non-discrimination/Freedom of association/ collective bargaining Forced labor/Disciplinary practices Security practices/Indigenous rights
	Society	Community ; Bribery and corruption/Political contributions. Competition and pricing
	Product responsibility	Products

You can find out more about the GRI at www.globalreporting.org

Our Stakeholders

By the very nature of our operations, we have a sphere of influence and impact that extends considerably further than our geographical presence. Equally, those that have an interest in or could in some way affect how we pursue our commercial aims have international reach. This stakeholder map is meant to do no more than illustrate that we understand the wide ranging nature of the views we need to take into account.

Engagement with Stakeholders

We are committed to ongoing dialogue and engagement with our stakeholders. We have departments dedicated to managing relations with the community and local NGOs, and with our customers. In the case of the local community we have devised programs and initiatives in direct response to issues raised during consultation. We have also conducted a detailed community survey within the past six months (see page 46).

Our consultation process involves discussing operations with suppliers, contractors and partners. These discussions range from day-to-day business planning to safety and environmental issues. We also regularly conduct employee surveys (see page 52).

Over the past two years we have held a number of meetings with local and international NGOs. In November 2002, a series of meetings and discussions took place in Washington DC and New York with nearly 50 representatives of 17 international NGOs and multi-lateral organizations, the majority for the first time. While many of the groups expressed concern about the adverse impacts of some forestry practices in Indonesia on the environment and society, there was some, albeit limited, recognition that we are taking positive steps.

We have indicated in our Sustainability Report where stakeholders have raised particular concerns with us. These meetings were not part of a formal dialogue process but we will consider following this course in the future.

Figures Used in this Report

All figures used in this report are accurate as of the end of December, 2002 except where otherwise indicated. These figures may vary from earlier published data due to variances in data collection as information became available.

Report Verification

The GRI states:
Reported data and information should be recorded, compiled, analyzed and disclosed in a way that would enable internal auditors or external assurance providers to attest to its reliability.

We felt it important that we subject our Report to external assurance to give our stakeholders confidence in our commitment, and to highlight to ourselves where changes are required.

Bureau Veritas (BV) undertook the verification of our Report.

Bureau Veritas is a service company specializing in QHSE management (quality, health & safety and environment) and social accountability, with a network that covers 140 countries and includes 550 offices and laboratories. Bureau Veritas offers an extensive range of technical services and solutions in the fields of certification, conformity assessment, consulting and training. With 13,000 employees, Bureau Veritas serves more than 200,000 customers from numerous different industries across the world, from small local companies to major multinational corporations. Bureau Veritas is recognized and accredited by the world's largest national and international organizations.

Bureau Veritas has no significant commercial or other relationship with APRIL except third party assurance services for its sustainability reporting.

You can find out more about BV at www.bureauveritas.com

Bureau Veritas' Assurance Statement can be found on page 60.

2 Corporate Profile

APRIL (Asia Pacific Resources International Holdings Limited) is one of the world's leading manufacturers of pulp and paper with major operations in Indonesia, a stationery plant in China and a corporate office in Singapore. APRIL's financial statements are produced and audited annually.

Sukanto Tanoto

APRIL Group

The APRIL Group comprises:
PT Riau Andalan Pulp & Paper (Riaupulp) which operates a pulp mill with a design capacity of 2 million tonnes per year on a 1,750 hectare site near Kerinci in Riau Province in Central Sumatra, Indonesia. APRIL has a 98.5% share in Riaupulp.

Riaupulp began commercial operations in early 1995. It now runs one of the largest pulp mills in the world. Our fiber supply comes primarily from government-granted concessions in Riau.

PT. Riau Andalan Kertas (Riaupaper) which operates a 350,000 tonnes per year uncoated wood-free paper machine. Riaupaper is owned 99.8% by a subsidiary of APRIL Fine Paper, which is 100% owned by APRIL.

APRIL subsidiaries include a stationery manufacturing plant in Suzhou near Shanghai in China.

Asia Pacific Enterprises Ltd. (APEL) and APRIL Fine Paper Trading Ltd. (AFPT), both 100% owned by APRIL, market the Group's pulp products and paper products, respectively.

APRIL's Management Team

Board of Directors

Sukanto Tanoto has been Chairman and a Director of the company since its formation. Mr. Tanoto served as Chief Executive Officer of the company from its creation until March 1996 and from September 1997 to the present.

Ian W. Spence has been a Director of the company since its formation. Mr. Spence is a chartered accountant with over 30 years experience in finance and general management. Mr. Spence, as an independent Director, acts as Chairman of the Audit Committee.

Dr. Per R. Haugen has been a Director of the company since 1997. He has worked in the pulp and paper industry for over 30 years and received his Masters of Science from the University of Maine and his PhD from the University of Manchester.

Professor Albert Widjaja is a Professor of Graduate Studies of Management, University of Indonesia, Jakarta, serving as Head of Department of Multinational Management. Prof. Widjaja holds an MBA from the University of Cincinnati, Ohio; and a PhD from Claremont University, California. As an independent Director, Prof. Widjaja sits in the Audit Committee.

A. J. Devanesan joined APRIL in September 2001 as President and Chief Operating Officer. He is responsible for realizing the company's vision to be one of the largest, best managed, most profitable and sustainable companies in the pulp and paper industry, and to make APRIL the preferred supplier and company for its employees. Mr. Devanesan also manages APRIL's multicultural workforce of around 11,000 people from 20 countries.

He has over 10 years of experience in building and managing the operations of pulp and paper mills. Mr. Devanesan holds a Bachelor of Technology in Chemical Engineering from the Indian Institute of Technology (1982) and he is a Fellow of the Wharton Business School, University of Pennsylvania (2001).

Executive Officers

A.J. Devanesan, President and COO (See Board of Directors)

Bonar Usanto joined as Chief Finance Officer of APRIL in January 2002, based in Jakarta. He has held various senior management positions within RGMI and various subsidiaries of the company.

Dennis Lim is Vice President, Sales & Marketing. He was Group Materials & Logistics Controller for the RGM Group before taking over the commercial functions of APRIL. He is responsible for marketing & sales of pulp & paper and for logistics strategies.

Heikki Hassi joined APRIL in May 2002 as Vice President, Operations. He has responsibility for the efficient operation of our pulp and paper mills in Indonesia and for organizational building to develop a world-class operations team. He has a PhD from University of North Carolina, Raleigh, and a Masters of Science degree from Helsinki University of Technology.

Esko Jantunen was appointed Vice President, Technical Services in March 2003. He has a Masters of Science degree in Engineering Pulp and Paper technology from the Helsinki University of Technology. He has worked in paper mills in Finland and around the globe as well as acting as a consultant to the industry.

Mark Werren is Vice President, Forestry. He joined APRIL in January 2003 bringing with him 23 years of experience in international forestry in Europe, Africa and Asia. Mr. Werren has a Masters in Forestry from the University of Helsinki and a first degree in Forestry from the University of Aberdeen.

Susilo Soputro is Vice President, Corporate Services. Mr. Soputro joined APRIL in March 2000 and is responsible for Human Resources, Community Development, Social Security-Licensing, Infrastructure Facilities and Projects. He has a degree in Civil Engineering from Bandung Institute of Technology.

Ibrahim Hasan joined APRIL in November 2001 as Vice President, Corporate Affairs, based in Jakarta. He has an Electrical Engineering degree from Massachusetts Institute of Technology (MIT) and a PhD in Economics from University of California, Berkeley. He has worked in the agriculture industry in Indonesia, Malaysia, Vietnam, and Australia for the past 21 years.

A. J. Devanesan

Bonar Usanto

Dennis Lim

Heikki Hassi

Esko Jantunen

Mark Werren

Susilo Soputro

Ibrahim Hasan

Key Operational Officers

Kadiman Mansoer, Sales and Marketing Director of APRIL, has helped establish a global sales distribution network for the company. He is responsible for all pulp sales and marketing activities in international markets. He has a Masters degree in Industrial Management and Technology and an Electrical Engineering degree.

Gus Choo, Sales and Marketing Director of APRIL Fine Paper Trading, has been with the company since 1999. He leads and manages APRIL's paper sales and marketing teams worldwide. He holds an MBA from the University of Toronto, Canada and earned his Business Administration degree from the University of Oregon, USA.

Widjaya Jiemy is President Director of Riaupaper, a position he has held since 1999. He majored in Applied Chemical Engineering with a minor in Business and Economics at Queen's University in Canada. He had additional training at the Papeteries de Mauduit in France.

Raymond F. Walsh, Pulp Operation Manager, brings with him 40 years of experience in the industry. He joined APRIL in September 1995 and has since been directly involved in many aspects of the company from engineering to mill optimization programs and mill operations. He is a graduate of Front William Collegiate in Ontario, Canada.

Ir. Faulin Batubara is General Manager, Social Security & Licensing, and has been with the company since 1995. He has held this position since last year and prior to that, he was the GAL Manager of Forestry for the company.

Rosman is General Manager, Forestry. His responsibilities include the development of joint operations, HTR and the plantation. He has been with the company for about 15 years. Rosman holds a Mechanical Engineering degree from the University of Atmajaya in Jakarta, Indonesia.

Kenneth G. MacDicken, Director for Forestry Research and Development, oversees the operations of the department. He has been working in tropical forestry research and development for about 28 years for both private and government sectors. He holds a PhD (Forestry) from the University of British Columbia and a Masters degree in Agronomy and Soils from the University of Hawaii.

Roland Offrell, Director, Environmental Affairs, joined APRIL in 2001 and is responsible for environmental affairs and international stakeholder engagement. He has Masters degree in Forestry from the Swedish University of Agricultural Science and is a certified lead auditor for ISO 14001 and forest certification.

Corporate Governance

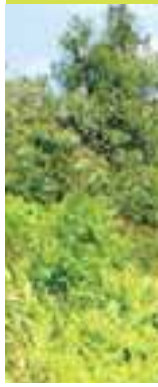
The Executive Management team has responsibility for the development of APRIL's corporate vision, policies and operational activities. The President and Chief Operating Officer, A. J. Devanesan, has taken personal responsibility of the company's commitment to sustainability. At present, APRIL's approach to corporate governance does not claim to follow any externally developed codes. This matter may be considered in the future.

With regard to financial governance, the Audit Committee is responsible to the Board of Directors. Each year full financial statements are prepared and independently audited and included in the Annual Report which is available to shareholders.

Our Markets

APRIL exports its products to markets around the world.

APRIL's primary market is the Asia Pacific region, although both pulp and paper are sold in Europe and USA. In 2002 the annual world production of market hardwood pulp totalled around 18 million tonnes. We produce approximately 1.5 million tonnes of market hardwood pulp annually, representing just over 9% of the global market.



Pulp

The largest market for APRIL pulp is Asia, accounting for two thirds of the total annual output. China is the biggest single market, followed by Korea, Taiwan, India and Japan. Two-thirds of Indonesian paper mills use APRIL pulp, a decision reflecting APRIL's ability to supply high quality pulp to time, to required quantity and to price. Europe currently accounts for 13% of APRIL's pulp output but this is expected to increase with the growing percentage of 100% Acacia plantation pulp in APRIL's overall pulp production.

In 2002, 435,867 tonnes of acacia pulp and 1,303,317 tonnes of mixed hardwood pulp were produced, giving a total production of 1,739,184 tonnes of pulp.

Paper

APRIL produces paper in three categories:
Roll paper – generally offset printing papers used in a variety of commercial printing (offset) applications including books, newsletters, brochures, manuals, direct mail, envelopes, and as a base sheet for other products such as carbonless paper.

Folio – high quality, good opacity uncoated paper. Its ultra-whiteness and smooth surface give greater resolution on offset, letterset and flexography printing methods.

Cut-size – white bond and reprographic business paper used in copiers and laser printers. Under the brand PaperOne, APRIL markets quality office paper. Cut-size paper accounts for approximately 60% of APRIL's paper sales.

PaperOne is APRIL's flagship brand with products made from elemental chlorine free (ECF) pulp produced from 100% plantation wood. This super high white paper is appreciated for its superior opacity and multi-directional and dual sided printability. PaperOne is available in more than 30 countries.

The Asia Pacific region is the prime market for APRIL paper products. While the ASEAN nations are leading the way, APRIL already has a marked presence in China and intends to intensify its sales network and marketing efforts to gain a firmer foothold in that country.

APRIL's major individual markets for its paper products are in Asia and Australia, with roughly 13% of sales to Europe. The majority of customers are merchants, printers and converters who make high volume purchases while only 5% go directly to retailers or end user customers. In total, 294,039 tonnes of paper were sold in 2002.

Company Milestones

Year	Event	Corporate	Mill	Forestry	Community
1993	Large-scale plantation development begins			•	
1993	Construction starts on Pulp Line (PL)1 of 750,000 t/a capacity		•		
1994	Asia Pacific Resources International Holdings Limited (APRIL) is formed	•			
1994	First pulp produced	•			
1995	Commercial production begins		•		
1995 – 1998	Production increases to 750,000 t/a level		•		
1996	Acacia Tree Improvement Program with the Queensland Forestry Research Institute in Australia (QFRI) commenced			•	
1997	Construction commences for Phase One of the second pulp line (PL2)		•		
1998	Start-up of paper machine 1		•		
1998	Implementation of "A-B-C Harvesting System"			•	
1998	First SGS Forest Management Audit			•	•
1998	Community development committee set up				
1999	Acacia plantations reach 108,000 hectares			•	
1999	Upgrading of Pulp Line 1 to 850,000 t/a capacity completed		•		
1999	Occupational Safety and Health Performance Award from the Ministry of Manpower, Indonesia received		•		
1999	Aquatic Environmental Impact Evaluation (I) with the Finnish Environmental Research Group (FERG)			•	
1999	Implementation of Community Health Survey with particular emphasis on skin disorder in three villages (Sering, Pelalawan and Rantau Baru) along Kampar River; conducted in conjunction with the Center for Environmental and Occupational Health Research, National University of Singapore				•
1999	People Development Program Department formed to develop community relations programs in Kerinci				•
1999	Training center established in Pasir Pengarayan				•
1999	Introduction of Integrated Farming System (IFS)				•
1999	Launch of cattle breeding Program. APRIL contributes 352 cows to 122 families				•
1999	Launch of a fish farming Program with 9,000 fish spawn				•
1999	10 hectares of land set aside for a senior high school in Pekanbaru				•
1999	Environment Department established to co-ordinate environmental performance and sustainable forest management initiatives			•	
1999	Study on Site Management and Productivity in Multiple Rotations of Tropical Forest Plantations with the Center for International Forestry Research (CIFOR)			•	
1999	Joint Project with the Faculty of Forestry, Institute of Agriculture (IPB-Bogor) to survey biodiversity within areas planned for operations for 1999-2000 and to review spatial land-use plan for greenbelts, watershed or hydrology protection areas			•	
1999	Phase One begins for the design and management of Corridors for Biodiversity Conservation in Large Plantation Landscapes with the Center for International Forestry Research (CIFOR)			•	
1999 – 2000	Delineation of Protected and Conservation Sites and Identification of Protected Tree Species by Faculty of Forestry, Institute Pertanian Bogor (IPB)			•	
2000	Establishment of PaperOneShop.com	•			
2000	Pulp and paper mills receive ISO 9002 certification from SGS Yarsely International		•		
2000	Second SGS Forest Management Audit			•	
2000	Phase Two begins for the design and management of Corridors for Biodiversity Conservation in Large Plantation Landscapes with the Center for International Forestry Research (CIFOR)			•	
2000	Biodiversity Survey of Aves Species in Sector Cerenti HTI Plantation Sites and PT Duta Palma Oil Palm Plantation in collaboration with the IPB Faculty of Forestry			•	

Year	Event	Corporate	Mill	Forestry	Community
2000	Development of Criteria & Indicators for Sustainable Forest Management of Industrial Tree Plantations and Code of Forest Practice with the Center for International Forestry Research (CIFOR)			•	
2000	Memorandum of Understanding (MOU) signed between APRIL and P.T. Bank Negara Indonesia (BNI) for an economic development Program to assist small and medium local enterprises (SMEs). In this initiative, APRIL will provide technical and professional services to interested local entrepreneurs who wish to start a business with BNI providing financial assistance at subsidized rates.				•
Sept 2000	Started up the first phase of Pulp Line 2 (PL2) facility; Increases mill capacity from 450,000 t/a to 1.3 million t/a		•		
2000 – 2001	577 participants undergo Integrated Farming Systems Training				•
2000 – 2001	1,441 heads of cattle distributed to 568 families in an animal breeding program			•	
2000 – 2001	81,350 fishes distributed to 100 families				•
2000 – 2001	Over 3,500 people benefited from a healthcare program: ranging from free medication, consultation, infant and toddler immunization, mass circumcision and health supplement handouts to children and pregnant women				•
2000 – 2001	APRIL contributes to the installation of a deep well and generator set to Sering Village				•
2000 – 2001	Donations to further education initiatives such as the rebuilding of facilities, scholarship programs and vocational training programs. This benefited more than 50 university students and 350 individuals.				•
2000 – 2001	Research conducted on farming practices, cattle raising and fish-breeding			•	
2001	Respiratory survey of six villages around the mill with the Center for Environmental and Occupational Health Research, National University of Singapore				•
Apr 2001	Completion of second phase of Pulp Line 2, bringing capacity to 2 million t/a		•		
2001	Aquatic Environmental Impact Evaluation (II) with the FERG			•	
2001	Habitat and Population Survey of Macaca fascicularis in the protected areas within APRIL's HP-HTI with the Institute Pertanian Bogor (IPB) Faculty of Forestry			•	
2001	Habitat and Population Survey of Presbytis melolophos in the protected areas within APRIL's HP-HTI with the Institute Pertanian Bogor (IPB) Faculty of Forestry			•	
2001	Habitat and Population Survey of Hylobates agilis in the protected areas within APRIL's HP-HTI with the Institute Pertanian Bogor (IPB) Faculty of Forestry			•	
2001	Obtained ISO 14001 Environmental Management System Certification for six sectors of the Forestry Division			•	
2002	10 sectors of APRIL's forests receive ISO 14001 from SGS Yarsely International Certification Services			•	
2002	ISO 9706 received for paper permanence		•		
2002	Pulp and paper mills receive ISO 14001 from SGS		•		
2002	Some 1,300 families from more than 70 villages are involved in the Integrated Farming System Program				•
2002	Moratorium on further road building and acacia planting in the Teso Nilo area		•		
2002	Collaboration with WWF on its efforts to prevent illegal logging from the Teso Nilo area			•	
2002	Completion of an independent wood tracking audit by SGS on wood purchased from third party sources and tightening of procedures relating to wood purchases			•	
2002	Resolution of land dispute claims for 7,900 hectares			•	

3 Environmental Performance

In 1998, ITTO defined sustainable forestry in its Criteria & Indicators for Sustainable Management of Natural Tropical Forests as: "... the process of managing forests to achieve one or more clearly specified objectives of management with regard to the production of a continuous flow of desired forest products and services, without undue reduction of its inherent values and further productivity and without undue undesirable effects on the physical and social environment."

Concerns Raised by Our Stakeholders

- Current sustainability efforts have not been properly managed resulting in significantly less fiber coming from plantations as opposed to natural forests
- APRIL should be achieving third party certification of its sustainability practices
- Land clearance by burning causes uncontrollable fires and atmospheric haze
- Remaining tropical rainforest is being destroyed
- Illegal logging is condoned

- Replanting does not replace the variety of species in natural forest. APRIL should realize plantations do not equal regeneration, even though it does take pressure off forests.
- APRIL's logging sites are the natural habitat of numerous endangered species, including the tapir, the Sumatran elephant and tiger.
- The conversion of these natural rainforests into tree plantations inevitably leads to the reduction of the area available to these species thus making extinction increasingly likely.

- Effluent from pulp mills poisons rivers and causes illness.
- Industrial waste water is being discharged illegally.

For information about our stakeholders see About this Report.

APRIL Forestry Mission

"To be the world's best plantation forestry company, sustaining our customers with the fiber of choice in terms of quality, contribution to society and environmental standards, at competitive cost."

The Business of Sustainable Forestry

From 1992 to 1998 the Indonesian Government granted APRIL industrial tree plantation concessions in Riau, Central Sumatra. The concessions were granted for a period of 35 years plus one eight-year rotation, on condition that the company replanted the land within the concession area. These concession areas total 330,000 hectares of which approximately 192,000 are suitable for plantations. APRIL has split the plantations according to 10 administrative sectors. For details on each concession and sector please see the table below.

The replanting area includes degraded forest, abandoned slash-and-burn farmland, grasslands and scrub-land. After land clearing, replanting is usually done with *Acacia mangium*, which can grow to 25 meters in height in seven years. The high growth rate associated with the equatorial climate means that we require significantly less land to produce wood than do producers in, for example, North America and Scandinavia. The combination of plentiful sun and water makes Sumatra one of the world's most efficient locations for growing wood.

We are committed to a policy of responsible forest management to maintain our goals of sustainable yield through sound forestry practices,˙ while protecting and limiting our impact on the environment.

However, our existing environmental strategy already comprises a pragmatic and effective approach to conservation. While more than 50,000 hectares of the concession area have been kept with their natural forest cover, albeit partially degraded/exploited forest, we are also looking at other areas that could be reserved for conservation purposes (these are described on page 30). We have been assisted in the development of our conservation strategy by the Center for International Forestry Research (CIFOR) and the Faculty of Forestry, Institut Pertanian Bogor (IPB). With the help of such institutions, we are committed to the responsible management and monitoring of these areas.

Administrative Sectors	Size (hectares)	Plantable Area	Area Planted Dec '02
Logas Utara (North)	14,615	7,413	7,171
Logas Selatan (South)	28,120	11,719	6,487
Teso Timur (East)	16,250	12,170	11,186
Teso Barat (West)	20,000	11,267	11,155
Langgam	10,100	4,912	4,211
Cerenti	40,260	23,344	19,154
Baserah	21,195	16,995	15,588
Ukui	19,300	14,715	12,453
Mandau	23,000	18,985	1,519
Pelalawan	79,300	61,228	16,403
Other Licensed Areas			
Rantau Baru	12,000	Not finalized	-
Lubuk Sakat	12,250	Not finalized	-
Pontianai	5,410	2,803	-
Siak Kecil	19,750	Not finalized	-
Jalan Akses (Corridor)	8,450	6,200	2,158
TOTAL (nearest thousand hectares)	330,000	192,000	107,000

Sustainable Wood Supply

The development of sustainable wood supply is a top priority for APRIL. To meet our mill's production capacity of 2 million tonnes a year, we have to develop at least 350,000 hectares of sustainable plantations from our own concessions, joint operations and smallholder tree farms. At the end of 2002, we and our partners, other concession owners and community Cooperatives, had developed about 175,000 hectares. We estimate our operations will be fully sustainable with plantation fiber by 2009.

As part of our strategy to develop sustainable sources of wood, we have been working to improve yields. The current mean annual increment from our own and our partners' plantations (see next page) is around 30 cubic meters per hectare, equivalent to a yield of 210 cubic meters at harvest (at a 7-year rotation). Further improvements in the yields of as much as 40-50 cubic

meters a year or a yield of 280-350 cubic meters per hectare at harvest have been achieved in research conditions.

While plantation development is in progress, we will continue to use wood from areas cleared for conversion into our future plantations and to some extent (around 5% of our wood supply in 2003) from non-APRIL owned areas being cleared for agricultural development. This will meet our annual requirement of 9 million cubic meters of harvestable wood (equivalent to 2 million tonnes of pulp). We always endeavor to obtain wood only from legal sources and do everything in our power to ensure that all wood is legitimate (see page 30 for information on Timber Tracking Audit).

Sources of Fiber

Entity	Ownership	Areas (in 000 ha)		
		Licensed	Plantable	Planted to12/2
APRIL	Licensed concession	330	192	107
Smallholder Tree Farms	Communities	20	20	3
Joint Ventures	Licensed other companies concession to	250	138	65
TOTAL		600	350	175

Note: Joint Ventures include long-term agreements with other licensed concession owners

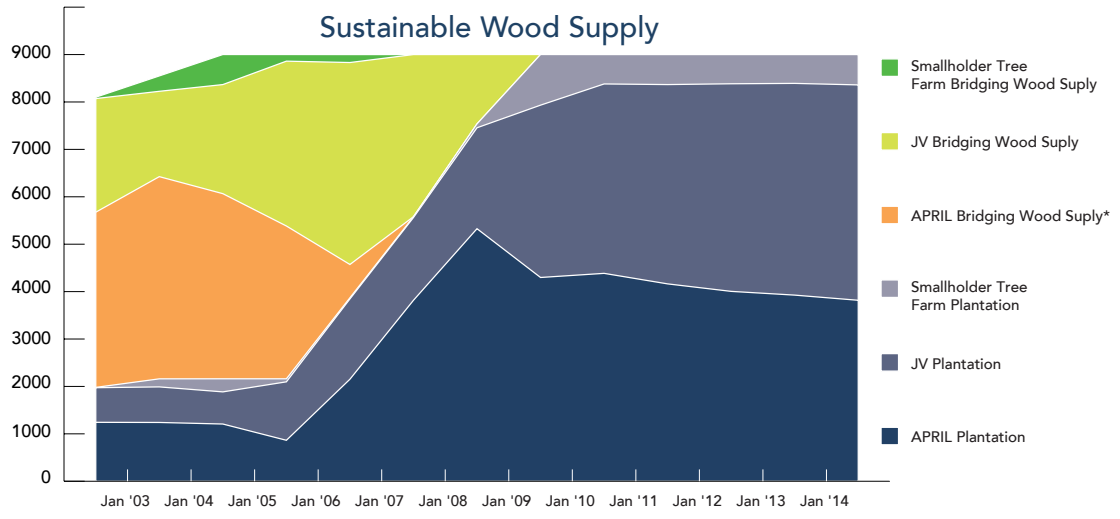
Roadmap to Sustainability

APRIL is committed to supply 9 million tonnes of plantation wood on a sustainable basis by 2009. This will be achieved by replanting degraded forest to highly productive plantations with due respect to environmental considerations. More than 50% of future plantation wood will be sourced from joint venture partner plantations, as well as from community forest projects. Implementation of this roadmap will broaden the economic benefits to the wider Riau community.

Research and Development

We use research and development to create forest plantations that optimize land use and provide wood that is best suited to the production of high quality, cost-effective pulp and paper. Through research in the areas of tree improvement, soil fertility, silviculture and nursery methods, we are developing higher yielding planting materials that are matched to plantation sites with the eventual goal of improving the yield per hectare and reducing the current seven-year growth cycle. Our R&D program is also seeking ways to produce trees that are disease-resistant, able to thrive under local conditions and produce an improved fiber for pulp production.

We currently plant two main species, *Acacia mangium* on well-drained land (mineral soils) and *Acacia crassicarpa* on poorly drained sites. Research is also underway to



* Inclusive of externally sourced wood

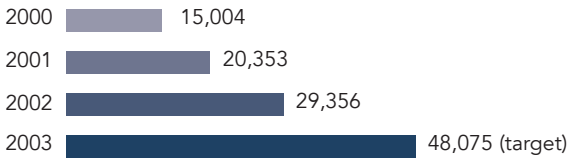
expand the number of tree species that can be used (e.g. eucalyptus) to supplement acacia and so, increase the species diversity of the plantations.

Nursery

At APRIL we operate our own nurseries of superior acacia and eucalyptus plantlets. Seeds and cuttings are taken from specially bred parent plants and grown in ideal conditions until they are ready for planting in the field.

In 2002, we produced 40 million seedlings and rooted cuttings. Our nurseries have the capacity to produce some 60-70 million seedlings and rooted cuttings a year. Nursery operations are integrated with Research and Development to ensure the cost-effective production of high quality plants. By taking the best materials from our R&D department into the nursery and continuously improving nursery production practices, we ensure it produces the best planting materials for our tree plantations. During 2002 our planting materials were 90% seedlings from our own nurseries. We also used 10% clonal material which we derived from selected superior plants with high yield and disease tolerance. We are planning increased deployment of cloned varieties during the coming years.

Planting Accomplishments (in hectares)



Planting

Planting is done manually as soon as land clearing is completed. We do not burn forest to clear land. This is for environmental consideration as well as to maximize the economic value of raw materials that would otherwise be destroyed by fire.

Acacia is planted on APRIL's own tree plantation areas, joint-venture partners' tree plantation areas and on smallholder tree farms (HTR). As of end 2002, together with our partners, we had planted about 175,000 hectares of acacia plantations.

Harvesting

Trees are harvested by low impact extraction methods that minimize soil disturbance. Forest residues left after harvesting are collected in strings to reduce impact on the ground when hauling the wood to the roadside by skidders or forwarders. After hauling it is spread evenly to provide nutrients to the soil and to reduce erosion. Harvesting is performed by loggers benchmarked against APRIL's 'best practice Standard Operating Procedures'

APRIL & HTI Plantations (2002)

Planned, Ha	Actual, Ha
27,517	22,381

APRIL & HTI Seedlings (2002)

Planned	Actual
37,000,000	31,365,895

JV/JO Plantations (2002)

Planned, Ha	Actual, Ha
13,800	7,537

JV/JO Seedlings (2002)

Planned	Actual
13,200,000	10,705,256

Minimum Planting Target, Progress and Plan for 2003

Land Resources	Minimum Overall Planting Target in Hectares	Actual Dec 2002 in Hectares	Planting Target 2003 in Hectares
APRIL Forest Plantation Area	192,000	107,384	27,075
Partners/Joint Operations	138,000	64,551	14,000
Smallholder Tree Farms or HTR	20,000	3,207	7,000
TOTAL	350,000	175,142	48,075

which sets performance and professional standards for different terrains and conditions. Performance is measured by determining the logs' volume in the forest, at the road side, and from the load on a truck delivered to the mill.

Every log contains a proportion of water, the drier the wood on delivery to the mill, the greater its density and the higher the proportion of fiber to water. As part of our best practice, we require the harvested logs to be stored at the harvesting site for eight weeks or more to allow a natural reduction in moisture content.This also means more logs can be delivered to the mill in each truck, resulting in less truck trips and thus saving on fuel consumption, road usage and wear and tear.

Many of the trucks are owned by local contractors and operated in partnership with APRIL.

Replanting is carried out within two months of harvesting.

Monitoring

Our forestry management operations were first assessed by SGS Forestry (UK) in 1998 and subsequently, in 2000 using a composite of criteria and indicators for sustainable forest management drawn from the SGS Forestry QUALIFOR Program. The criteria and indicators were based on the generally applicable requirements of the Forest Stewardship Council's Principles and Criteria, the International Tropical Timber Organization Plantation Guidelines and the draft Lembaga Ekolabel Indonesia Criteria and Indicators. The main objective was to benchmark our practices against those deemed to be best practice in sustainable forest management and to provide us with performance targets for continuous improvement. Another follow up forest management assessment is planned for the fourth quarter of 2003 to evaluate progress and improvements, and to track performance by making direct comparisons of ratings in forest management, environmental and social accomplishments between the first, second and the proposed third audit. The follow up assessment in 2003 will also be used as a ramp up (test case and to determine readiness) for suitable forest certification by 2005.
Our environmental management systems (EMS), which provide the framework for ongoing management of the environmental aspects of the forestry operations and ensure their minimal impact on the environment, have also been certified by SGS UK as meeting the requirements of ISO 14001.

As part of our commitment to environmental best practice, we have built 220km of our own forest roads with access points located to avoid unnecessary damage, and to minimize negative impact on the travel and transport on public roads and those living in surrounding communities.

Joint Operations

In addition to our own concession areas, we also partner with other companies to develop plantations and thus supplement our own wood supply. These companies have licensed concessions, or are in the process of finalizing these licenses, to establish industrial tree plantations. APRIL has arrangements with them to both purchase acacia and mixed hardwood and to provide expertise and assistance in developing acacia plantations. The arrangements also cover the future supply to APRIL of the wood from the acacia plantations once they mature in five to seven years time.

APRIL is working with its partner companies to have them observe all the safety and quality controls, harvesting processes and authentication of wood procedures that APRIL adopts for its own concessions.

Smallholder Tree Farms (HTR)

Among our partners we count many smallholder tree farms. Commonly owned by local communities, we work with the villagers to create their own acacia plantations. When the trees are mature at 5 to 7 years old, the villagers sell them to us. Villagers who own land partner with APRIL. We work on the land, developing plantations from infancy to maturity, providing seedlings, fertilizers and chemicals, training and maintaining the plantations at our own costs. At the end of each rotation, the villagers profit from the scheme from benefit-sharing either on a 60–40 ratio for dry lands or 70-30 ratio for lowlands.

Prevention of Forest Fires and Haze

Our purchase of local wood helps the prevention of forest fires and haze. Land clearing for agricultural

development in surrounding communities continues to produce residual wood suitable for pulping. This is wood which would otherwise be burned. Burning of such residual wood has resulted in very serious forest fires in Sumatra in the past (1997 being the worst) and a haze affecting Sumatra, Malaysia and Singapore. Our purchase of residual wood has reduced the incidence of forest fires and the level of haze in Sumatra.

We are also a founding member of the Haze Prevention Group that actively promotes the No Burn Policy and provides training in forest fire prevention, protection and management among its members. APRIL's no burn policy was implemented in 1994, pre-dating government action by three years.

Illegal Logging and Timber Tracking

Background

APRIL gets wood from three sources. The first comprises APRIL concessions that have been, or are being, turned into acacia plantations. The second are concessions that are currently being cleared for plantation by joint operation partners and smallholder tree farms. These two sources accounted for 78% of the wood supply during 2002. The third source is wood from areas zoned for agriculture development, mainly from communities developing their land into palm oil plantations or other agricultural crops. It is within this third source that there can be abuse of legal procedures. We are, therefore, reducing our purchases of wood from this area to less than 10% of our total wood supply in 2003.

Our policy is only to accept wood with a valid Izin Pemanfaatan Kayu (IPK), a government permit that licenses harvesting of wood on designated lands, usually those marked for agricultural development. We complement government efforts to monitor the cutting operations of IPK holders to guard against abuse. Such misuse includes cutting outside the IPK block, in excess of the volume allowed by the permit, or fraudulent use of the IPK license to document logs taken elsewhere.

Questionable wood is then offered to the pulp mill by local log haulers working for logging operators. Their income is threatened when their wood is rejected for lack of the appropriate authorization, causing unrest among local village families and increasing tension between mill personnel and log deliverers at wood delivery stations. This has resulted in demonstrations and blockades at our mill gates.

Through the enforcement of our Wood Purchase Policy, recently strengthened by undertaking a Timber Tracking Audit (see next page), we will continue to face opposition from the affected wood truckers and suppliers, whose real

APRIL Wood Purchase Policy

APRIL is committed to complying with applicable legal requirements and regulations on all wood purchases used as raw materials for its pulp and paper mill.

To implement this commitment we will:

- Be the leader in our industry and community by ensuring that wood being supplied to the mill has the required license or permit issued by the government authorities concerned.
- Take necessary measures to ensure that wood is properly checked and verified as to legitimate source and origin before deliveries are made.
- Ensure that wood coming from illegal sources shall be automatically rejected before the weighbridge.
- Expect that all our suppliers and contractors comply with all licensing requirements and the relevant rules and regulations on the cutting, transport or delivery of wood raw materials to the mill.
- Provide that suppliers identified as violating the relevant legal requirements and the provisions of the policy shall be immediately warned and blacklisted for repeated violations.
- Stop purchasing from suppliers that disregard applicable licensing and regulatory requirements.
- Ensure that all our employees responsible for the procurement, purchase and acceptance of wood delivered to or used as raw materials for the pulp and paper mill are properly informed and trained to enforce the provisions of this Wood Purchase Policy.
- Disciplinary action including termination may take place for those staff found violating the Policy.

August 2002

issue is lack of alternative employment. We are trying, through our community programs, to introduce new skills and work opportunities but our efforts alone will not solve this widespread problem. Eradicating illegal logging demands a concerted effort from all parties: governments, communities, the private sector and NGOs.

Wood Purchase Policy in Action

Anyone wishing to sell wood to APRIL must negotiate a contract directly with us. Our first concern is to establish that the site from which the potential contractor will source the wood is appropriate for the purpose. We survey their site to ensure the stated forested area actually exists and that the terrain is suitable for harvesting and replanting.

Irrespective of the source, our primary concern is the sustainability of harvested sectors. Along with our approvals, the contractor must obtain an IPK, a government harvesting license covering the precise area. Following the negotiation of a one year contract with us, the contractor must also obtain a Faktur, a government transport permit, which authorizes the harvesting and hauling of the logs.

Once the appropriate documentation has been provided, we have an overall assurance that the wood delivered to the mill has been sourced in the required manner. However, it is extremely difficult to monitor daily that contractors are operating in accordance with all these provisions. This is why we have sought to strengthen our wood purchasing by commissioning an audit of the process. Our Timber Tracking Audit, outlined below, has identified several measures which will further support our determination to eradicate illegally harvested wood from our operations.

We have not imposed our Wood Purchase Policy to make life more difficult for the local community. Rather, through our commitment to sustainability, we are using this policy to ensure that all harvested land is replanted to provide for their and our own future income.

Wherever possible, we like to turn these conflicts into mutually beneficial relationships by, for example, employing former illegal loggers as contractors to harvest wood for us in our concessions. Additionally, we contract local truckers to transport logs to collection points within our sectors. We also work to establish community smallholder tree farms to provide villagers with an ongoing source of income (for more information see Community Involvement).

Violent Action

In our determination to minimize the potential risk of purchasing illegally harvested logs, we have reduced the amount of wood obtained from third party sources (see page 27). During 2002 this gave rise to violent action by the loggers and their supporters. They blocked roads, burned equipment and threatened to harm our employees. This violence culminated in a two-day blockade of our mill entrance. The protesters - truckers, suppliers and some villagers – complained that by refusing to buy their wood we were cutting off their only source of livelihood. Subsequently, in associated action, three container housing units were set alight.

We also decided to work with WWF in an attempt to prevent illegal loggers transporting wood from Teso Nilo – an area WWF is seeking to identify as a conservation zone. We agreed with WWF that we would implement a system to stop trucks carrying undocumented logs from using the APRIL-owned ferry crossing at the Kampar River. In an attempt to prevent this new checking system from being put into place, a pre-emptive attack was made on the ferry crossing. Security guards at the ferry crossing who were, at the time, trying to evacuate people to safety, were attacked. Two of our security personnel were killed during the attack. Both were employees of PT Shields (Indonesia), our security partner, who were simply protecting people and property. Senseless killings will only serve to reinforce our determination to fight against illegal logging.

Timber Tracking Audit

As part of our effort to ensure that no illegal wood enters our supply chain, in October 2002, we commissioned SGS Malaysia to undertake a Timber Tracking Audit to verify the legality of raw materials sourced from local external suppliers and to evaluate the documentation and physical traceability of the timber. Representatives

from WWF Indonesia acted as observers as well as taking part in the development of the scope of the audit.

The audit concentrated on the following wood tracking criteria:

1. Forest Concession and Use Rights
   - Documentation and verification of the legal use rights to all forest/plantation (IPK) areas supplying wood to the APRIL mill.
   - Evidence that all IPK areas supplying wood to the mill are legally classified as commercial production forest, plantation or conversion to other land use.
   - Evidence that all IPK areas are free from third party disputed claims to use rights or ownership. In case of disputed land, there should be evidence that due process for the resolution of land disputes is being closely observed.
2. Legal Requirements of Operation
   - Compliance with local and national regulations in respect of harvesting and field operations as defined in the IPK.
3. Harvest Planning
   - Legal verification that areas demarcated for harvesting (IPK) are formally approved by the relevant government authority.
   - A documented harvest plan that clearly defines total and net production areas and complies with IPK conditions.
   - Evidence of compliance with all IPK conditions and the harvest plan, including approved harvesting volumes, diameter limits and species.
4. Traceability and Identification of Material
   - Documentary evidence of legal authorization to transport the volume of logs defined in the harvest plan and the IPK
   - Clear and adequate records and physical identification of harvested material so each truckload of material can be traced back to the harvest area (IPK)
   - Summaries of records to enable verification that the volume of logs transported is in accordance with the harvest plan and IPK.
   - Adequate documentation to enable clear identification of wood and their volume or weight during transport to the wood processing facility.
5. Factory Procedures
   - Existence of purchasing procedures that allow exclusion and disposal of wood not compliant with above requirements.
   - Purchasing procedures implemented adequately
   - All staff understand their specific responsibilities in relation to the identification, traceability and recording of wood received.

While the audit found that no wood enters the mill without proper and complete documentation, SGS did find that some procedures should be tightened and we have taken appropriate steps to implement the recommendations.

Among other things, SGS recommended that we should:

- Stop accepting materials from IPK holders that are found to supply materials cut from outside the contractual IPK licensed areas by updating the Quality Control/Weigh Bridge On-line System - updating completed.
- Develop formal standard operating procedures (SOP) on purchasing, receiving and monitoring, based on supplier type - SOPs revised as recommended.
- Revise the On-line System to include a clear reference to the IPK number, total volume and supply period. The System should also have a means of verifying volumes received in respect of LHP - On-line System revised as recommended.
- Monitor suppliers' (Anugrah and Joint Operation partners) progress in their forestry operations and production in respect of the operational plan and IPK - regular field monitoring and audit are being implemented based on revised SOPs.

In the case of Anugrah, SGS recommended the following:

- Contracts of IPK holders that are proven not to be supplying materials originated from the licensed area should be cancelled – implementation is underway by Anugrah.
- A formal standard for operating procedures for supplier acceptance, monitoring and expulsion should be developed – SOP already developed and being implemented by Anugrah.
- An initial assessment should be provided, prior to acceptance of the contract that includes: location,

boundary, land use plan, production area, conservation areas, access, stumping points (loading areas), and system of harvest under a clearly defined plan - included in the SOPs and being implemented by Anugrah.
- Supplier progress of forestry operations and production to be monitored with respect to the operation plan, IPK and APRIL's requirements – monitoring currently being implemented on a regular basis by Anugrah and supplemented by audits undertaken by APRIL's environment department.

To monitor the effectiveness of these remedial measures the Audit was repeated in May 2003. Information on the outcome of this audit, available too late for inclusion in this Report, can be obtained through our Corporate Communications Department and will be included in our next Sustainability Report. See Contact Us at the back of this Report for details.

Conservation Management

Our commitment to sustainability also includes the conservation of existing sites of natural, scientific and cultural importance. Our aim was to develop a set of guiding principles from which we could construct a more comprehensive framework of conservation practice. This has been achieved by having our Forestry Operations audited externally (by SGS) in 1998 and 2000. These audits comprise a Forest Management Audit that used a composite of applicable FSC Principles & Criteria, Criteria & Indicators for Sustainable Forest Management from the ITTO Guidelines for Tropical Plantation Management and the draft Lembaga Ekolabel Indonesia (LEI) C& I for Sustainable Plantation Management. We have also, with the help of CIFOR and IP Bogor, developed a conservation strategy for setting aside areas as riparian zones and protected forests. Within our concessions we have responsibility for areas that are not only biodiverse, but also encompass religious and cultural sites. Our conservation strategy is to provide biodiversity in the overall plantation landscape through the careful allocation of about 20% of our concessions set aside as various conservation areas. Conservation concerns include:

- Riparian Areas (sempadan sungai)
- Biodiversity Areas (kawasan pelestarian plasma nutfah or KPPN)
- Indigenous plant species of local commercial significance (tanaman unggulan)
- Cultural sites with significant community value

In addition to our own plantations and concessions, we work with our partners to have them implement similar practices.

All areas of forest are equally likely to be threatened by illegal loggers which is why any wood supplied by third parties must be harvested in accordance with our Wood Purchase Policy and supported by proper and complete documentation (For more information see Illegal Logging and Timber Tracking).

SGS Timber Tracking Audit October 2002
Summary of Remedial Actions Required

Forest concession and land use rights	• No clear system or process for handling third party claims
Legal requirement of the operations	• Suppliers are supplying materials without evidence of land clearing operation in the IPK area
Harvest planning	• Lack of monitoring by Anugrah
Traceability and identification of materials	• Lack of procedures for verifying non-conflicting land uses prior to acceptance of contract
Factory procedures	• Lack of initial assessment by Anugrah to evaluate the plan for extraction
	• Online system lacks clear reference to IPK number, total volume, supply period and means to verify volumes received in respect of LHP* (wood production inventory) volumes
	• Anugrah does not have clear documented procedures for purchasing materials from the IPK holders

*LHP – Laporan Hasil Produksi – This is a Wood Production Inventory Report that is the result of an inspection by government forestry authorities before a Faktur (Hauling Document) is issued.

Maintaining Biodiversity

In order to establish the extent of the tasks we faced and how we might prioritize and approach them, we put in place a two-phase project in collaboration with CIFOR.

In Phase 1 we examined patterns of biodiversity and selected ecological processes in relation to the spatial arrangement, dimensions and management regime of those areas set aside from plantation production. Particular attention was paid to the role and impact of riparian zones and conservation areas, and the connectivity within the plantation landscape and tracts of natural forest inside and outside our concessions.

The project resulted in a number of recommendations on how to enhance the functions of the conservation areas. A paper covering Plants Used by People in Natural Forest Corridors in a Large-scale Plantation Landscape in Riau Province, Sumatra, Indonesia was published in October 2002 by Wisnu Rusmantoro and John Poulsen.

Our challenge now is to establish how increases in connectivity via wildlife corridors could significantly enhance animal (mainly primate) movement between areas of seasonal habitat.

Elephant Protection in Teso Nilo

Conservationists are rightly concerned that Sumatra's elephant population could be under threat of extinction unless measures are taken. Teso Nilo, a lowland forest area, is partly surrounded by our concessions. An access road to one of our concessions also runs through Teso Nilo's eastern section, an area which is a natural habitat for Sumatran elephants. APRIL was granted a permit to develop 500 metres on each side of this road into acacia plantations. This will help stop further encroachment along the road into the natural forest. We were also granted permits for other access roads in the Teso Nilo area. In February 2002, we agreed to WWF's proposal that we should institute a moratorium on developing these roads. This moratorium was effective from 16 March, 2002.

However, WWF continued to be concerned that we might be purchasing wood from Teso Nilo and requested that we do not purchase wood from Teso Nilo. This has been done. As part of upholding that commitment, we commissioned SGS to conduct a Timber Tracking Audit to assess our wood purchase system and field controls (see page 29 for more information on the Timber Tracking Audit).

APRIL and WWF are continuing to work with the Government towards finding a viable solution involving the concept of using acacia plantations to create a buffer between the two often conflicting groups of elephants and people. Elephants dislike acacia meaning an acacia boundary would separate elephants and villagers from each other. The acacia could be harvested and replanted by villagers through APRIL-managed Smallholder Tree Farm (HTR) schemes. We would also benefit through this contribution to our fiber supply.

Monitoring Conservation Activity

Our conservation strategy is concerned with creating or maintaining:

- Areas of religious and cultural importance such as burial sites
- Significant geographic features, such as a hot spring, used as a local amenity
- Biodiversity areas (kawasan pelestarian plasma nutfah or KPPN), including protected species and serving as natural seed source areas
- Wildlife corridors to enable significant wildlife migration from biodiversity areas to seasonal, temporary or outlying habitats
- Riparian buffer zones and steep slopes (stretching up to 100 metres on both sides of a river or water course) to inhibit soil erosion, silting and a decline in water quality and provide shade for plants and animals. Riparian buffer zones may include wildlife corridors, Tanaman Unggulan (important indigenous local plant species), such as the ramin tree, which is used for canoe building, and relevant tree species pools

Money does **grow** on trees in Sumatra

Growing fewer trees can increase the profitability of plantations. This is the startling conclusion reached by CIFOR researcher John Poulsen. "Plantation managers just want to make a profit and you can't blame them for that," said Poulsen.

"Companies must think in the short term, which goes against the concept of long-term sustainability. Even so, our research shows them that they can increase the profitability of their plantations and still reduce the impact on the environment and the local people."

As deforestation continues, tropical plantations are becoming more important as a source of industrial wood and fuel throughout the tropics. They also reduce pressure on the remaining forest. However, monoculture plantations reduce biodiversity and local people's access to resources. So two of CIFOR's programs, Plantations and Biodiversity, began to look at ways to balance profitable production with environmental conservation.

CIFOR capitalized on its extensive experience with tropical plantation research by collaborating with the Bogor Agricultural University and the large plantation company PT Riau Andalan Pulp and Paper in Riau, Sumatra, Indonesia.

In Indonesia, plantations must set aside 15% of a concession as conservation areas. "We found that setting aside 25% of the area as natural forest captured about 80% of the regional tree species," said Poulsen. But to have any real benefits, especially on wildlife, these patches need to connect with each other. In new plantations the natural forest that is set aside must be carefully sited and well connected by corridors of natural forest. In existing plantations, the remnants of natural forest that still exist must be conserved and reconnected.

The good news was that profitability actually increased as more of the concession was set aside, up to the threshold of 25-30%. Corridors of natural trees created between the remnants acted as windbreaks. These protected the plantation trees from damage that was expensive to remedy. Plantation trees closer to the corridors also had much less insect damage because the corridors were acting as reservoirs for predators that fed on the major pest insects. This increased production.

These two effects alone increased the profitability of the plantation. But corridors can have many more benefits. The mature vegetation in the corridors along rivers and streams reduced run off and sediment in the water. They can reduce fire damage to the growing trees and also stop weeds invading the plantation area. The 25-30% natural forest area also retained up to 90% of the original primate species and reduced the production risks, such as sudden outbreaks of disease, normally associated with monocultures.

As well as the environmental advantages, these effects directly benefited the local people, with the indirect benefit to the concession owners of reducing opposition to the plantations. The local people had clear water. The density of the ten most important tree species used by the local communities also increased with the area of forest corridor. So they could continue to use the forest to collect products such as honey, firewood and medicinal plants, and hunt animals.

"We even showed that siting corridors away from roads drastically reduce illegal logging," said Poulsen.

The impact of the work is obvious. Natural forest remnants and corridors in plantations can be used to maintain biodiversity, increase profitability, retain environmental services and minimize social tensions.

"Since this approach is cost-effective and can even increase profitability, it will be much easier to convince the industry to adopt our ideas," said Poulsen. The research does not argue for plantations but it deals with the real situation. Many governments will plant large-scale industrial plantations despite their possible negative social and environmental impact.

"So it is critical for us to work with governments and the private sector to find ways to reduce these effects," said Poulsen. Linking long-term sustainable ways of working that conserve environmental services yet still yield immediate economic benefits will encourage the industry to adopt the methods. "We are now making an intensive effort to bring the results to a wider audience by starting similar projects in the Philippines, Thailand and Vietnam."

Progress on defining conservation areas

Identification of Conservation Areas

at end 2002

Type	Hectares
Cultural area	12
Special Interest Areas*	487
Wildlife buffer area	10,459
KPPN area	1,315
Riparian area	36,380
Total conservation areas	59,611

*e.g. hot springs in Teso East

Manufacturing Operations

Introduction

At our 1,750 hectare manufacturing complex in Riau, Central Sumatra we have built a pulp and paper mill, an integrated chemical plant and a power plant that generates all the energy for the complex, mostly from bio-fuels. Within this integrated production facility, the power plant was designed to meet all power, steam water and pressurized air requirements of the manufacturing complex, the neighboring town, Pangkalan Kerinci and to supply electricity to nearby villages. The power plant has a design capacity of 435 megawatts and steam generation capacity at 2,468 tonnes per hour. The energy from the plant is produced from black liquor, a bio-fuel generated as a by-product of the pulp manufacturing process. About 72% of total energy produced comes from black liquor and the balance primarily from wood bark, another by-product of the process.

During energy production, CO_2 is generated. On the average, the CO_2 generation from fossil fuel is 8.5%, at about 3,170,000 tonnes in year 2002.

The pulp mill has a rated capacity of 2 million tonnes per year and began commercial pulping in early 1995. It is one of the biggest single pulp production lines in the world. The paper mill has one of the world's fastest fine paper machines with a designed maximum speed of 1,500 meters per minute. Capacity of the paper mill is 350,000 tonnes per year.

Built within the last decade, both mills use the most advanced European and US plant machinery and processes, are fully computerized, and both have been awarded ISO 9002 certification for their quality management systems. Audits to achieve ISO 14001 certification of the power plant, pulp and paper mills' environmental management systems were also completed and the certificates awarded in November 2002.

The safety of employees is paramount, and a concerted effort has been put in place to develop and maintain a culture of safety throughout the mill complex. We have a Gold Certificate from the Indonesian government that attests to our compliance with the national safety regulations. Our objective is to benchmark our standards against the best of the industry.

Pulp Production

We chose the kraft process for our pulp mill. This is a closed loop system that delivers strong fiber, high yield and good chemical recovery. To begin with we debark the harvested logs and cut them into small wood chips. The bark is recovered for use as fuel to produce steam and electricity. After removal of dirt and other contaminants, the chips are fed into digesters. Chemicals are added and the chips are cooked at high temperature and under pressure to dissolve lignin, the natural glue that bonds wood fiber. The pulp is then washed to separate it from the mixture of pulping chemical and dissolved lignin. Known as 'black liquor,' this mixture is processed to recover pulping chemicals and to generate energy. Some 97% of the cooking chemicals are recovered and converted back to white liquor for reuse in the digesters.

Meanwhile, the pulp undergoes further processing, culminating with bleaching to remove the dark color of residual lignin.

Consumption of bleaching Chemicals

Chemical	kg/ADt pulp
O_2	30
$C1O_2$	46
$H2O_2$	2.5
NaOH	16

The resulting product is not only whiter but also more resistant and absorbent. After bleaching, the pulp is dried, finished, baled and shipped to customers where it is used to make office paper, coated paper, tissue and other paper products.

Paper production

Our paper mill uses an alkaline papermaking process to turn the pulp into paper. After stock preparation, liquid pulp is spread onto moving wires where water is drained from both above and below to produce even sided paper. The semi-dry sheet is then run through heated drying cylinders to evaporate the remaining water. Once dried the sheet of paper passes between heated rolls to ensure uniform thickness and surface smoothness. As the paper is rolled, its characteristics are examined: moisture content, smoothness, weight and opacity are checked. Each finished roll holds 60 tonnes of paper. These large rolls are then cut into smaller rolls, wrapped and either supplied to customers or converted into folio sheets or office paper.

Mill Environment

Introduction

The mill uses the Elemental Chlorine Free (ECF) process to produce bleached hardwood kraft pulp. ECF is favored by the US Cluster Rule for new mills. These rules are applied in order to protect the health of the villages around the mill and to maintain normal aquatic and ecosystem functions in the nearby Kampar river. Wastewater is treated using activated sludge biological treatment before the effluent are discharged.

The modern effluent treatment process put in place enables the mill to meet and exceed the specifications of Indonesian regulations and the US Cluster Rule. We undertake daily monitoring of the quality of the wastewater. This monitoring is checked against the results of independent tests conducted by local environmental NGOs, educational institutions, and the government.

Air Emissions

Air pollution is a global problem and, as a major industrial operator, we are committed to minimizing the level of potential pollutants contained in our emissions into the atmosphere.

Water Use in Pulp Production 2002

Process water	48 m^3/(ADt) (Average)
Water from river	115,681,223 m^3*

* These figures include cooling water and cleaning water in log handling.

All our recovery boilers, power boilers and lime kiln have electrostatic precipitators (flue gas purifier) to control air emissions, such as dust and particulate matters. We use high-efficiency recovery boilers to reduce sulphur dioxide emissions. In the bleach plant, gas scrubbers are installed to capture and reduce emissions. The installation of continuous emissions monitoring equipment will be completed by the last quarter of 2003.

Our emissions are within the levels specified by the Indonesian government and our performance is verified by SUCOFINDO (one of the world's leading, independent certification companies). Additionally, our environmental management system is in compliance with ISO 14001, as certified by SGS.

Water Quality

Adverse effects on both the ecology and the uses of water can result where environmental waters are enriched by nutrients and other pollutants produced through industrial activity. Increased nutrition levels cause eutrophication and, at extreme levels, can cause exhaustion of oxygen due to the growth of algae. Rivers in different places have naturally different concentrations of nutrients. 'Very low' nutrient concentrations, for example, are not necessarily good or bad. We have objectively established that our operations have little impact on the biological and aquatic condition, as well as the surface water quality of the Kampar River (where the APRIL mill is located). River water quality and aquatic biology are monitored by external parties such as the Finnish Environmental Research Group (MFG-Finland), Faculty of Fishery, University of Riau and an NGO (Yayasan Mandiri).

MFR conducted two aquatic environmental impact evaluations of our environmental management systems, in 1999 and 2001.

In 2001, it was established that the toxins in the effluent were so low that an average adult (weighing 70kg) would need to consume 500 liters of undiluted effluent to reach the limit for acceptable daily intake. The report concluded that: "…human health hazard from dioxins and furans in the receiving water is negligible or non-existent."

There continue to be no adverse community health impacts resulting from mill operations in downstream villages and the surrounding upstream communities. Community health is monitored with the collaboration of the Center for Family, Occupational and Community Health Research, National University of Singapore (NUS).

In response to published accusations that effluent discharges from the Mill could be affecting river water quality and causing skin conditions among villagers living in Sering, a village downstream of our mill, a NUS study on the skin conditions of villagers living in Sering and Pelalawan (8 km and 25 km downstream from the Mill) and Rantau Baru (45 km upstream from the Mill) was conducted in 2000.

The study found that:

- There was no statistically significant difference in the incidence of skin diseases in villages downstream of the mill (Sering, Pelalawan) and Rantau Baru which is upstream of the mill.
- The majority of adults and children examined (>60%) were free from significant skin diseases.

Such findings suggest that it is unlikely that mill effluents could be the cause of skin disease in Sering.

We monitor daily the levels of BOD, COD, TSS and pH in water being discharged to ensure they are within the parameters required by Indonesian law and the US Cluster Rule for New Mills. We also monitor weekly the Total Phosphorus and Total Nitrogen discharged and compare our performance with the specifications of Nordic Swan and the best performing mills in Europe. Our monitoring and testing procedures are also included in our ISO 9002 quality assurance system, which has been certified by SGS.

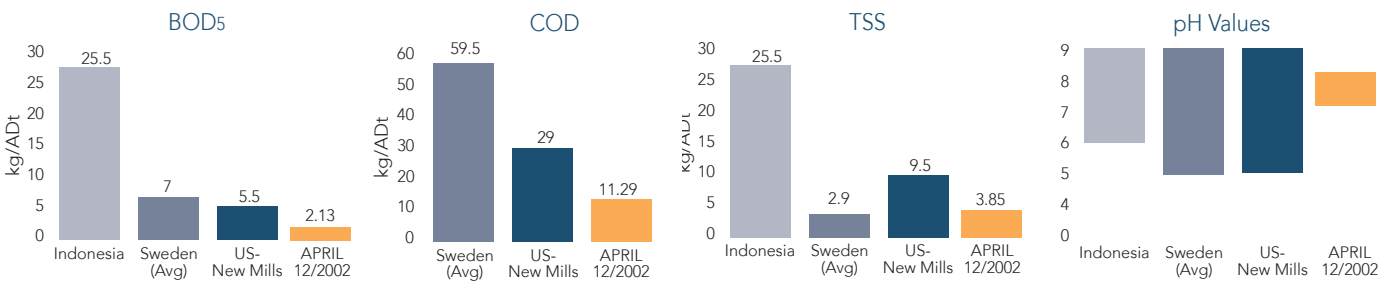
Management of mill residuals

The company has taken a pro-active approach to solid waste management We have a policy of minimizing solid waste through recycling as much material as possible. For example, tree barks are fed to the power boilers and excess quantities are utilized in road stabilization.

In addition we are also in the process of securing a permanent license for a new waste handling site. A topographical survey to determine the location for groundwater monitoring wells at this site has already been completed by an independent consultancy (PT ECONUSA).

Feedback

We operate an open door policy and welcome visitors to observe our operations in action. We also invite comments from all readers of the Report. If you would like to make a comment, to receive more information or to visit our operations, do contact us. Please go to Contact Us at the back of the Report for details.



4

Community Involvement

At APRIL we take seriously our role as a good corporate citizen and invest considerable resources to improve the social infrastructure, health and welfare of the communities with which we are involved.

Concerns Raised by Our Stakeholders

- Develop an effective community development strategy
- Work with a third party to resolve land disputes
- People have lost their land and gained no benefit

- They won't buy our wood
- They've taken our land

For information about our stakeholders see About this Report.

4

We are without doubt a major presence in Riau. During the last 10 years, the town of Pangkalan Kerinci, located near our industrial complex, has grown from 200 dwellings to a population center of around 40,000. We estimate that our operations provide a livelihood for more than 100,000 local people. People continue to be attracted to the area to do business, to study and to raise their families.

Like any growing community, the social infrastructure must keep pace with its needs if the local economy is not to suffer and result in deprivation. Our community empowerment program is therefore not only designed to build skills to enable local people to be self-sufficient but also to develop at a pace which is appropriate for them.

In January 2003, we had an independent company carry out a Community Perception Survey of villagers in the area. The findings are summarized at the end of this section.

Community Development Program

The main components of our Community Empowerment program are: support for the creation of integrated farming; social infrastructure support such as education and health provision; support for small and medium sized enterprises; and provision of vocational training.

This program is driven by our vision:
"To establish an independent and self-reliant community through the harmonious partnership among the surrounding villages, the company, universities, local government and non-governmental organizations."

One of the benefits is that it helps provide the local community with an alternative source of income to illegal logging and provide a supplementary source of earnings for people who do not have a regular source of livelihood.

Integrated Farming System (IFS)

We have established three training centers for local farmers where we teach the latest techniques in animal husbandry (cattle breeding and rearing), fruit and vegetable growing, and fish farming. Our researchers are also concerned with developing further technologies that should help small farming units to be ever more cost-and energy-efficient.

Selected villagers are trained in theory and practice. They learn how to raise and breed cattle and to use the manure as compost for organic gardening. Back in the villages, the trainees are provided with start-up resources. APRIL's field extension workers live in the villages and assist the trainees to practice what they have learned. The field extension workers also act as facilitators in helping the trainees to teach others. Harvests, including fruit, vegetables and feed crops, can be sold in local markets as well as provide food for the family.

By the close of 2002 our Integrated Farming System had benefited 1,106 households from 71 villages near our mill complex and had prompted us to build a fourth training center. We are hopeful that this rate of take-up will continue and would be pleased if we could expand it further.

Community Development 1999-2002

	1999	2000	2001	2002
Participants in the ongoing Integrated Farming System (IFS) Program	213	600	641	1,106
Beneficiaries of the Social Infrastructure Program	3,710	5,576	6,392	9,476
Entrepreneurs in the ongoing Small & Medium Enterprise (SMEs) Program	0	0	12	22
People trained each year under the Vocational Training Program	0	111	52	205

Case Study: **Rasmi's Story**, Integrated Farming System

Rasmi was unimpressed when one of APRIL's Community Development Field Officers first came to see him three years ago to offer assistance through the Integrated Farming System (IFS). He remembers, "they never stopped coming to our land, never giving up, until they were able to convince me to join the program." Today, Rasmi, a 52-year old farmer from Langgam village, Pelalawan District, is one of the IFS's most successful participants.

Before participating in the IFS, Rasmi was a traditional village man alternately making a living from fishing and taking wood from the forest. This irregular income was barely enough to provide for his family.

Through the IFS, Rasmi is now cultivating his "own" one hectare of land and keeping five cows. His farming now enables him to support his family - wife Fatimah, and children Rafilus and Sri Bintahilah - from selling his yield crops. When asked of his dreams for the future, Rasmi said that he wants his village to become the biggest chili source in Pelalawan District.

The IFS Recruitment Process

The IFS process includes a number of steps that enable us to engender commitment among all participants and other beneficiaries. It involves:

a. Promoting Acceptance

Our Field Officer meets with the Formal Village Leader, Religious Leader as well as Traditional Leader to gain their support of the IFS and their approval of a campaign to inform villagers about the IFS.

b. Recruitment

After gaining the village leader's approval, the Field Officer conducts an information campaign to encourage villagers to join the IFS.

c. Farmer Group Establishment

The newly recruited participants are formed into a Farmer group to coordinate and manage the IFS program. A group resolution on the rules to be followed in the implementation of the IFS is adopted, with our Field Officer functioning only as a facilitator.

d. IFS Training

After being nominated as training participants by the Farmer group, the farmer participants undertake IFS training for 14 days at the APRIL Community Development Training Center.

e. IFS Implementation

After completing IFS training, participants organize their land and cow cooperative prior to taking receipt of their cows and farming inputs (fertilizers, seed, pesticides etc). Once they begin farming, our Community Development Field Officer provides ongoing assistance.

Support of Small and Medium Sized Enterprises(SMEs)

As part of running our everyday business, we rely upon a network of local businesses to support our own operations and provide a range of services to our employees in their private capacities.

To meet this need, in 2000 we signed a Memorandum of Understanding with PT Bank Negara Indonesia (BNI) to provide loans to local entrepreneurs participating in our incubation program. We also have an extensive vocational education program that ranges from dressmaking, hairdressing and carpentry to cottage industries such as handicrafts using recycled paper, traditional food and beverage, weaving, food packaging and pallet making production. Those participants who have displayed a real intention of developing their own businesses have been offered tools and equipment to help their efforts.

Smallholder Tree Farms

We have helped to establish a network of smallholder tree farms among villagers to develop their own acacia plantations.

Integrated Farming System Program

	1999	2000	2001	2002
No. of Trainees*	59	99	320	515
No. of Participating Villages	7	24	53	71
No. of Cattle Distributed	352	708	733	646
Cultivated Land (hectares)	170	274.12	342.63	358.84
No. of Fish (Fries) Distributed	9000	40,300	50,560	46,535

*Trainees in turn assisted other people to participate in the IFS program hence the higher figure given in the earlier table.

Use of Contractors

In APRIL we have a longstanding business practice of employing directly or through contractors as many local people as possible – a proportion of whom have come through our SMEs and other community programs.

Around 30 contracted companies currently support our operations and we are loyal to those whose standards clearly match our own. A large proportion of our contractors have worked for us for many years. We are also keen, wherever possible, to encourage traditional loggers to take on our harvesting contracts, as we explain under Traditional Logging on page 45.

Also see the section Managing our Business, for more information.

Social Infrastructure Support

Within Pangkalan Kerinci, a town with a population of 40,000, we supply electricity at a subsidized rate to the local power company. We have also provided a source of fresh water to villages where this has been agreed with village leaders. In a number of villages we have established facilities for community functions, including building and repairing offices and meeting halls. We have eased the movement of local traffic by building roads and have undertaken bridge repairs.

Medical Provision

Health education is a major feature of our social infrastructure program, in an effort to promote prevention of illness and increase self-reliance. In all aspects of our program we work closely with the local medical and education authorities.

We make available an extensive range of free medical care. In addition to a mobile clinic where a full medical service is available, we provide advice on immunization, nutrition and supply vitamins – particularly targeting expectant mothers and toddlers. Minor surgery such as circumcision, cataract and harelips can also be carried out. A total of 6,237 patients were treated during 2002.

Support of Small and Medium Sized Enterprises
Total SMEs Partnership Data as of end 2002

Kind of Business	Partner(s)**	Project(s)	Partnership Amount (billion Rp)*	Contract
Construction	21	78	10,373	Per Project
Procurement	88	450	7,136	Per Project
Cleaning Services	11	14	2,922	Annual Contract
Pallet Making	7	7	3,274	Annual Contract
Hauling	5	5	1,363	Annual Contract
Manual Logging	2	2	0,877	Annual Contract
Manpower Supply	2	2	0,438	Annual Contract
Employees Bus Service	1	1	0,306	Annual Contract

*Approximately US$1 = 8,500 Indonesian Rupiah
** One company can have more than one business specialization.

Social Infrastructure Program

	1999	2000	2001	2002
Construction/Renovation of Village Head Office	0	0	8	14
Construction/Renovation of Village Meeting Hall	0	0	5	3
Provision of Electricity Generator	0	1	16	13

Education and Training

While basic education is available to every child, there are schools and students that could benefit from extra help or resource. We have therefore helped to build and equip schools in Pangkalan Kerinci and the surrounding area, made scholarships available for all levels – from Grade School to Senior High and University, and funded teaching posts.

The scholarships have so far benefited more than 9,261 students from villages in the area: 8,435 students have received assistance in the form of a scholarship/school package, 251 students have received scholarships while 575 teachers received honoraria.

Support for Vocational Training

Support has been provided to local people to acquire a multitude of skills from dressmaking, hairdressing, carpentry to pallet making, driving and honey production. This is to help create a source of income for the jobless or identify supplementary sources of earnings for those who do not have a regular income. After receiving training, participants either become employees of existing businesses or are able to set up as entrepreneurs. APRIL's support includes the provision of working capital as well as training. By the end of 2002, 368 people had undertaken vocational training.

Religious and Cultural Affairs

We hope through our programs to promote multi-cultural harmony. Religion plays a fundamental role in the fabric of Indonesia. Our response has been to provide material support by building and renovating places of worship and building an Islamic boarding school. As part of our financial investment in the community we have also made donations to groups undertaking the pilgrimage to Mecca.

Although Pangkalan Kerinci is a new town, caring for the cultural heritage of Riau is equally partly our responsibility. We have been pleased to renovate a significant historical site in our concession area and to have the opportunity to publish a book of folk stories.

Patients treated from 1999 to 2002

	1999	2000	2001	2002
Village	7	22	29	51
Patient	1,978	2,967	4,224	6,261

Vocational Training Program

	1999	2000	2001	2002
No. of Participants	0	111	52	205

Academic Support

	1999	2000	2001	2002
Scholarships for Grade School	1,725	2,000	2,010	2,700
Honorariums Given to Teachers in Rural Areas	7	105	154	309
Scholarships Awarded to University Students	0	50	0	201
Construction/Renovation of School Buildings	4	20	20	30
Schools Receiving Furniture & Equipment	0	6	9	10
Schools Receiving Operational Donations	0	1	7	8

Land Affairs

Apart from a few privately owned plots, all land in Indonesia is government-owned. We, like all other plantation operators, run our business under licenses awarded by the government. Our total concession area encompasses 330,000 hectares. Of this area, approximately 79,000 hectares was subject to various claims. At the end of 2002, claims involving approximately 67,000 hectares had been resolved and only 11,730 hectares remained registered with our Land Dispute Resolution unit by individuals or groups who believe they have a prior claim. We are committed to seeking a timely resolution to each claim.

We believe it is important to stress that no one has been driven from their land. Where indigenous communities exist within our concession area, their villages have been maintained in accordance with Indonesian law.

The land claims can be grouped into three categories:

- Land claims by local inhabitants within the public forest land consisting of about 7,566 hectares
- Claims resulting from an overlap of land use rights issued by the local government estimated at 3,713 hectares
- Claims by land speculators of 523 hectares.

Our approach to seeking resolution of these claims includes:

- Forming joint operations on acacia tree farm development together with local communities – smallholder tree farms
- Agreeing the payment of compensation for improvements made, for example, in relation to crops planted, but with no compensation for the land which is already owned by the government
- Delineating the area under claim as an enclave for the local community with the company applying to the government for replacement land which would not be viable for their own development
- Going to litigation against land speculators

We intend to have our resolution process independently audited by the first half of 2004.

A record of each claim is maintained and the status of these negotiations is available. For more information see Contact Us at the back of the Report.

Religious & Cultural Affairs Support

	1999	2000	2001	2002
Construction/Renovation of Places of Worship or Schools	5	14	41	29
Tools & Equipment Supplied for Religious Services	0	2	9	8
Donations for Pilgrimages to Mecca	0	4	4	5
Construction/Renovation of Historical Sites	0	1	1	3
Sports Equipment Distributed	0	5	17	31
Donations for Traditional Occasions	0	2	3	2

Traditional Logging

Rural unemployment is a major problem in Indonesia and is one of our motivations for instituting such a wide-ranging community program. We recognize that, for sections of the community, logging has been a traditional form of income. In many instances, the tradition predated the allocation of concession areas and harvesting licenses (IPK). However, in the regulated environment which is designed to ensure the replanting of harvested wood, traditional logging has to be controlled.

Those who are not licensed to log wood may nonetheless rely on this source of income and can become deeply resentful when we will not purchase their wood. Wherever possible we will encourage traditional loggers to work for us by using their skills to help us harvest our wood, thereby becoming contractors to APRIL.

For information on Illegal Logging, please see the Environmental Performance Section.

Community Health Impact

We are not only concerned that our operations should not have a negative impact on the health of local communities but also that any health fears should be allayed through independent monitoring, research and reporting.

In our Environmental and Social Review 2000/01, we reported on the findings of studies conducted by the Faculty of Community, Occupational and Family Medicine of the National University of Singapore on the relationship of river water quality to skin conditions of villagers living in downstream (Sering and Pelalawan) and upstream (Rantau Baru) areas along the river, and the respiratory health of six villages.

The skin condition study concluded that the incidence of skin diseases is low and comparable among respondents from downstream and upstream villages, thereby countering accusations that mill effluents had caused skin diseases in the downstream village of Sering.

Unresolved Land Claims Identified Inside the Operable Portion of the HTI Concession Area by Sector (in hectares) as at end 2002

Sector	Claims by local inhabitants	Overlapping use rights issued by local govt	Land speculators	TOTAL
Logas Selatan	4,392	500	-	4,892
Logas Utara	-	-	-	-
Teso Barat	15	-	-	15
Teso Timur	499	-	205	704
Langgam	-	-	-	-
Cerenti	-	-	-	-
Baserah	239	-	286	525
Ukui	905	3,213	32	4,150
Mandau	1,500	-	-	1,500
Pelalawan	15	-	-	15
TOTAL	7,566	3,713	523	11,802

Additionally, the study on respiratory health confirmed that there were no definite trends for the prevalence of respiratory symptoms among the villagers surveyed.

We also commissioned the Finnish Environmental Research Group to conduct an aquatic environmental impact evaluation of the effluent of the mill discharged to the Kampar River. These, too, were reported in our 2000/01 Review. The study established, in summary, that there was no significant difference in water condition upstream and downstream of the discharge site, indicating that treated effluent discharged to the river had negligible, or no effect on river biology.

Since these studies were conducted we have continued to monitor all emissions and effluent discharged from our mill complex. All discharge levels are the "same as if not lower than those current at the time these investigations were conducted." We intend to do a follow up Community Health study through the National University of Singapore in the second half of 2003.

You might also like to see the Environmental Performance Section for more information on our effluent and emission monitoring.

Community Perception Survey

In March 2003 we received the results of a community perception survey . We had commissioned Taylor Nelson Sofres (TNS) to coordinate this quantitative opinion research project among 30 villages surrounding our operations. TNS designed the survey, developed the questionnaires and undertook the analysis of the results. The fieldwork was handled by PPIP of University of Riau who conducted face to face interviews among a random sample of 300 residents of the 30 villages.

The Context

The purpose of the survey was to establish where we stood in relation to other companies operating in the region and also to understand more fully the expectations, as well as perceptions, of the local community.

While considering the results of this survey it should be borne in mind that in Indonesia, the social welfare, public health and education systems are under enormous pressure, with demand greatly outweighing supply. It is therefore expected by those living within our area of impact that the shortfall in the provision of forms of community support will be taken up by large commercial enterprises such as ours. We are happy to address this need to the greatest degree possible, but we suggest that demand of this type will be very difficult to satisfy.

We have always been committed to playing a comprehensive role in the community and will use this survey, the second of its type, to improve our community development program.

The Survey Results

Major Expectations

The local community has many expectations of companies, including APRIL. They ranged from assisting with road maintenance to support of cultural and religious events and forest conservation. The major expectations (given by between 20-30% of those who participated in the survey) were:

- Provision of infrastructure and public utilities: particularly education support and the provision of electricity supply
- Availability of community welfare: especially increasing support for rural welfare, providing job opportunities and increasing income overall
- Generating economic empowerment: by providing work training and capital, seeds and/or equipment

Major Perceptions

In general we are perceived to be making a greater contribution to the community than other companies. Our overall performance is provided in the table below.

Feedback

We operate an open door policy and welcome visitors to observe our operations in action. We also invite comments from all readers of the Report. If you would like to make a comment, to receive more information or to visit our operations, do contact us. Please go to Contact Us at the back of the Report for details.

People Awareness & Views of APRIL's Performance (in %)

APRIL's Performance in:	Aware	Unaware	Positive	Negative	Neutral	Importance Rating
Economic Impact	51.55	48.45	55.52	1.67	42.81	3.6
Community Welfare	66.26	33.74	40.60	7.46	51.86	21.2
Land Disputes	59.45	40.55	34.45	17.17	48.38	6.5
Culture, Customs & Religion	63.15	36.85	39.08	5.07	55.85	11.13
Economic Empowerment	69.93	30.07	39.25	7.00	53.75	19.5
Environment/Industrial Waste	69.48	30.52	9.51	61.21	29.28	8.3
Transportation	78.79	21.21	48.80	5.03	46.17	5.4
Infrastructure/Public Utilities	77.41	22.59	41.20	4.01	54.79	24.1
Total Performance Index			**38.35**	**11.00**	**50.66**	

5

Managing Our Business

At APRIL, we believe that developing a forward looking yet practical business strategy is at the heart of building a sustainable business. With operations centered in a location of environmental sensitivity, our approach to sustainability is holistic. To create environmental or social initiatives isolated from commercial reality would have been to disadvantage the business and the initiatives in the longer term.

In response to this thinking, we have begun implementing the Balanced Scorecard management and measurement system to enable APRIL to align vision with strategy and translate them into action.

The Balanced Scorecard is complemented with identification of our Cultural Pillars, which define the key cultural characteristics and behavior needed to support APRIL's competitive advantage.

Case Study: **Rosman**
Operation GM for Forestry

Rosman started his career in 1988 as a Mill Wright, helping to set up the IndoRayon mill, an RGM company. He received his first promotion two years after he joined the company, recognizing his contribution in establishing the mill.

After that, he rose through the ranks as the company identified his potential through his consistent outperformance in his position. Rosman was groomed and trained to take on more responsibilities, in line with the company's policy of internal promotion.

"I have had a relatively long but good career with the company. I've been given many opportunities which I made the most of and put in my greatest effort," Rosman said.

Today, he is the General Manager (Forestry) of Riau Andalan Pulp and Paper.

5

Business Strategy

The Balanced Scorecard

Our vision is to be one of the largest, best managed, most profitable and sustainable pulp and paper companies in the world, and be a preferred supplier to our customers and the preferred company to our people.

We operationalize our vision by adopting the Balanced Scorecard methodology. Using the Balanced Scorecard, we are able to translate our vision and strategy into a comprehensive set of performance measures that provides the framework for strategic measurement and management.

The Balanced Scorecard enables us to see the business from four important perspectives:

1. How we look to our financial stakeholders (shareholders, investors, suppliers)
2. How we look to our internal and external customers
3. What we must excel at (the internal perspective of what we must do right in order to meet the expectations of all our stakeholders at the same time as running a commercially successful business)
4. How we must develop our skills and our people (learning, development and innovation)

Strategic Directions

To reach our vision we have identified strategic directions which will be managed and measured through the Balanced Scorecard:

1. Develop sustainable, low cost wood supply management
2. Develop world-class management and people
3. Develop and promote environmental competence and community harmony
4. Develop profitable markets
5. Create sustainable shareholder value
6. Develop continuous product innovation and process improvement

Identifying critical success factors, supported by Key Performance Indicators, helps us to follow these strategies and to reach our vision.

By 2004, we will update the Balanced Scorecards, and at the same time we will conduct our strategic review of the system before we set our budgets. In this way, the scorecard will become the driver for our budget and operational plans.

Business Integrity

At APRIL, as a matter of policy, all employees are required to conduct their responsibilities and assigned tasks in a professional and ethical manner, and free from external (third party) pressures (HR Policy No. 400.0 in General Administration: Conflict of Interest). This policy is provided to ensure that individuals within the company who are decision makers, or can influence decisions, do not have outside interests which could result in a conflict of interest situation.

Valuing Our People

We believe successful organizations are characterized by their willingness and ability to nurture and harness the capabilities, creativity, enthusiasm, energy and ambitions of their employees. This belief is the driving force behind our people development principles:

- Maintain a sufficient pool of new employee trainees to ensure that the organization needs can be met through internal promotion
- Identify, train and coach promising employees to develop the key competencies that will enable them to perform current and future jobs within the organization
- Implement applicable career development programs that focus on assuring an alignment of individual career planning to achieve an optimal match of the individual with the needs of the organization
- Limit, where practicable, external organizational recruitment to new projects or business developments.

To be such an organization, at APRIL, we aim to provide each employee with a sense of purpose, a trusting and supportive environment, the opportunity to contribute to and participate in business decisions and the means to develop themselves as well as contributing to the growth of the company.

Measuring Employee Satisfaction

We continue to find areas where we can improve our services and support to our employees. In 2002, our company commissioned Taylor Nelson & Sofres to assess the overall satisfaction level of our employees and identify areas where we can enhance our management performance. The survey conducted covered employees from all levels and showed an overall satisfaction index of 58.88% in eight performance dimensions. The results were used to implement improvements in HR services.

Employee Satisfaction Index

Dimension	Satisfaction Index(%)
Working Climate	67.46
Leadership/Management	64.79
Working Appreciation	63.15
Training/Development	62.51
HR Procedures	57.12
Internal Community	53.22
Reward & Recognition	51.28
Career Development/Promotion	51.49
Overall Satisfaction Index	**58.88**

Reward

We participate in the compensation and benefits survey of the Indonesian pulp and paper industry conducted by Hewitt Associates, the global human resources consultancy. Results of the 2002 survey have established that our basic salary is above the market median, especially for superintendent level and above, but that some officers and supervisors/coordinators have basic salaries lower than market median. The research also found that, of the six companies that participated, only APRIL provided loans to employees and a guaranteed bonus of up to two months' salary. In general, the Hewitt Associates survey established that our compensation and benefits packages were already aligned to the market's upper income quartile and have reached the maximum for superintendent positions and above.

Annually we also participate in the Total Remuneration Survey conducted by William M. Mercer Consulting. This enables us to review our remuneration system in a total industry perspective and maintain our leading position in the pulp and paper industry.

To promote a performance-driven culture, the company implements a performance-based rewards system. For employees with rank of superintendent and above, the reward is determined by key performance indicators (KPIs) as indicated in the individual performance contract. This contract is drawn following the Balanced Scorecard framework that cascades the achievement of the Critical Success Factors from business units, to departments and to individuals.

For employees below the superintendent level, rewards are computed and given monthly based on the company's Performance Incentive Scheme. Under this scheme, employees of business units that achieve at least 90% of their targets become eligible for incentive. However, a business unit receives a deduction of credits for the absenteeism or indiscipline of colleagues.

Our Approach to Training and Development

Our Human Resources development plan is closely aligned to the company's business strategy.Every employee is provided with a range of training opportunities. At the basic level these relate to work attitude and corporate culture. Technical training and courses appropriate for each function are also held regularly.

Our commitment to individual development is translated into our 'CARE' for our people which encompasses:

- Career advancement
- Compensation
- Communication
- Coaching

It is in our interests to nurture natural ability, to enhance existing skills and develop new competencies in our people. We promote on merit and reward those who rise to the challenge.

Executive Development

For those in the executive grades, a program is agreed that will broaden their skills and expertise in general management and emphasize the importance of leadership ability. We use every opportunity to bring those new to executive functions together with more experienced colleagues to share knowledge and thereby strengthen corporate vision and culture. The training modules covered within the executive development program include an understanding of finance, business strategy, organizational behavior and change management. We also cover issues closely related to our location, namely, the national and local political situation, forestry conservation and sustainable development, as well as relations with the media and other external stakeholders.

Management Development

Management development is carried out with colleagues from other Group companies to build shared values and perspectives at senior levels. We want to have a continuity of skills and competence across the company in leadership and people management, marketing, financial management and negotiation and communication. Within each of these areas we have established a series of interrelated modules which together represent a comprehensive individual development program.

Appreciating Diversity

Our employee profile reflects the indigenous ethnic diversity in Indonesia. We have also attracted international industry experts from countries such as Australia, Canada, Finland, India, Malaysia, Philippines, Singapore, Sri Lanka, Sweden, the USA and the UK. Within APRIL in Riau, approximately 72% of employees are Moslem, 26% are Christian and 2% are Buddhist.

Employee Representation

Every employee may join the leading labor union, SPSI. Our excellent labor relations are in part due to the close relationship we have forged with SPSI and the joint commitment we have to improve the career opportunities and working conditions of our people.

APRIL (Indonesia) Employee Grade Report

Grade		Total	%
No grade	Management Trainee	69	1.5
A1-C2	Non-staff	3697	82.2
C3-D1	Officer or Supervisor	489	10.8
D2	Superintendent	107	2.4
D3	Manager	17	0.4
E	General Manager	4	0.1
	Expat	117	2.6
Total		4500	100%

Table does not include the workforce in overseas offices which totalled 191 as at December 2002

Health, Welfare and Safety

We also have an absolute commitment to the health and safety of our employees and those who may be affected by our activities. We provide comprehensive accident prevention training to all employees and safety induction program for contractors. Health and safety, as well as emergency preparedness procedures, are already incorporated under our ISO 14001 Environmental Management System. Our safety performance in the Mill is listed in the table on the next page.

We have a medical clinic for our employees and their families. At our town site we have established sports facilities for football (soccer), tennis, badminton, golf driving range, swimming and fishing.

Safety Initiatives in Forestry

During 2002 a considerable proportion of wood harvesting was assigned to local contractors for whom safety was not a part of their working culture. This led to both deaths and serious injury. To address this particular concern, a safety program was designed specifically for contractors.

We are in the process of implementing a rigorous safety certification program.

'Green Card' – Since October 2002, contract harvesting employees have progressively undergone safety training supervised by APRIL safety personnel and will only be allowed to work after having been certified as safe and productive operators through the issue of a 'kartu hijau' or green card. To implement the program, each contractor must subsequently employ at least one safety certified chainsaw instructor.

'Safety Rules' – The contractors are monitored for their work productivity and safety performance. During 2003 we are progressively introducing a zero tolerance policy relating to unsafe practices: a yellow card warning will be issued to individuals for non-compliance of safety regulations. Green cards will be withdrawn if warnings

Employee Accident Record at the Mill from 2001 to 2002

Year	Fire	Fatality	First Aid	Medical Aid	Lost Time Injury*	Day(s) Lost **
2002	38	-	25	57	12	228
2001	22	-	-	11	42	170

Employee Accident Record for Forestry and Non-Employees in 2002

Year	Fire	Fatality	First Aid	Medical Aid	Lost Time Injury*	Day(s) Lost **
2002	66	17	113	345	813	106,004

* Lost Time Injury: number of accidents which resulted in lost time

**Day Lost: total number of days lost according to government regulation. The numbers shown are not actual days lost, but the number of days according to the government regulation if accidents occur. It will differ between accidents.

are not heeded. In cases where the contractor is grossly negligent, a red card will be issued leading to the possible suspension of his whole team either temporarily or possibly indefinitely.

Also see the section Community Involvement, for more on our practice of providing skills and work to local people.

Protecting our People

While we understand that poverty is often the root cause of conflict with local communities, we also have a moral obligation as well as a legal right to protect our employees and our assets from acts that may result in unsafe working conditions or create some other form of threat. In these efforts, we use Shields, an independent security company.

In the case of any sort of conflict, we adopt a Flexible Response Strategy in which the use of security is always our final course of action. The strategy is supported by a commitment to negotiation to defuse any kind of hostile situation. To ensure a consistency of understanding and action amongst its employees, Shields provides a comprehensive training regime. The company also works in close cooperation with the Indonesian police and relevant local authorities.

Among its activities during 2002, Shields recovered US$167,000 of illegally harvested wood and investigated 61 cases of theft with 47 being successfully closed.

Use of Suppliers

Suppliers of goods or services which we purchase directly are selected on their demonstrable capability to provide a product or service that meets our specified requirements.

The evaluation of a new supplier's capability to meet our requirements may use one or more of the following criteria:

- Suppliers quality system, i.e. ISO 9001 or 9002 or equivalent
- Evaluation of product samples
- Trial orders
- Risk to the quality of products we supply our customers
- Long term relationship with the supplier
- Past history with suppliers
- Certificates of analysis or conformance/calibration supplied with each delivery
- Published experience with other users
- Nationally or internationally recognized for their service i.e. inspection or calibration services
- Sole supplier or agent, original equipment manufacturer

Supplier performance is evaluated at the beginning of each month based on delivery inspection data. If a supplier's performance is not up to the required standard, we will propose the actions required to remedy the situation. We de-list a supplier if it is clear that our criteria cannot be reasonably achieved. Each case is considered individually. (For information about our wood supply, please refer to the Environment Section).

Feedback

We operate an open door policy and welcome visitors to observe our operations in action. We also invite comments from all readers of the Report. If you would like to make a comment, to receive more information or to visit our operations, do contact us. Please go to Contact Us at the back of the Report for details.

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Moving Forward

Our commitment to good business practices and sustainability is ongoing and we have continuously been seeking to improve our operations both in terms of production as well as in community relations, corporate citizenship and environmental performance.

Through our use of the Balanced Scorecard and the concepts of corporate Key Performance Indicators and individual Performance Contracts, we are increasingly improving our management function and company operations. This will never cease as we will always seek to do things better.

In this Report we have talked about what we are doing and discussed where we are going. This section summarizes the key areas where we believe we can take specific actions that will help lead us to our goal of sustainability.

- We are committed to a policy of responsible forest management to maintain our goals of sustainable yield through sound forestry practices while protecting and limiting our impact on the environment.

- We currently plant two main species, *Acacia mangium* on mineral soils and *Acacia crassicarpa* on low-land sites. Research is also underway to expand the number of tree species, primarily eucalyptus, that can be used to supplement acacia thus increasing the species diversity of the plantations.

- Our forestry management operations were first audited by SGS Forestry (UK) in 1998 and subsequently in 2000 using a composite of criteria and indicators for sustainable forest management drawn from the SGS Forestry QUALIFOR Program. The criteria and indicators were based on the general applicable requirements of the Forest Stewardship Council's Principles and Criteria, the International Tropical Timber Organization Plantation Guidelines and the draft Lembaga Ekolabel Indonesia Criteria and Indicators. We are planning a follow-up forest management audit for the fourth quarter of 2003 to evaluate progress and improvements and to track performance by making direct comparisons of ratings in forest management, environmental and social accomplishments between the first, second and the proposed third audit. The follow-up audit in 2003 will also be used as a ramp-up (test case and to determine readiness) for suitable forest certification in 2005.

- In 2002 SGS Malaysia carried out an audit of our wood purchase arrangements. Subsequently, procedures have been tightened. A follow-up audit was completed in May, 2003. The results of this came too late to be included in this Report but we are committed to making them available as soon as possible.

- The installation of continuous emissions monitoring equipment in our mill complex will be completed by the last quarter of 2003.

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- We will continue negotiations with government authorities on solid waste disposal and the potential use of certain wastes as a form of fertilizer and other uses for land applications.
- We will continue to work with WWF and the Government to help find a viable solution for the coexistence of people and elephants in Teso Nilo.
- Our Community Development program continues to expand. In 2003 a fourth training center for local farmers will be established.
- We are committed to the fair resolution of land disputes as quickly as possible. In 2003, we will involve an independent third-party to audit the land dispute resolution process.
- As part of our commitment to sustainability and to improve our management processes we will continue to issue Sustainability Reports.

Independent Assurance Report

To: Asia Pacific Resources Holdings Ltd (APRIL)

a) Introduction

Bureau Veritas has been engaged by Asia Pacific Resources Holdings Ltd (APRIL) to provide assurance for its sustainability reporting. This Independent Assurance Report applies to APRIL's 2002 Sustainability Report ('the Report'). The preparation of the Report is the responsibility of the management of APRIL. Our responsibility is to provide assurance on the reliability of the information therein and to express our overall opinion on the Report as per the scope of assurance.

b) Scope of the assurance

The scope of our work was determined through discussions with APRIL and can be summarized as follows.

- Review and assess the reliability of selected environmental, social and related information and associated performance data included in the Report for the period 2002.
- Provide a level of assurance commensurate with the accuracy of information and/or the efficacy of systems deployed in the collection and compilation of such information.

c) Basis of opinion

APRIL's sustainability reporting predominantly covers its operations and activities in Indonesia. The reporting structure is based on the Global Reporting Initiative (GRI) and APRIL has selected certain of its performance indicators for inclusion in the Report.

Our opinion is formed on the strength of available information, observation and discussions with APRIL during a site visit of 16th-20th July 2003. The work conducted as described in the scope of work above was planned and carried out to provide reasonable, rather than absolute, assurance and we believe it provides a reasonable basis for our conclusions.

d) Assurance Conclusions

In our opinion the Report:

- provides a fair representation of APRIL's sustainability status for the reporting period and as a first report provides a sound basis upon which to move forward
- provides information in a clear and understandable manner that is considered to be free from error or bias, as far as the assurance scope enables such evaluation
- addresses a number of key stakeholder concerns openly and informatively
- has been corrected for mistakes and inaccuracies identified through the assurance process with a positive view to providing best available information

e) Commentary on Reporting and Assurance

Key areas for ongoing improvement

- Open further the scope of the report to APRIL's operations and activities via greater stakeholder inclusivity, in turn building trust and completeness over time
- Extend the reporting into areas that can be effectively measured, to demonstrate both commitment and improvement on associated social and environmental issues
- Consider setting performance indicators and targets against main stakeholder concerns not already addressed
- Consider developing a more formalized approach to the management of social issues and initiatives

Considerations and limitations

In relation to our assurance work and conclusions the following considerations and limitations should be noted.

- We have conducted individual stakeholder interviews in relation to providing assurance against certain claims made in the report
- We have carried out work regarding future activities and plans which, whilst not verifiable, is supported by previous and on-going activities and commitments
- In relation to the performance data we have audited source data wherever possible; where this has not been possible we have ensured that the data has been accurately transposed into the report
- We have not carried out any work in respect of either aspirational statements or opinion made by APRIL in the Report
- Therefore this independent assurance report should not be relied upon to detect all errors, omissions or misinterpretations in the Report, nor can it guarantee the quality of environmental and social management systems and processes.

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Glossary of Terms and Definitions

Acacia Crassicarpa & Acacia Mangium – Two species of Acacia, characterized by fast-growing and good pulping qualities. APRIL plants Acacia Crassicarpa on low-lying poorly drained land and Acacia Mangium on better drained soils.

ADt (Air Dried tonne) – Marketable pulp (air dried) contains 10% water.

AoX – a collective term for absorbable organic halogens. Total concentration of chlorine bound to organic compounds in waste water. AoX measures all chlorine compounds both harmful and harmless.

Biofuel – In contrast to fuel based on products derived from the petrochemical industry (i.e. fossilized biomaterial) biofuel is based on raw material derived from living organisms and therefore can be classified as renewable resource.

BOD – Biological oxygen demand. A measure of the amount of oxygen that bacteria will consume while decomposing biologically available organic matter. BOD is a measure of the degree of organic pollution in water. See COD also.

CIFOR – Center for International Forestry Research, located in Jakarta, Indonesia.

COD – Chemical oxygen demand. COD does not differentiate between biologically available and inert organic matter and is therefore a measure of the total quantity of oxygen required to oxidize all organic matter into carbon dioxide and water. As with BOD, it is a measure of water quality. See BOD also.

Dioxins/furans (chlorinated) – These are highly carcinogenic compounds, very small amounts of which may be created in chlorine gas-based bleaching. ECF bleaching methods have been developed to avoid creation of these compounds during bleaching.

Electrostatic precipitators – Apparatus for separating dust and soot from flue gases. It uses static electricity to remove soot particles from waste gases,

Elemental Chlorine Free (ECF) – Pulp bleaching process, where no chlorine gas (i.e. no elemental chlorine (Cl_2) is used, but only chlorine dioxide (ClO2). Using chlorine dioxide (a powerful oxidant) minimizes the formation of chlorinated organic compounds during bleaching.

Eutrophication – Having waters rich in mineral and organic nutrients that promote a proliferation of plant life, and algae, which reduces the dissolved oxygen content and often causes the extinction of other organisms.

Hectare – metric unit of area equal to 10,000 square metres (2.471 acres).

Illegal Logging/Illegal Wood – This refers to trees that are cut from natural forests, private concessions and village land without legitimate government authorization or permits. It also includes wood obtained through bribery and wood acquired in violation of the conditions of the permit (e.g. cutting more than the authorized volume, or cutting outside the permit area). Illegal logging is a global multi-billion dollar industry affecting many countries. APRIL is actively combating illegal logging.

Indirect Employment – This refers to the flow-on effect whereby jobs are created in additional industries and companies other than those specifically created by APRIL. This indirect employment is funded by the payments APRIL makes in wages and services when its employees and contractors, in turn, pay for other goods and services.

ISO – The International Organization for Standardization, also known as ISO, is a worldwide

federation of national standards bodies representing more than 140 countries, one representative from each country. ISO is a non-governmental organization established in 1947. The mission of ISO is to promote the development of standardization and related activities in the world with a view to facilitating the international exchange of goods and services, and to developing cooperation in the spheres of intellectual, scientific, technological and economic activity. ISO's work results in international agreements which are published as International Standards. ISO is not an acronym for the International Organization for Standardization, as many people believe, ISO is actually derived from the Greek "isos", meaning "equal" which is the root of the prefix "iso" found in many terms to indicate "equal", such as: isometric; isobar; isogenous; isotope; etc. Therefore, the short name of the organization "ISO" ensures that the name remains the same, regardless of the country or language.

ISO 9000:2000 comprises a series of documents (standards, guidelines and technical reports) that set out more specific standards for areas such as auditing procedures, quality performance evaluation, quality improvement, quality in project management, training, techniques and statistical process control; however, they do not result in "certifications." ISO 9001:2000 "Quality management systems - Requirements" is the standard used to assess an organization's ability to meet customer and applicable regulatory requirements and thereby address customer satisfaction. Furthermore, ISO 9001:2000 is the only standard in the ISO 9000: 2000 family against which third-party certification can be carried out.

ISO 14000:1996 comprises a series of documents that set more specific standards for areas such as auditing procedures, environmental performance evaluation, life cycle analysis and eco-labeling programs; however, they do not result in "certifications."

ISO 14001:1996 "Environmental Management Systems - Specification with guidance for use" is the only standard within the ISO 14000 series against which an organization's environmental management system (EMS) can be certified. ISO 14001 requires that an organization's EMS provides a framework to identify and address the significant environmental aspects and related impacts of its activities, products and services. ISO 14001 requires compliance with all relevant legislation and a commitment to continual improvement of the organization's EMS. However, the ISO standard does not set specific environmental performance criteria nor does it establish absolute requirements for environmental performance; these are defined by the organization seeking certification to this standard. Certification to ISO 14001 requires an organization to:

- establish an appropriate environmental policy;
- determine significant environmental impacts of its activities (past, present or planned) and of the products/services it produces (ensure that all issues identified as "significant" are being managed within the EMS);
- identify the relevant environmental legislative and regulatory requirements (ensure regulatory compliance is being achieved);
- identify priorities and set appropriate environmental objectives and targets;
- establish a structure and program(s) to enable it to implement the policy and achieve the established objectives and targets;
- facilitate planning, control, monitoring, corrective action, auditing and review activities to ensure both that the policy is complied with and that the environmental management system remains appropriate to the nature and scale of the organization activities (the system is auditable, both internally and externally); and
- be capable of adapting to changing circumstances.

Kraft pulping process – The most widely used chemical pulping process, kraft process (also known as sulphate pulping process) is versatile, allowing most types of wood to be used as raw material. Unbleached kraft pulp is brown in colour and its uses include brown sack paper and bags. For use as printing or writing papers it needs to be bleached. The name of the process comes from the German word "kraft" (power, strength), referring to the high strength of kraft pulp (as compared with sulphite pulp, a product of the less common sulphite pulping process).

Land Disputes – Land in Indonesia is predominantly state owned. The right to use the land is given to certain companies and individuals under licensed concessions for which fees or royalties are payable. A major exemption to this is traditional village land, usually small plots on which villagers grow subsistence and cash crops. Disputes may arise through overlapping claims to the same land, or through lack of provable land titles and questionable recognition of traditional rights.

Land Use Plan – The Indonesian government has a strategic direction for the development of the country, which includes a national land use plan. On the island of Sumatra, of the total landmass of 47.1 million hectares, 52% (24.4 million ha) has been allocated for agriculture, settlements and non-forestry uses; 21% (9.8 million ha) is reserved as protected forest, parks and wildlife reserves; 27% (12.9 million ha) has been designated for production forestry, including commercial tree plantations such as those for the pulp and paper industry.

Mixed Hardwood pulp – A specific type of pulp which, in the case of APRIL, is produced from a mixture of various hardwood species harvested from concession areas which are being developed into Acacia plantations.

Nitrogen oxides (NOx) – A group of gases that cause environmental problems, such as smog and eutrophication of coastal waters. Combustion in high temperatures under the presence of air (which contains 78% nitrogen) yields NOx into the atmosphere.

Palm Oil – A vegetable oil produced from a special variety of palm (the Oil Palm) widely planted in South East Asia. Palm Oil can be used for cooking, food processing and lubrication.

Particulate matter – The term for small solid particles found in the air, including dust, dirt, soot and smoke. When small enough, particles can be suspended in the air for long periods of time.

pH – The pH scale commonly measures the acidity or alkalinity of water. pH is the negative logarithm of the molar concentration of hydrogen ions. It ranges from 0 to 14. A pH of 7 is neutral (pure water). A pH less than 7 is acidic, and a pH greater than 7 is basic.

Riau Province (Riau Propinsi) – The province on the island of Sumatra, Indonesia, where APRIL's pulp & paper mills are located. For administrative purposes, Indonesia is divided into a number of provinces, each administered by its own provincial government.

Riparian – relating to the immediate surrounding area of a natural water course. This includes vegetation as well as the soil.

Scrubbers – A wet scrubber is a common pollution control way of cleaning waste gases and for recovering useful chemicals. A stream of polluted gas is brought into contact with a spray of liquid droplets. The pollutants are absorbed by the liquid, which is then collected and utilized (e.g. scrubbing flue gas with water or alkali solution is a common way for recovering

SO_2 – and heat – and returning it to the closed cooking chemical cycle for a kraft paper mill).

SME (Small & Medium sized Enterprises) – APRIL helps establish and encourages local SMEs both through our industrial operation and via community development.

Sulphur dioxide, or SO2, belongs to the family of sulphur oxide gases (SOx). These gases dissolve easily in water. Small amounts of sulphur are present in fossil fuels (crude oil, coal) and many ores that contain common metals such as aluminum, copper, zinc, lead and iron. SOx gases are formed when fossil fuels are burned and when gasoline is extracted from oil or metals are extracted from ore. SO2 dissolves in water vapor to form acid, and interacts with other gases and particles in the air to form sulphates and other products that can be harmful to people and their environment.

Sumatra – The second largest island in Indonesia (after Borneo). Riau Province, where APRIL's pulp & paper mills are located, is in Sumatra.

Sumatran Elephant – The Sumatran elephant (Elephants maximus sumatranus) is the smallest (and perhaps oldest) of the Asian subspecies and is unique to the island of Sumatra. It has been protected in Indonesia since 1931. Now endangered, population surveys conducted in the 1980's estimated that only 2800 – 4500 wild elephants remain.

Teso Nilo – Teso Nilo is a lowland forest area in Riau Province. The area is a natural habitat for Sumatran elephants and other wildlife. According to a WWF report titled Biodiversity Surveys in Teso Nilo, Sumatra, Indonesia - Oct/Nov 2001, this area has also been found to have up to 218 species of plants in plots of only 200 sq. metres, giving it a greater biodiversity than any other area in the world. APRIL has declared a moratorium on logging in Teso Nilo.

Transition Economy – Indonesia is currently a transition economy, making the change from a primarily agrarian economy to a manufacturing and services-based economy.

US Cluster Rule – a comprehensive set of regulations issued by the US Environmental Protection Agency to reduce environmental pollution, water discharges, air emissions and solid wastes relating to all industries, including pulp and paper mills.

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