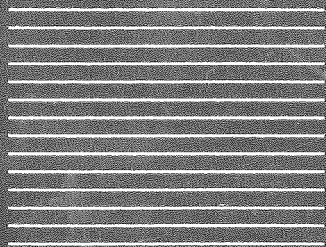


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Environmental
Regulation in
Indonesia

Carol Warren
Kylie Elston

Environmental Regulation in Indonesia

Carol Warren & Kylie Elston

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The Politics of Environmental Regulation in Indonesia

Since the early 1980s environmental regulation has received high priority in Indonesian policy making. Given Indonesia's dependence upon foreign donors for its economic program, external pressures inevitably played a significant role in stimulating this development. But internally generated factors were also of considerable importance. Mounting evidence of the economic and social costs of environmental degradation, the rise of a middle class, and the connection between environmental questions and other hotly contested political issues such as conflicts over land tenure and resources, the rights of workers, farmers and indigenous minorities, the demand for democratisation and greater press freedom all played a part in moving the environment to centre stage. In addition, but partly at odds with these movements, Cribb (1988:25-28) suggests that the need for environmental protection offered a prop for some sections of the Indonesian bureaucracy threatened by economic deregulation and political liberalisation. The consequence, he says, has been an ambiguous dual approach by government to environmental management in Indonesia, at times using environmental rhetoric to pit public interests against business and at others to serve bureaucratic or well-connected investors' interests against the public (1988:33).

Until the early 1980s, legal recourse for environmental protection in Indonesia was largely limited to remnants of Dutch colonial law, primarily under the 'Nuisance Ordinance' (*Hinderordonnantie*) of 1926. Milestones in the development of environmental law came in the wake of Emil Salim's appointment as first Minister for the Environment in 1978. The central piece of legislation, providing the foundations for all subsequent regulatory action, was Act 4 of 1982, Basic Provisions for the Management of the Living Environment. Like other basic legislation, it established only broad principles for environmental management.¹ The first steps toward putting in place mechanisms to implement the provisions of the law were taken with Government Regulation 29 of 1986 providing for environmental impact assessment (AMDAL) and the establishment of the Environmental Impact Management Agency (BAPEDAL)

under Presidential Decree 23 in 1990.

On paper the Indonesian environmental protection system is one of the most comprehensive in the world. In practice, its scope and complexity are not matched by an institutional capacity for implementation (World Bank 1990: 129; Dick and Bailey 1992). The most serious problem with environmental regulation in Indonesia has been the lack of enforcement. Neither appropriate mechanisms for monitoring and implementation nor sanctions sufficient to act as deterrents have been developed (Harjono 1991:13). According to the Environment Ministry at least 2,000 businesses liable to carry out environmental impact assessment under the law had not complied by the 1992 deadline (*Tempo* 13 February, 1993:97).

The respected Minister for the Environment, Emil Salim, who deserves much of the credit for the strides in environmental legislation which Indonesia has achieved to date, complained of the inadequacy of the sanctions at his disposal when the showcase Clean Rivers Program (Prokasih) was suffering from serious non-compliance two years after its introduction in 1989. To a large extent the enforcement problem has been a consequence of conflicting development interests and a failure of political will. Salim himself felt unable to use even the originally promised publication of the list of companies which had failed to live up to pollution control agreements on grounds that 'it could kill industry' (*Prospek* 6 July 1991:87). Recent statements by his successor, Sarwono Kusumaatmadja, however, suggest that the Ministry is now gearing to replace the 'consciousness raising' phase of environmental protection with a more concerted focus on enforcement. Sarwono indicated the Ministry's intention to introduce an environmental audit and compliance rating system and to publish the results, opening the environmental performance of companies operating in Indonesia to public scrutiny (interview Australian Broadcasting Commission Radio 12/2/94; *Tempo* 20 November 1993).

The complexity of administrative structures, jurisdictional ambiguities and a general lack of cooperation among government departments plague the implementation of environmental protection measures. The history of Indonesian law enforcement is in any case studded with 'special dispensations' (Harjono 1991:12) and selective application according to 'vulnerability and political value' (Cribb 1988:31). The consequence of the cumbersome framework of the impact assessment process and weak enforcement provisions has been that those few environmental assessments which actually

materialised to date, did little, as one consultant remarked, 'except provide excuses for proponents to do whatever they wanted' (personal communication 28/12/93).

Shortages of qualified personnel, base-line data and funding place severe strains on the quality of the environmental impact assessment process. Consultants are under pressure to satisfy their clients and because of the inadequate training and experience of many of the practitioners, impact assessments tend to become little more than score cards in which positive economic outcomes inevitably counter-balance negative environmental impacts, legitimating projects without stipulating operational means of mitigating environmentally unacceptable effects (Doberstein 1993:14; *Tempo* 13 February 1993: 97). Preparation of the impact assessments, when this occurred at all, was typically the end point of environmental management. There has been virtually no monitoring after assessment, nor was there assurance that funding would be provided by proponents to carry out recommendations.

Underemphasis on social impacts, limited provision for public participation, and failure to require publication of AMDAL reports are further criticisms of impact assessment practice to date. Government officials, private sector consultants and academics concurred that the AMDAL process required simplification and streamlining which would reduce costs, encourage greater compliance and focus attention on the most serious environmental impacts rather than dissipate the management process in the production of over-technical and detailed reports which bog down the system and produce few practical results (Kasryno et al. 1991: 169; EMDI 1992:66; Doberstein 1993:24).

In response to the recognised need for reform, a new government regulation (PP51/1993), revising environmental impact assessment procedures replaced PP29/1986. The new regulation was part of a package of economic deregulation measures and is clearly aimed at facilitating business investment (*Tempo* 8 November 1993). Nevertheless, it is expected on balance to strengthen the environmental impact assessment process (Neame and Lubis 1993). In particular, explicit linkage of operating permits to implementation of management and monitoring plans (RPL and RKL) offers the prospect of improved enforcement. At the same time, a number of loopholes may prove counter effective. Not all developments require an operating permit; trial operations may begin before pollution control facilities are in place; and the legal obligation for the permit-issuing agency to take account of RKL/RPL implementation is unclear

(personal communication, 1994).

The regulation clarifies some departmental responsibilities and reduces the number of stages involved and time-limits set for the review process. It remains to be seen what resources will be made available to BAPEDAL and the AMDAL Commissions for monitoring and whether refusal of operating permits for failure to implement RKL and RPL will be applied consistently. But even potential use of this provision as a vehicle of enforcement is a significant risk to reticent investors, and should prove an incentive toward satisfying at least formal requirements of the AMDAL process. Furthermore, the inclusion of non-government organisations in AMDAL Commissions under the new AMDAL regulation should broaden public awareness and participation in the environmental impact assessment process.

Ultimately, upgrading environmental practices depends as much upon the changing political context within which they operate, as it does on the technical provisions of the new regulatory regime. The high profile which the Environment Ministry and Emil Salim in particular have given environmental issues, has had a powerful effect on public perception and the degree of media exposure which environmental matters attract. Indirectly, this has been important in building the political pressure to treat environmental questions seriously, which in turn has been feeding slowly back into the institutional sphere.

A very important factor in changing the climate in which environmental management takes place, has been the influence of international agencies such as the World Bank and the Asian Development Bank. Their requirements for environmental impact assessment through terms of funding for infrastructure projects have been an important stimulus to establishing standards globally. After historic problems with major projects, such as the Kedung Ombo dam in Java, they have become sensitized to the need for ensuring thorough environmental and social impact reviews. Both banks insist on initial environmental evaluation of every project 120 days prior to voting on funding and both have been prepared in recent years to withdraw or alter projects, at least where negative impacts and strong public reaction overwhelmingly outweighed economic advantages. They have contributed substantially to the enhancement of Indonesia's planning and technical capacity in environmental management, as have bilateral arrangements, particularly with the Canadian International Development Agency (CIDA). Donor policies have encouraged better institutional linkages, the World Bank

requiring, for example, that the Indonesian Public Works Department liaise with the Asian Wetlands Bureau in their Integrated Swamps Development Projects and that sectoral impact assessments be adopted for the Rural Roads Project (EMDI 1992:92).

Bank practices are not always consistent, however. A Canadian consultancy review indicated that some 'wrong messages' on environmental planning were still being sent by these powerful lending institutions. An Asian Development Bank-funded tree-crop project in Irian Jaya, for example, proceeded almost to land-clearing stage before the bank insisted on the requirement to carry out an AMDAL (EMDI 1992:98ff). Follow-up funding for implementation and monitoring has also been wanting. World Bank sponsored impact assessment recommendations for solid waste management in the urban tourist zone of Bali soon gave way to open-dumping because the infrastructure necessary to support even the minimum sanitation system stipulated in its report was not financed (Doberstein 1993: 13).

Like the Indonesian government, lending institutions have been responding to heightened international criticism of environmental policy. In some instances public opinion has exerted direct influence on project proponents, as in the case of Scott Industries' withdrawal from a partnership with PT Astra to build a pulp factory in Irian Jaya after international publicity about local social and environmental consequences. Similarly, a number of companies have installed pollution control equipment because of the importance of maintaining a green image among consumers (*Prospek* 6 July 1991:88; *Tempo* 18 June 1988:100). Particularly for large transnationals, there can be profit in introducing best environmental practice in their subsidiaries. Ciba-Geigy installed a new paint factory near Jakarta which reputedly used the most advanced processes and would produce no pollution at all (Cribb 1990:1130).

There is no question that social and environmental impacts are now mainstream considerations in development planning, not least, as Emil Salim has pointed out, because their resolution has become an important condition of successful competition on the international market (*Prospek* 6 July 1991: 88). Conflicts between competing economic interests over resource bases have also served to fuel the drive for environmental regulation. Highly publicised confrontations over the destruction of fisheries and prawn farms resulting from industrial pollution of waterways; over the loss of agricultural land to urban expansion and resort complexes; and over

community-based forestry and environmental tourism as economic alternatives to wanton destruction of Indonesia's forests under timber concessions, have turned what were once localised community issues into more broadly based debates over the allocation of Indonesia's resources. The solutions to environmental management problems in Indonesia will depend as much on comprehensive systemic changes of a legal and political nature as on upgrading technical skills and facilities. In this respect the role of non-government organisations and the media are pivotal.

Non-government organisations have been in the forefront of the environment movement in Indonesia. WALHI, a national forum bringing together a large number of diverse NGOs throughout the country, was founded in 1980. Now numbering in the hundreds, its member groups include those focused on specific local or single issue environmental concerns and others which have broad social agendas as well. WALHI has worked closely with the Legal Aid Institute (LBH) in attempting to enlist the judicial system in environmental protection. The decision of member groups to commit WALHI to a higher profile advocacy role at the organisation's 1992 conference signalled a concerted move beyond public awareness campaigns and lobbying toward judicial activism (*Environesia* October 1993:9). Pursuit of environmental protection through the judicial system is likely to be enhanced by the foundation in 1993 of the Indonesian Centre for Environmental Law, which maintains links with LBH. Like the environment movement in other parts of the world, WALHI has expanded its brief to the social sphere, building alliances with social justice and consumer groups to present common cause.

In the past, the courts have not shown a willingness to act independently of executive policy or against well-connected parties and have been strongly criticised for their weakness in applying basic principles of environmental law (Arimbi 1993:14). A limited number of suits have found their way to the courts under the 1982 Environment Act, but these have been conducted mainly against small companies and most have failed to achieve direct positive outcomes. Where local people attempted to take action against several factories polluting the Sambong River (Semarang, Java) in 1992, press reporting and NGO activism did bring about some changes in company practices, but the Legal Aid Institute was unable to prosecute their case for compensation in the courts because of the difficulty of proving liability (Hamzah et al. 1993:49-70). It is indicative of the early stages in the development

of implementation mechanisms, that merely getting environment cases to court could be regarded as a kind of success (Arimbi 1993:13)².

One defeat which was nevertheless a landmark in the development of environmental litigation in Indonesia was the 1989 decision by the central Jakarta State Court in the PT IIU (Indorayon) case. The owners of the pulp and rayon factory were accused of polluting the Asahan River in North Sumatra through poor logging practices and disposal of toxic waste into the important waterway, destroying rice farms, fisheries and adversely affecting the health of the local population.³ The court's decision went against the litigants, but did find that the environment constituted common property, and recognised for the first time the right of parties who did not have a proprietary stake in a dispute to initiate civil cases. Conservation groups such as WALHI were accepted as legitimate representatives of the public interest and of the environment, now recognised as a legal subject in its own right (*Environesia* October 1993: 10; Saman et al.1993).

Because of the complexity, expense, delays and lack of independence of the Indonesian legal system, other avenues of legal redress are currently being tested (Nicholson 1994). Alternative Dispute Resolution through negotiation and mediation was adopted in an industrial pollution case involving several factories along the Tapak River in Semarang, Central Java (*Environesia* Jan-Mar 1993). In the Tapak River case, agreements to compensate the affected communities and a commitment to upgrade waste dumping systems and rehabilitate the river resulted from an NGO organised boycott of products (including Coca Cola) using chemicals produced by the offending companies.

However, resort to mediation is only a serious option if backed by a legal system with powers of enforcement, or the prospect of adverse publicity and organised sanctions. In the Tapak River case, where residents had suffered the effects of pollution from these factories for 14 years and where effluents were ruining the commercial interests of downstream prawn farms, negotiations initiated in 1979 with government and factory officials had little effect until 1991 when the consumer boycott, Indonesia's first on this scale, was organised by 15 NGOs and local farmers' groups (*Prospek* 6 July 1991:90; Hamzah et al. 1993:5-6). Because the press have become more outspoken and local communities have increasingly begun to feel the impact of environmental damage, public awareness of environmental issues in Indonesia is very high. Accordingly, the

prospect of further development of formal and informal mechanisms for environmental protection is promising.

Forestry policy is undoubtedly the most contentious issue in the struggle over resources and environment as a national political question, and one which illustrates the important role of the press and NGOs. The timber industry has come under close scrutiny as a result of the combined effects of environmental activism at local and international level, media exposure and questions about the economic efficiency of current practices. These have brought about potentially significant policy shifts over the last decade, although few genuine conservation outcomes can yet be demonstrated with respect to logging policy.

The over-exploitation of Indonesia's forests, which began with the granting of lucrative timber concessions (HPH) when the New Order government came to power in 1966,⁴ was slowed by a ban on the export of raw logs in 1984/5. The resulting reduction in log production was compensated by a dramatic growth in wood processing industries, particularly in plywood production where Indonesia now commands 50% of the world market. But over-expansion of processing industries is now itself putting pressure on forest resources. Current production capacity would require nearly twice the timber supply as official calculations of 'sustainable' yield production would legally permit from timber concessions (WALHI/YLBHI 1993:16-22), and there is substantial evidence that overcapacity is driving illegal forestry practices (*Tempo* 25 September, 1993:92).

Combined economic and political pressures provoked further policy changes in 1990 to provide incentives for industrial tree plantations (HTI) to increase wood supply.⁵ But again, economically driven policies fuelled faster expansion of processing industries, now stimulating pulp and paper investment. In consequence, the demand for timber is already outstripping plantation development and creating an 'entirely new pressure on native forest' (WALHI/YLBHI 1993:29). Although industrial forest plantations were intended to regenerate critical deforested lands, the new policies have instead promoted the conversion of natural forest, in some instances classified as 'protected', to plantation monocultures (Saman et al. 1993:92).

Timber concessions are a particularly sensitive issue in Indonesia because of the political interests of many powerful figures connected with the industry. But this does not mean that it has been invulnerable to criticism, particularly where the environmental and economic interests of the public demonstrably coincide. A cover

story in *Tempo* (26 October 1991), titled 'Who Owns Our Forests'⁶ based on economic research commissioned by WALHI, sparked heated debate over forest industry policy. The research focused on the small percentage of profits from exploitation of Indonesia's forests accruing to the public purse. Income to the state from this national resource amounted to only 17%. The study pointed out that if the government collected the same 85% in royalties from the timber industry that it does from oil, this income would equal half of Indonesia's annual foreign public borrowing. The *Tempo* article initiated open debate about who benefited from the wastage of Indonesia's timber resources and precipitated calls for an increase in government levies for the sake of conservation, social welfare as well as industry efficiency.⁷ These demands were not without effect. Following the 1992 election, the Minister for Forestry was replaced in the new Cabinet and timber exploitation royalties were raised.

Collusive arrangements between concessionaires, powerful political figures and 'grossly inadequate supervision' by Forestry Department officials have been long-standing criticisms of Indonesian forest management (WALHI/YLBHI 1993:11-13). Differences in statistics on effective demand from local processing industries compared with officially reported log production, not to mention evidence from satellite imaging, indicate that under-reporting of logging in Indonesia's forests is rife (Hamilton, forthcoming; *Tempo* 25 September, 1993:92).

In the past, companies exceeding the conditions of their permits have only been prosecuted, if at all, under 'timber theft' charges which carry light penalties (*Tempo* 5 December, 1992). But after a public campaign launched by Greenpeace and SKEPHI⁸ accusing license holders of violating the conditions of their permits, 27 companies including one in the powerful Barito Pacific Timber Group had their licenses revoked (*Editor* 11 September 1993:11). In addition, as of July 1993, 40 logging companies had been fined Rp 5.1 billion (US \$2.2 million) for exploitation violations and 7.6 billion in fines were served against four companies for infringement of timber management regulations and royalty payments. But, in the light of past experience, it remains to be seen to what extent the Forestry Department will be able to carry out in practice the new hard line on enforcement it has presented to the public (personal communication 1994).

'Development' has been the cornerstone of the New Order government's legitimacy and any movement that can be portrayed as 'anti-development' still risks being labelled subversive. Ironically, at

the same time a steady stream of initiatives in environmental legislation and programming are being undertaken and when government is making overtures to non-government organisations to help in its poverty alleviation platform, Indonesia's Vice-president and other government and military figures have repeatedly alluded to environmentalists and human rights activists as 'new traitors' (*penghianat baru*) threatening Indonesian national security (see *Editor* 11 September 1993 cover story). Public concern about environmental issues and a changing international climate of opinion on the kind of development that can be sustained in the long term are not likely to be reversible. The new awareness is of such countervailing import, that the environment is not only on the agenda in Indonesia, but environmental politics have become integrally allied with related social and political issues such as poverty alleviation, media 'openness' and democratisation. To a large extent the environment will share their fate.

Law does not operate in a vacuum. Public opinion, a free press to inform it and an open political system to insure its full expression are essential elements of an effective regulatory regime. Over the last five years in Indonesia, changes in all these spheres have been moving at a rapid pace. Notwithstanding ambiguous outcomes to date, among the more notable signs of change have been first steps toward bringing environmental practice into line with the law.

Indonesia: Government Structure

Indonesia is a nation of over 13 thousand islands with a central rather than federated form of government based in Jakarta. It is divided for administrative purposes into 27 provinces (*propinsi*), in turn subdivided into regions (*kabupaten*), districts (*kecamatan*) and villages (*desa*).

Provinces are also referred to as Level I of local government; regions (*kabupaten*) as Level II. Both have partly elected assemblies (DPRD). Like their central government counterpart, the DPR-RI, these are largely consultative and have to date had their functions almost entirely subordinated to executive power.⁹ In the lengthy process of passage, however, legislation sometimes does undergo significant modification through informal political processes.

The provinces are dependent on central government for funding and subordinate to central policy and regulation. Although there has been an official policy shift towards decentralisation, prompted by the need to reduce administrative overlap and to better distribute economic development (to date disproportionately focused on Jakarta), there has been little diminution of central government authority (Priyono 1993).

The major planning agency in Indonesia is the National Development Planning Board (BAPPENAS) which controls the allocation of budget funds and co-ordinates development plans in all sectors. Its counterpart at the provincial level, the Regional Development Planning Board (BAPPEDA), is responsible for co-ordinating the activities of both the provincial offices of the sectoral Ministries (Kanwil) and their counterpart offices in the provincial administration (Dinas) (Priyono 1991:93).

Environmental Protection: Legislation and Agencies

*Act 4 1982 Basic Provisions for Management of the Living Environment (UULH 4/1982)*¹⁰

Presidential Decree 23 1990 Agency for Environmental Impact Control [BAPEDAL], (KepPres 23 /1990)

The key piece of legislation governing environmental management in Indonesia is the 1982 Act setting out Basic Provisions for Management of the Living Environment (UULH 4/1982). It outlines in general terms the roles of the Environment Ministry and the agencies at central and provincial level with responsibility for the environment. It states that the management of the environment shall be co-ordinated by the Minister for the Environment and implemented through departments and agencies in central government and by regional governments in accordance with national legislation. In 1990 a central government agency, BAPEDAL, was created to ensure that the policies of the Environment Ministry, which lacks a departmental arm of its own, along with standards and controls administered by the line agencies and provinces, are put into effect.

The Environment Act (UULH 4/1982) encodes the right of all Indonesians to a healthy environment and their reciprocal obligation to maintain it (§5). It establishes the 'polluter pays' principle and the requirement for environmental impact assessment. A link between licensing and protection of the environment is established and the need for public participation and the development of environmental awareness noted. The Act allows a role for 'self reliant community institutions [which] shall perform a supporting role in the management of the living environment' (§19).

Under the 1982 law, resources are controlled by the State, to be 'utilized for the maximum welfare of the people'. This gives the State the authority to regulate the allocation, development, provision, management and supervision of resources; to regulate legal relations between people in this regard; and to establish environmental taxes and retributions (§10).

Basic laws such as the 1960 Basic Agrarian Law (UUPA) and the

1982 Environment Act (UULH 4/1982) present only broad statements of fundamental principle, and require further enabling laws and regulations to be implemented. UULH was intended to provide the basis for further legislation to create a single system of Indonesian environmental law (UULH 4/1982 Elucidation §5; Hardjosoemantri 1991). On the basis of this act, the Environment Ministry drew up a matrix of 96 regulations to be developed. It advised on which government agency should be responsible for or involved in preparing each regulation, and whether the regulations would take the form of an act, government regulation, presidential decree, or adjustment of an existing regulation (Hardjosoemantri 1989:21). By 1992, fifty pieces of environmental legislation had been produced by nine central government agencies in addition to those promulgated by provincial governors (Makarim and Jardine 1992:12).

Within the complicated bureaucratic structure under which Indonesian administration operates, the Environment Ministry (LH) and the enforcement agency, BAPEDAL (*Badan Pengendalian Dampak Lingkungan*), are the two agencies dedicated specifically to environmental management at central government level.

The Environment Ministry comprises four assistant ministries covering: population; natural resources; environmental degradation and control; and public participation, education and communication. While the role of the Environment Ministry has been primarily advisory and concerned with the formulation of legislation and policy, BAPEDAL was specifically established as an enforcement agency.

BAPEDAL was established by Presidential Decree 23 of 1990. It began operations in March 1991 as a non-departmental government agency responsible directly to the President. Its stated role is to assist the President in applying the law to prevent damage, handle impacts and restore the quality of the environment. The facilitation of co-operation between government departments and encouragement of community participation in management of the environment is also part of its brief (KepPres 23/1990 §2-3).

BAPEDAL is divided into two sections. The first, concentrating on pollution control, has divisions responsible for the control of pollution and hazardous waste; the preparation of effluent/emission quality standards, planning and supervision of waste disposal; and the enforcement of environmental quality standards. The second division of BAPEDAL is responsible for development of an environmental framework and is subdivided into directorates covering the

development and control of the environmental impact assessment process (AMDAL); technical guidance; and the development of laboratory facilities for processing data. A fourth directorate for enhancing central and provincial government co-operation was established later (§8).

Limited resources have forced BAPEDAL to concentrate its efforts in a few areas. The first priority is control of surface water pollution through the Clean Rivers Programme - Prokasih. The others in order of priority are: control of air pollution from mobile sources, the Clean Cities Programme, control of environmental destruction from mining and quarrying, environmental impact assessment (AMDAL), hazardous waste management and, finally, control of impacts from small-scale activities (BAPEDAL n.d.).

At the national and cross-sectoral level, resource and environmental policies are determined by BAPPENAS and the Environment Ministry. Sector-specific environmental policy formulation and implementation are handled by the relevant line Ministries (Industry, Health, Public Works, etc.), provincial offices, and the agency for environmental management, BAPEDAL.

Development projects are controlled at two stages. The head of regional Level II government (Bupati) or the regional land agency (BPND) issues a location permit after the suitability of the project site has been determined. At regional level, licences are issued under the Nuisances Ordinance (1926) which controls water usage, and water, air and noise pollution. Regional offices of the sectoral ministries have some autonomy and are involved in the implementation of centrally developed programs. Domestically financed industrial projects are licenced by the Ministry of Industry, but it has yet to exercise control over pollution from these industries in a systematic manner (Makarim and Jardine 1992:12).

Government Regulation PP 51/1993, revising AMDAL, attempts to clarify some of the initial ambiguities of jurisdiction that have plagued implementation of environmental impact regulations. The Ministry of Environment retains its policy-making role, while BAPEDAL has responsibility for establishing and supervising the framework for environmental management and the impact assessment process (AMDAL). Sectoral departments and provincial governments retain responsibility for establishing guidelines and enforcement of environmental regulations in their respective areas. The practical effectiveness of the working relationship between BAPEDAL and sectoral agencies and between central and regional government agencies remains to be seen, however, as does

BAPEDAL's power to ensure that enforcement provisions are carried out. A new Presidential Decree revising the structure of BAPEDAL is expected in 1994.

Environmental Impact Assessment (AMDAL)

Government Regulation 29 1986 Environmental Impact Assessment (AMDAL) (PP 29/1986)

Government Regulation 51 1993 Environmental Impact Assessment (PP 51/1993 [Replacing PP 29/1986])

Ministerial Decree 49 1987 Guidelines for the Determination of Significant Impacts (Ministry of Population and Environment - KepMen 49/1987)

Ministerial Decree 134 1988 The Prevention and Overcoming of Pollution of the Environment as the result of the Activities of Industrial Estates (Ministry of Industry - SK134/M/SK/4/1988)

Ministerial Decree 11 1994 Types of Project or Activity Which Require AMDAL (KepMen 11/1994 - Ministry of Environment)

Ministerial Decree 13 1994 Guidelines for Membership and Working Procedures for AMDAL Commissions (KepMen 13/1994 - Ministry of Environment)

Ministerial Decree 15 1994 Establishment of an Environmental Impact Assessment Commission for Integrated/ Multisectoral Activities (KepMen 15/1994 - Ministry of Environment)

The requirement for environmental impact assessment is based on Article 16 of the Environment Act (UULH 4/1982) which stipulates that any plan likely to have significant impact on the environment shall be subject to environmental assessment. The most important piece of enabling legislation was Government Regulation 29 of 1986 establishing impact assessment procedures known as AMDAL. Many provisions of this regulation underwent major revision when it was superseded in 1993 by Government Regulation 51 (PP51/1993).

The types of business or activities having significant impact are to be specified by the Environmental Impact Management Agency, BAPEDAL, which also establishes criteria for screening individual projects to determine their liability for environmental assessment. The broad principles defining 'significant impact' which would require assessment are set out in Article (§) 2. These include projects or activities which involve:

- a) modifications of landforms and the natural landscape
- b) exploitation of natural resources
- c) potential to cause waste, damage and decline in natural resource utilization
- d) effects on the social and cultural environment
- e) effects on the preservation of natural resource conservation areas or the protection of cultural reserves (heritage sites)
- f) the introduction of new species of plants, animals and micro-organisms
- g) the production and use of biotic and abiotic substances
- h) the use of technologies with environmental impact potential
- i) activities having high risks and affecting national security

(PP 51/1993: §2)

AMDAL is basically a self-assessment procedure. It is carried out by project proponents in accordance with technical guidelines set out by the sectoral department/agency at central or provincial government level under whose jurisdiction the activity falls. A tourism project, for example, would fall under PARPOSTEL, the Department of Tourism, Post and Communications at central government level if it involves foreign capital, and at provincial level for domestically funded projects. Sectoral departments and agencies are in turn overseen by the environmental impact management agency, BAPEDAL. Responsibility for coordination of AMDAL was transferred from the Environment Ministry to BAPEDAL in 1990. Implementation is carried out through AMDAL Commissions established in 14 sectoral government departments and agencies at central government level and in 27 provincial governments (BAPEDAL 1991:1).

When planning a public or private sector development project, the first point of contact is the responsible government authority at national or provincial level. If a project includes foreign investment or requires the assistance of the Indonesian government, the proponent must seek a permit from the Investment Board (BKPM) which may pass the project on to the appropriate agency. Other projects go directly to the responsible government authority - either a sectoral department or non-departmental government agency. At this stage screening of the projects by the relevant AMDAL Commission determines whether they need to enter the AMDAL process and, if so, what the scope of the environmental impact statement (AMDAL) should be.

The AMDAL process involves four documents¹¹:

- KA – terms of reference for environmental impact assessment
- ANDAL – the environmental impact assessment report
- RKL – environmental management plan
- RPL – environmental monitoring plan

Existing activities having an effect on the environment were required to go through a similar process (SEMDAL). However, by mid-1992, the deadline for compliance with SEMDAL requirements, an estimated 85 percent of liable project reviews had not been initiated (Dick and Bailey 1992: 69), and reference to SEMDAL was deleted from the 1993 regulations.

Under Government Regulation PP51/1993, central AMDAL Commissions within sectoral departments are responsible for preparing technical guidelines for the environmental impact assessment process (AMDAL), and for evaluating AMDAL documents (KA, ANDAL, RKL, RPL). They are to assist in the decision-making process of the department or agency to whom they are responsible, and may call on the services of a technical team if required. Provincial AMDAL Commissions appointed by the Governor have responsibility for evaluating and making recommendations on AMDAL documents at this level of government (§17-18).

Final decisions regarding projects reviewed at national level are made by the sectoral Minister in central government and at provincial level by the Governor on recommendation of the relevant AMDAL Commission. AMDAL Commissions are required to take into account government policies on regional development, spatial planning and national security, in addition to standing policy on environmental management (PP51/1993 §19).

AMDAL Commission memberships were expanded in the new regulations to include representatives of the investment and land use agencies (BKPM and BPN) as well as non-government organisations. It is anticipated that this change will lead to better coordination and increased public involvement (Neame and Lubis 1993: 3; KepMen 13/1994).

The role of BAPEDAL is largely supervisory and co-ordinative (PP51/1993 §34). It produces guidelines concerning the composition and organisation of the Central Commissions as well as general guidelines for the preparation of various AMDAL documents, with the authorised government department/agency at provincial or central government level responsible for evaluation and monitoring.

Activities likely to have a 'significant' effect on the environment

require an environmental impact assessment statement (ANDAL). Significance is determined by the number of people affected by the impact, its extent, duration and intensity, the number of other environmental components affected, and the cumulative nature and reversibility of the impact (§3). The ANDAL is considered part of the proponent's feasibility study for proposed projects (§6).

Based on the evaluation of the ANDAL Report by the relevant AMDAL Commission, the authorised government agency must decide within 45 days (reduced from 90 days set under the previous regulation PP29/1986) whether to approve the document. Failure of the Commission to meet this deadline indicates automatic approval (§10). The only circumstances in which the regulations specifically allow for the rejection of a proposed activity are if 'the environmental impact statement (ANDAL) concludes that negative impacts cannot be mitigated based on the present state of science and technology or that mitigation costs are higher than the positive impacts' (§11). In case of rejection, the proponent can appeal to a higher authority who shall consult the Minister in charge of environmental management before making the final decision.

All types of development listed as requiring environmental impact assessment must submit an ANDAL report, an environmental management plan (RKL) and monitoring plan (RPL) to be carried out by the proponent and supervised by the authorised government agency. The 1993 regulations now stipulate that operating permits (*izin usaha tetap*) may not be issued before the AMDAL process is completed and the approved environmental monitoring and management (RKL and RPL) plans implemented (§5). This requirement is intended to strengthen the enforcement capacity previously lacking.

The 1993 regulations provide for streamlining of procedures where multi-sectoral, special industry or planned regional development areas are involved. Special industry zones (such as tourism and industrial estates) or regional development zones will be dealt with by the AMDAL Commission and head of the relevant department/agency. In these cases, the ANDAL is conducted for the entire estate and not necessarily for each business or activity within it. Multi-sectoral projects will prepare a single integrated environmental impact assessment for one-stop evaluation by the Central AMDAL Commission within BAPEDAL (§12-14)¹². Previously, procedures for projects involving more than one ministry, such as mining in a forest reserve area, were complicated by overlapping departmental jurisdictions. Questions have been raised about the

appropriateness of the streamlined assessment provision for special industry zones, however, since the principle is adopted from legislation in developed countries where these zones are occupied by industries of the same type, which is not usually the case in Indonesia (*Tempo* 8 November, 1993).

A number of problems with the implementation of environmental impact assessment have been identified since its introduction, some of which have been dealt with in the 1993 regulatory revisions, while others remain serious obstacles to adequate environmental planning and management.

i) Administrative complexity and institutional inadequacies

A Canadian consultancy review concluded that the Indonesian legislation 'suffers from overambitious objectives and inadequate institutional support' (EMDI 1992: 32). Indonesia's environmental impact assessment provisions are so sweeping that their application given institutional limitations could not be seriously expected. Under the original regulations (PP29/1986), the screening stages alone required such detail to determine the potential significance of a proposed project that the 'decision to proceed with Environmental Impact Assessment could not be made unless an ANDAL had already been completed.' (EMDI 1992: 55)

The many regulations produced by different departments caused confusion, as did the general lack of coordination and delineation of responsibilities between departments and levels of government. Responsibility for implementing the AMDAL process is shared between 14 central government departments or agencies and the provinces; and the relationship between the Environment Ministry and BAPEDAL was itself unclear (EMDI 1992:68). In many cases, the guidelines and regulatory requirements of different departments conflict. Some departments, notably the investment board (BKPM), ignored the AMDAL process entirely. The inclusion of BKPM representatives in AMDAL Commissions under PP51/93 and clarification of BAPEDAL's role as the agency for supervision and management of AMDAL¹³ are meant to resolve these difficulties.

On the technical side, the documents produced by AMDAL consultants have often been inadequate as a result of limited availability of trained personnel, base line data and facilities.¹⁴ Technical inadequacies have also hampered the development of the judicial process. The poor quality of data presented to court has hampered legal actions (World Bank 1190:129; Hardjasoemantri 1992:461). The 1989 Sidoarjo water pollution case was dismissed because of

conflicting evidence from laboratory tests (Arimbi 1993:14).

From the proponents' point of view, the environmental impact assessment process caused lengthy delays in development time frames. This was partly due to the cumbersome nature of the process and difficulties with finding qualified consultants, but may also be attributed to a general lack of appreciation of the importance of environmental impact assessment in identifying long-term effects. The elimination of the Preliminary Impact Assessment (PIL) and the time reduction from 90 to 45 days for AMDAL Commission review under PP51/1993 ameliorate these problems considerably. The new regulation also enables evaluation and approval of monitoring (RPL) and management (RKL) plans along with the ANDAL report where these had previously involved separate stages in the impact assessment process. There is, however, danger that limited resources at the disposal of overloaded AMDAL Commissions may result in projects proceeding by default without sufficient time for thorough review of AMDAL documents.

ii) Monitoring and Enforcement

Where previous regulations tied the granting of permits to approval of management and monitoring plans (RKL and RPL), the 1993 AMDAL regulation requires implementation of these plans before operating permits are issued (§5). The enforcement of article five will depend upon the provision of substantial new resources and a high level of training of technical personnel. Under-resourcing has been a serious problem in implementation of environmental impact assessment since its introduction. AMDAL Commissioners are employed on a part-time basis, making it impossible to review adequately the volume of AMDAL reports which the law requires. Much of the actual work of the Commission is done by technical teams in the department or agency carrying out the review for this reason. These problems do not appear to be addressed by the new regulations. In fact, the reduction of time limits under PP51/1993 in the absence of better resourcing will likely result in a large number of proposals proceeding automatically for want of formal reply by the Commission within the prescribed 45 day period.

The AMDAL process is also vulnerable to conflicts of interest. The same agency that has primary responsibility to serve as an advocate of certain types of industrial development is also expected to conduct environmental impact assessment.¹⁵ Although the earlier regulation required that environmental impact assessment procedures be carried out before government agencies issue permits

authorising projects to proceed (§5 PP29/1986), the boards responsible for foreign and domestic investment (BKPM/BKPMMD) frequently issued permits before projects underwent AMDAL assessment (EMDI 1992:41; *Tempo* 15 May, 1993). In some cases building had been completed before environmental evaluation had been carried out (Doberstein 1993:13). In the case of the Puncak estate development, building permits were issued by regional government before the zoning of the area in question had been settled.

But although the risks of development priorities overriding environmental protection would appear considerable under the current Indonesian AMDAL structure, the general view has been that the advantage of controlling environmental impacts through the planning process, identifying risks before projects are initiated, is of overriding significance and that this is best accomplished by incorporation of AMDAL within sectoral departments (Neame and Lubis 1993).

iii) Public participation

Public awareness is obviously prerequisite to safeguarding the environment. Despite the fact that public disclosure had been required by Regulation 29/1986 from the outset, little attention was paid to this provision, and information regarding particular projects has been difficult to obtain. It is possible that the participation of non-government organisations on the AMDAL Commissions provided under the new regulations will enhance this aspect of the environmental assessment process in future. These are unspecified and non-permanent ministerial appointments, however, and their contribution will depend upon the extent to which genuinely independent groups with popular support are included. Furthermore, the effectiveness of broadening representation on the Commissions will be limited unless BAPEDAL insures greater independence of the Commissions from the more narrowly constructed technical teams. This in turn depends upon proper resourcing of its staff. BAPEDAL currently has only ten professionals in the AMDAL Directorate to administer the entire program (personal communication, 1994).

Of considerable importance in improving the track record of environmental impact assessment will be the level of resources at the disposal of BAPEDAL and the AMDAL Commissions, and the extent of government commitment to upgrading the technical skills and facilities necessary to improve the AMDAL process.

New enabling regulations and guidelines pursuant to the enactment of PP51/1993 will further determine the extent of the reform of

environmental impact assessment procedures. The most recent of these, KepMen 11/1994, lists screening criteria for projects which determine responsibility under AMDAL. It specifies environmentally sensitive areas which require environmental impact assessment in all cases. Project size according to sector is the basic criterion for determining when AMDAL applies otherwise. Considerable discretion remains, however, in the framing of these terms of reference, so that they are likely to remain a source of conflict (personal communication, 1994).

Land-use and Regional Planning

Act 5 1960 The Basic Agrarian Law (UUPA 5/1960)

Act 20 1961 Land Expropriation (UU 20/1961)

Act 24 1993 Spatial Planning Act (UU 24/1992)

Presidential Decree 55 1993 Acquisition of Land for Carrying Out Developments in the Public Interest (KepPres 55/1993)

Changing land-use patterns which have accompanied economic growth and a slowed but still growing population have contributed to Indonesia's environmental management problems, again compounded by overlapping and under-resourced bureaucratic structures. A report by the World Bank in 1990 complained that the current land classification system did not optimise land-use. For instance it found that in Sumatra, one third of forestry department land was deforested but not available for development, while some very steep areas that should have been protected, had been classified for production (1990:xv-xvi). Part of the problem has been the number of central government agencies involved in land-use planning. In contrast, the provincial government, where practical decisions on land-use are typically made, have limited institutional capacity to address land-use problems and limited access to relevant data held by central government (1990:xv).

In 1988, in an effort to deal with some of the country's land-use planning problems, the Government of Indonesia created the National Land Board (BPN), directly accountable to the President, and formed a ministerial level commission to deal with spatial planning. The 1992 Spatial Planning Act (UU 24/1992) establishes the basic framework for zoning and planning for rural and urban land-use, resource development, conservation and other special purposes. Its stated objectives are protection of the environment and achieving coordinated and appropriate utilization of space, human and natural resources. Spatial zoning plans will be established at national, provincial and regional levels as a basis for determining the priorities for land-use, balanced regional development and allocation of investment (§19-23).

The Act recognizes the rights of individuals to appropriate

compensation for the effects of implementing developments according to spatial plans (§4) and provides sanctions for contravention of zoning regulations (§18). It provides for the revocation of permits for activities which are inconsistent with spatial zoning plans at regional level and for appropriate compensation where these can be proved to have been obtained in good faith (§ 26). Broad consultation between sectoral departments and other levels of government, including regional parliaments, before conversion or change in function of a zoned area, is mandated (§ 29). The Spatial Planning Act was hailed as an important step in controlling unilateral approval to changes in land-use by departments with vested interests, as had occurred in the controversial Pantai Indah Kapuk ('Waterfront City') development where protected mangrove and wetland reserves near Jakarta were converted to a residential resort complex with the sole agreement of the Department of Forestry (*Tempo*, 12 September 92; 29 January 94).

Presidential Decree 55/1993 concerns the controversial issue of land acquisition for development projects. Developments in the public interest are defined to include public infrastructure projects such as road, dams, telecommunications and any other development activity approved by Presidential Decree (§5). It specifies that resumption of land for development may only be undertaken if it is in accordance with previously established regional zoning plans (§4). Land Acquisition Committees are to be established at both provincial and regional (*kabupaten*) government levels. These committees have the duty of carrying out investigations and inventories to determine the land and goods affected. After conducting negotiations between those holding rights to the land and government authorities, the Land Acquisition Committee will estimate and advise on the type and size of compensation for land to be expropriated. Land values are to be based on true value, taking account of valuations used for tax purposes. In the event no mutual agreement is achieved between the government and affected parties, the Committee will recommend compensation to the Governor who will make a determination (§ 20). In the event the Governor's decision is contested by the legal land holder, the Governor will submit his request to the President who may order expropriation to proceed under the Land Expropriation Act (UU 20/1961) via the Head of the National Land Board (BPN) and Minister of the Interior (§ 21).

Numerous and protracted land disputes in the recent period have erupted over inadequate compensation to land owners and local resistance to the diversion of productive land for certain types of

development projects such as dams and golf courses (MacAndrews 1986; Lucas 1992). Tjondronegoro (in Harjono 1991:17-35) found no reason to expect improvement in the land conflict situation without significant reform of the legal system and bureaucracy. There appears to be a general consensus among commentators that the incorporation of environmental and social impact assessment in the planning process is of crucial importance in Indonesia and that inclusion of NGOs in the process will facilitate a more balanced appraisal of alternative land and resource uses (World Bank 1990; Dick and Bailey 1992; Neame and Lubis 1993:3). The new provision for Regional AMDAL assessment in the 1993 regulations specifically links environmental assessment with spatial and regional development planning, and further regulations are anticipated to establish the process. Meanwhile, land tenure and land-use conflicts remain among the most intractable social and environmental issues in Indonesian law (CSIS 1991; Hardjono 1991; Lucas 1992).

Resources

The State's right to administer the land, water and air is established in Article 33 of the Constitution. Article 4 of the 1982 Environment Act defines conservation of natural resources as 'management to ensure wise utilisation'. The management of renewable natural resources aims to ensure their continued supply and recognises that for the sake of present and future generations development must take into account environmental considerations (§4 UULH 4/1982).

Agricultural Resources and Land Tenure

The Basic Agrarian Law (UUPA 5/1960).

Presidential Decree 3 1986 Restriction of Dangerous Pesticides (KepPres 3/1986)

Land tenure is of critical import in Indonesia because of its implications for land-use, resource management, environmental protection and human welfare. In Indonesia land tenure has been an extremely sensitive issue since independence, embodying historical tensions in relationships between regional and central government and between Indonesian national and trans-national capital. Foreign nationals are not permitted freehold title under Indonesian Law (UUPA 5/1960, § 21).

The Basic Agrarian Law of 1960 (UUPA 5/1960) remains the foundation of Indonesian land law. It recognises customary (adat) forms of tenure. But these usually corporate and overlapping forms of ownership and use-rights are not easily reconciled with the categories of private land tenure imported from Dutch law.

Both local customary and national land law in turn have a problematic relation to changing patterns of resource access and use in the rapidly expanding Indonesian economy. Global economic integration has exerted mounting pressure to liberalise access to land and resources for international capital. Countervailing pressures

from environmental and human rights groups for the protection of customary land tenure rights and conservation values have at the same time begun to receive recognition in United Nations conventions and aid agency project assessment criteria (World Bank 1990). From both standpoints there is a need for clarification of land law and policy in Indonesia to resolve the large number of disputes over land and resources (World Bank 1990; CSIS 1991).

The Basic Agrarian Law (UUPA 5/1960) recognises the importance of soil, water and air to the creation of a just and prosperous society and asserts the State's obligation to regulate property rights in land and to guide its use. The State claims the authority under the Constitution to regulate the allotment, use, supply and maintenance of land and water, and the exploitation of the natural riches they contain (UUPA §2,§8). It is required to make a General Plan regarding the supply, allotment and use of these resources encompassing: State and community needs; religious, social and cultural purposes; improvements to agriculture, livestock breeding and fisheries; improvements to industry, transmigration and mining. Based on the General Plan, regional governments shall regulate these matters locally (§14). Local customary law is given special recognition under certain conditions:

The agrarian law applicable to soil, water and air, is the 'adat' law in so far as it is not contrary to national and State interests based on national unity, Indonesian socialism, the regulations laid down in this act, and other legislative regulations, in all things with due observance of their basis in religious law (§5).

The Basic Agrarian Law has a strong socialist thrust and refers to particular government responsibility for the protection of economically weak groups (§11). It had considerable political significance in the 1960s in providing for land reform. According to the Law, rights in land have a social function and possession and control of excessive amounts of land are not permitted (§6-7). The maximum or minimum size of land-holdings shall be set by government regulation and the excess may be confiscated and redistributed with compensation (§17). Principles established under UUPA restricting landholdings, prohibiting absentee ownership and regulating sharecropping arrangements are detailed in subsequent regulations and decrees (see UUPA and Land Reform 1984), although there has been little effort at active implementation in the post-1965 period (see Lucas 1992; MacAndrews 1986).

The Government is to prevent the creation of agrarian monopolies and government monopolies may only be created by legislation (§13).

The Basic Agrarian Law recognises the following categories of rights in land:

1. *Hak Milik* is a right of private property ownership. This fullest form of property rights to land is restricted to Indonesian citizens. (§20-26).
2. *Hak guna-usaha* is the right to cultivate land directly administered by the State for agricultural, fishery or breeding enterprises. The standard period of this use right is 25 to 35 years depending upon the purpose, but could be extended for a further term (§29). It is open to Indonesian citizens and corporate bodies established according to Indonesian law and domiciled in Indonesia (§30).
3. *Hak guna-bangunan* is the right of Indonesian citizens and corporate bodies to establish constructions on land owned by the State or private owner (*hak milik*) by mutual agreement for a standard period of up to 30 years which may be extended for 20 years (§35-40).
4. *Hak pakai* is the right to use and/or collect the products from land directly administered by the State or owned privately by mutual agreement. It may be obtained by Indonesian citizens, resident aliens, local and foreign corporate bodies (§41-43).
5. *Hak sewa* covers the use of private (*hak milik*) land for building purposes accompanied by payment of rent. It may be obtained by Indonesian citizens, resident aliens, local and foreign corporate bodies (§44-45).
6. *Hak membuka tanah dan memungut hasil hutan* is the right of Indonesian citizens to open land for farming and to collect forest products, but does not give automatic *hak milik* right to land (§46).

These rights to land may be resumed with appropriate compensation if it is in the interests of the State and the people (§18).

The law establishes a register of land and procedures for land registration through the Department of Agriculture (§19). Despite projects to expedite the issue of land titles, budgetary limitations, the complexity of the process and the high costs of official and unofficial payments 'which frequently exceed the value of the land itself', mean that the vast proportion of Indonesians in rural areas have not been issued official land titles (World Bank 1990:164-65).

Rights to the use of water *hak guna-air* and space *hak guna-ruang-*

angkasa are to be dealt with by additional government regulation (§47-48).

Everyone has the obligation to maintain the land, increase its fertility and avoid damage (§15). Penalties for infringement of Article 15 and other provisions of the Act are set out in Article 52.

Agriculture accounts for about 20% of the GNP and more than half the workforce of Indonesia (Kasryno et al 1991:161). Since the mid-1970s Indonesia has become aware of the cost of environmental degradation and has instigated measures aimed at more sustainable agricultural development. For instance, upland Java has a serious soil erosion problem, with 13 watersheds considered to be in a critical condition. The overuse of pesticides resulting from rice intensification programs has also caused problems. The aggressive promotion of high-yielding varieties of rice and the chemical fertilizers and pesticides upon which they depend had serious consequences for water and soil quality as well as the ecological balance of the wet-rice farming regime. A land conservation farming system which recommends crops and farming techniques for various degrees of slope and an integrated pest management program which gives priority to non-pesticide agents for pest and disease control have recently been introduced with some positive results. Presidential Decree 3/1986 restricting the distribution of dangerous pesticides has reduced pesticide use considerably (Fox 1991:74-84). Other programs focus on shifting cultivators and rehabilitation of degraded agricultural land (Kasryno et al. 1991:161-163), although emphasis on the deleterious effects of traditional farming systems is exaggerated by contrast with the impact of plantation agriculture and the timber industry (Dove 1985; WALHI/YLBHI 1993).

One of the most serious problems for Indonesian agriculture and food self-sufficiency, again affected by poorly coordinated planning and weak law enforcement, is the diversion of land in the most fertile and productive wet-rice cultivating regions of Java and Bali to other purposes (industrial and residential estates, tourism resorts, etc.). This poses serious risks to the hard won food self-sufficiency which Indonesia achieved in the 1980s. Fox warns that 'without strenuous efforts on the part of the government to regulate land-use, a great deal more land will be taken out of production' (1991:82).

Forestry

Act 5 1967 Basic Provisions on Forestry (UU5/1967)

Government Regulation 33 1970 Forestry Planning (PP33/1970)

Government Regulation 28 1985 Forest Protection (PP28/1985)

Government Regulation 7 1990 Timber Estate Forest Concessions (PP7/1990)

The Ministry of Forestry is responsible for the management of 75% of Indonesia's land area (World Bank 1990:xiii,155). This includes management of timber production, reforestation, soil conservation, protected land and marine areas and wildlife. Under the Environmental Management Act of 1982, the Ministry of Forestry is responsible for the implementation of AMDAL processes for the activities under its jurisdiction.

The Basic Provisions on Forestry Act (UU5/1967) establishes State control of all forests in Indonesia, private and State owned (§5). All State forest as determined by the Minister, and cleared land that the Minister considers should be reforested, shall be maintained as 'permanent forest' (§4).

The Government shall produce a general plan setting out the purpose, allotment, supply and use of forest for multiple purposes by sustainable means (§6). The plan will cover the regulation of irrigation systems, the prevention of flood and erosion, the production and marketing of forest goods, income sources from the forest, protection of wildlife, as well as migration, agriculture, estates, cattle breeding, etc., that affect forest areas.

Forest management and administration is the responsibility of central government which may delegate some of its authority to regional government (§10-11). Private forests will be administered by the owner under the guidance of the Minister and in accordance with management principles set down in the Act (§11). Rights to forest management can be granted to private enterprise under subsequent regulations (§14).

According to Article 13, forest management is intended to insure 'the production of forest products for the development of the national economy and the welfare of the people' and should cover planting, maintaining, harvesting, processing, and marketing of forest products.

The act recognises traditional use-rights, including the rights to open forest, rear cattle, hunt wild animals and collect forest produce,

but these shall not hinder the implementation of provisions of the Act (§17 and elucidation). Forestry officers are granted special police authority in relation to this act (§18-19).

Under the Act, several implementing regulations have been promulgated. The most important among these are:

– Government Regulation 33 of 1970 on Forestry Planning covers the survey and inventory of forest resources, the General Plan for forests and watershed areas, guidelines for the determination of forests and their functions.

– Government Regulation 28 of 1985 concerning Forest Protection provides for the implementation of Article 15 of the 1982 Environment Act regarding the protection of forest areas and forest reserves. The regulations provide for the marking of forest boundaries and approvals for the use of forest areas which differ from allocated functions. Permits are required for the cultivation or habitation of forest area or forest reserve or for the felling of trees (§7,9). Permits for exploration or exploitation for mining can be issued by the competent agency (e.g. Ministry of Mining and Energy) after approval is obtained from the Minister of Forestry (§7). Forest produce cannot be collected by unsuitable means (§7) and cattle grazing and grass collection can only occur in designated areas (§11). Protection of water resources in forested areas is covered by Article 8, but the specification of areas where the felling of trees is prohibited in order to protect water resources is left to further regulation by the Minister responsible for irrigation.

Provincial forestry agencies are responsible for forest protection. Forest concession holders also have responsibility for protection of the forest area to which they hold rights (§15). The rights of forestry officers and others in implementing the Act and penalties for infringement are set out in Articles 6 through 18.

Articles 13 and 14 deal with the calculation of the State levy on forest products and foreshadow further regulation by the Minister (§13).

– Government Regulation 7 of 1990 concerning the Timber Estate Forest Concession aims to increase the productivity of the forest while guaranteeing the permanent supply of forest products for industrial raw materials through the establishment of forestry plantations (HTI). Areas suitable for plantation forestry would be decided by the Minister and would be within unproductive sectors of the permanent production forest area (§5). Silviculture shall be based on clear felling and replanting (§4). The Act allows HTI concessions of 300,000 hectares for plantations sup-

porting the pulp industry and 60,000 hectares for those supporting the craft wood or other industries (§6). HTI concessions can be granted to State Companies, Private Companies or Co-operatives. They do not apply to areas already subject to Forest Exploitation Rights (HPH) (§7). Concessions of 35 years will be granted to those applicants who meet the requirements of the Minister on the recommendation of the head of the province concerned (§8).

Plantation Forest concession holders are obligated to produce and implement a general plan with guidelines for exploitation of the land as well as annual plans. Within five years one-tenth of the concession area, and within 25 years the entire area must be planted. Concession holders must immediately replant after felling trees and must pay levies to the Government for forest products collected as well as for concession rights (§12). They are also required to employ experts in the fields of forest planning, silviculture and forest exploitation (§13).

At the termination of the HTI concession, the infrastructure facilities and plants on the concession area become the property of the State (§17). The HTI concession can be revoked if the concession holder: does not begin implementation within 12 months; fails to submit a general or annual work plan; leaves the area for two years; does not pay the levies due; or is negligent in implementation of the HTI (§18). If the concession holder fails to plant the required area, the area can be reduced by the Minister (§19). Penalties for damage to the forest by concession holders shall be proportionate to the degree of damage caused. These are to be set out in subsequent Ministerial regulations (§20).

The 144 million hectares of land under the jurisdiction of the Forestry Department are officially allocated as follows:

- 13% Conservation Forest and national parks; logging and hunting are prohibited.
- 21% Protection Forest – for watershed protection; logging is prohibited.
- 45% Production Forest – for wood production using selective logging methods.
- 21% Conversion Forest – for conversion to agriculture and plantations; clear felling is permitted.

Half of the 113 million hectares in the first three 'permanent forest' categories are in limited and regular production forest. Of the 60

million hectares set aside for production, half has already been logged. An NGO study cites Ministry of Forestry estimates that only 4% of concession holders followed selective cutting guidelines properly, and concludes that paper commitments to improved management policies are irrelevant unless the Government begins to take enforcement seriously (WALHI/YLBHI 1992:59-60). In addition, fire has become an increasingly serious threat to forest conservation in Indonesia: 3.6 million hectares were destroyed in the East Kalimantan forest fire of 1982/83 alone. Increased incidence of serious forest fires has been attributed to a build up of forest floor litter together with drier micro-climates induced by logging. There is concern that with deforestation occurring at up to one million hectares per year, the future of the forests and the long term availability of forest resources is in jeopardy (World Bank 1990:xix-xx).

Mining

Act 11 1967 Basic Mining Regulations (UU11/1967)

Act 44 1960 Oil and Natural Gas Mining (UU 44/1960)

Act 8 1971 The Oil and Natural Gas Mining Corporation, PERTAMINA (UU8/1971)

Government Regulation 17 1974 Control of Mineral Oil and Natural Gas Exploration (PP17/1974)

Act 11 1967 on Basic Mining Regulations covers the categorisation and allocation of mineral resources and the licensing of mining enterprises. Minerals considered 'strategic' or 'vital' are controlled and regulated by the Minister for Mining while exploitation of the less important minerals is regulated by Provincial Governments (§3). Mining of 'strategic' minerals is restricted to Government or State Enterprises unless mining by a private party can yield a greater profit for the State (§6-7).

The contents and requirements for obtaining a mining permit are set down by Government regulation (§15). The holder of a mining permit is subject to a State levy (§28) and is obliged to compensate the owner of the land for any resulting losses to surface land-use (§25).

Act 44 of 1960 regarding oil and natural gas mining laid the legal

basis for the exploration and exploitation of Indonesian waters and the continental shelf for oil and natural gas. The intensified search for these fuels created the need for greater legal control, resulting in the establishment of a State Mineral Oil and Natural Gas Mining Corporation, PERTAMINA, under Act 8 of 1971.

Government Regulation 17 of 1974 on the control of Mineral Oil and Natural Gas Exploration and Exploitation in Offshore Areas outlined the functions of the Mineral Oil and Natural Gas Directorate. It set down the obligations and functions of the operator, in this case PERTAMINA or operators contracted to work for PERTAMINA in relation to exploration, development and assessment (§§36-46). These obligations included several environmental considerations. Specifically, Article 14 of the Act prohibited the operator from 'causing sea and river water, coastal and air pollution from crude oil or its processed products, destructive gas, poison containing acid, radioactive material, unused as well as excess goods and the like'. The Regulation makes the operator responsible if pollution occurs, and sets penalties of fines or imprisonment for infringement (§61-63).

Approval of the Minister for Mining and another relevant minister is required for exploitation or exploration in an area encompassing an important archaeological site, nature preservation area or declared tourism area, at a site generally known for spawning, rock, pearl and coral formations, or important for scientific or defense purposes (§13). Article 46 covers the burning of oil and the disposal of other waste. The Directorate's inspector has the authority to enter premises to ensure the operator is meeting his obligations including that of the prevention of oil and gas wastage or pollution (§10).

Because of the large amounts of capital and potential profits involved, and because most mining developments have taken place in the less densely populated parts of Indonesia, economic incentives almost invariably determine priorities in project approvals (Donner 1987; Connell and Howitt 1991). On the other hand, most of these are large multi-national concerns with international reputations to protect. For this reason environmental management guidelines, according to some consultants, tend to be treated seriously and in some cases exceed legal requirements (personal communication 1994). Conflicts over land and the disruptive social and economic effects of mining developments on the local people nevertheless remain serious issues in Indonesian law and impact management (Connell and Howitt 1991).

Fisheries and Coastal Resources

Act 4 1960 Indonesian Waters (UU4/1960)

Act 1 1973 Continental Shelf of Indonesia (UU1/1973)

Act 5 1983 Indonesian Exclusive Economic Zone (UU5/1983)

Act 9 1985 Basic Fisheries Act (UU9/1985)

Several Acts outline Indonesia's right to control the exploitation of resources in the waters of the Indonesian archipelago. These acts also establish the principles of conservation and pollution control.

Under Act 5 of 1983 regarding the Indonesian Exclusive Economic Zone (EEZ) the exploration and exploitation of natural resources in the zone requires the consent of the Government or an international agreement (§5.1) and must follow Indonesian Government regulations on management and conservation. Exploitation of animal resources, such as fisheries, by a foreign government or person is permitted if Indonesia is unable to completely utilise the resource itself (§5). This supplements Article 10 of the Continental Shelf Act (UU 1/1973), which requires operators to protect the interests of fisheries and nature conservation zones under pain of losing their licences.

It is mandatory for all activities in the EEZ to include measures to prevent and control pollution of the sea (§8). People responsible for pollution or damage to natural resources shall be strictly liable for the cost of rehabilitation unless they can show that it was due to a natural event or third party (§11). However, the law permits dumping under license from the Indonesian Government (§8).

The major piece of legislation dealing directly with fishery resources is Act 9 of 1985. Its preamble sets out management objectives as improving the living standards of the fishermen, while preserving fishery resources. The fishing territories of Indonesia consist of Indonesian waters, inland waters and those waters within the Indonesian Exclusive Economic Zone (§2).

As a general rule, fishing and fish farming require a licence and are subject to a fishery tax. Small-scale fish farmers or fishermen whose daily living depends on their catch are exempt (§10-11). Fishing without a licence in Indonesian waters or inland waters, in a motor boat of more than 30 gross tons, can incur a fine of 50 million rupiah or five years prison (two and a half years or 25 million rupiah for a smaller vessel) (§25). Fish breeding without a licence may lead to a maximum of 6 months in prison or a five million rupiah fine (§26).

Any action, including catching or breeding of fish which will damage or endanger the preservation of fishery resources and their environment is prohibited (§6). Breaches of these clauses within Indonesian waters or inland waters can result in a fine of up to 100 million rupiah and/or imprisonment of up to ten years.

To implement these provisions, the Minister for Fisheries shall stipulate provisions regarding: fishing devices; technical requirements to be fulfilled by fishing boats (without prejudicing provisions of prevailing regulations regarding shipping safety); quantities, kinds and sizes of fish that can be caught; territories, tracks, seasons of fishing; the spreading of new kinds of fish; fish culture; and the prevention and destruction of pests and diseases (§4).

The Minister shall also produce regulations regarding the prevention of pollution and damage to the environment and the rehabilitation and enhancement of fishery resources. This shall be achieved through reforestation of mangroves, construction of artificial reefs, construction of places for fish breeding, dredging etc. (§4).

The Minister shall prohibit the export or import of certain kinds of fish (§20) with penalties for non-compliance of up to five million rupiah (§27). The inter-island or international transport of live fish shall be subject to quarantine in accordance with prevailing regulations (§5).

The Act spells out the Government's responsibilities to promote the fishing industry. It includes the requirement of the Government to establish an information system to support the implementation of fishery resources, management and development of fishery businesses (§14). It says the Government shall promote research into fishery resources and (§15) organise the education, training and promotion of fishing and fishbreeding (§16). The Government shall 'assist and protect' the undertakings of fishermen and small fish farmers particularly through co-operatives (§17) and shall construct and promote fishery facilities (§18). The Government shall regulate fish trading procedures and promote quality standards in fishery products (§19).

Despite the stress on protection of small scale fishermen in the 1985 law, there is no provision for customary territorial rights to community fisheries analogous to customary rights recognised in the Basic Agrarian Law (UUPA 1960). With the exception of restriction of boats of a certain weight from operating within inshore waters, local fishermen have no legal protection for their rights to traditional fishing grounds and their resources (Zerner 1990). Achieving recognition of access rights for Indonesian fishermen who traditionally fished in Australian waters has been a serious issue for

some years and the subject of a Memorandum of Understanding between the Australian and Indonesian governments (see Campbell and Wilson 1993).

Article 8 allows for the protection of rare fish and marine areas of natural beauty in the interests of science, culture and conservation (§8). Officials authorised to investigate violations of this law are investigators, as stipulated in Article 14 Indonesian Exclusive Economic Zone Act (UU 5/83). Civil servants assigned to the fisheries sector may be authorised to investigate violations as well. Such an official may receive reports or complaints, investigate the suspect, search fishing boats, transportation and storage facilities, confiscate fish, equipment and documents used in violating the law (§31). Central government can delegate responsibility for fishery management to regional administrations (§21).

Water Resources

The Water Resources Development Act (UU 11/1974)

The Water Resources Development Act of 1974 establishes that water and water resources, including natural resources contained within, have a social function and shall be used for the welfare and prosperity of the people and controlled by the State.

The Minister of Public Works is responsible for the co-ordination of general and project planning and for the supervision, exploitation, maintenance, conservation and use of water and water resources, subject to the interests of the departments/agencies concerned. This does not include the administration of underground water resources, which are the responsibility of the Ministry of Mining and Energy (§5). General planning relates to the formulation of basic guidelines for large-scale development programs to be implemented in accordance with defined objectives, taking into account suggestions, project ideas and available knowledge as well as prevailing conditions and circumstances. Project planning involves 'guidelines, designs and specifications for the implementation of specific small-scale projects of a technical nature' (§1) In the case of an emergency the Government is entitled to take precautionary actions or institute protection measures which do not comply with this law (§6).

'Water regulations, water management areas and water resources development shall be based on general and project plans intended to serve the community interest' (§8) and must be in line with

established priorities. Plans for the development of water resources must conform with the basic framework of national development and their implementation shall accord with national, regional and local interests (§8). Licences are required for corporations, associations and individuals to use resources (§11). Intentional defiance of general and project plans or licensing requirements can lead to imprisonment for up to two years and/or a fine of five million rupiah.

The Government shall formulate specific water resource management policies to be implemented by regulation. These shall address: the conditions and procedures for general and project planning and for the use, exploitation, policing and licensing of water and water resources; the regulation and implementation of water resources development as well as waterworks management; the prevention of harmful water pollution; the control of harmful effects of water; the survey and inventory of water resources; and the implementation of information and special training programmes (§10).

Article 12 makes it mandatory for the community, corporation, association or individual who benefits from a particular waterworks or structure to participate in the operation, maintenance and repair of these structures. In the case of waterworks or structures intended to serve the public interest, the central or local government shall be responsible.

Conservation is dealt with in general terms in Article 13 which outlines four areas to be targeted: Soil and water resource conservation, the control of harmful effects of water, the control of pollution and the conservation and protection of waterworks and structures in order to ensure their permanent operation (§13). A licensee who deliberately refrains from carrying out conservation measures may be imprisoned for up to two years and/or fined five million rupiah. Infringements caused by negligence are subject to a maximum of three months detention and/or a fine of up to 50 thousand rupiah.

Corporations, associations and individuals directly benefiting from existing water works or structures shall contribute a share of the costs to the Government, while communities directly benefiting from existing works may be required to share management costs. The financing of all activities within the framework of water and water resources control and development shall be subject to Government Regulation (§14).

The situation of natural resource protection in many parts of Indonesia is approaching a critical condition with severe consequences for the health and livelihood of the general population. With respect to land, forest and water resources which most directly

affect Indonesia's agrarian population, a World Bank report calls for urgent action to improve land and resource management. The World Bank estimates that by the year 2010 Indonesia will experience severe irrigation shortages (World Bank 1990). Groundwater levels have already dropped to alarming levels in some areas (*Tempo* 2 January, 1993:36) and poor water quality as a result of inadequate management of industry and resource development to date is having serious impacts. Recognition of the importance of Indonesia's water system prompted the introduction of a Clean Rivers Programme (Prokasih) in 1989 and more serious attention to the impacts of deforestation on Indonesia's water system.

Conservation

Act 5 1990 Conservation of Living Natural Resources and their Ecosystems (UU 5/1990)

Presidential Decree 32 1990 Management of Protected Zones (KepPres 32/1990)

Act 5 1992 Protection of Cultural Heritage Materials (UU 5/1992)

Colonial conservation policy in the early 20th century had largely focused on protection of individual species, natural heritage sites and areas of special biological interest to scientists. But by the 1980s, 'conservation policy in Indonesia underwent a dramatic transformation from a listless and neglected inheritance of Dutch colonial rule to a dynamic element of national development strategy' (Cribb 1988: 2-3).

The most important piece of legislation regarding nature conservation is Act 5 of 1990 concerning Conservation of Living Natural Resources and their Ecosystems (UU5/1990). The law establishes the principle of sustainable development and recognises the interdependence of elements within ecosystems. Conservation is seen as the responsibility and obligation of the Government and the people (§4) and is to be accomplished through the protection of life support systems; the preservation of diversity of plant and animal species and their ecosystems; and the sustainable utilisation of resources (§5).

Conservation is largely the responsibility of the Ministry of Forestry.

Protection of Life Support Systems

The protection of life support systems requires the maintenance of ecological processes which support life and enhance human welfare (§7) through the designation of areas whose utilisation will be controlled by Government regulation (§8). These could include forests, watersheds, riverbanks, coastal areas, parts of the Indonesian Exclusive Economic Zone, tidal areas, cliffs, steep banks, and areas threatened by heavy pollution (Elucidation §8).

Every holder of rights over land or aquatic systems within a life

support system shall be responsible for maintaining the protection function of the area. The Government shall be responsible for regulation and law enforcement regarding land-use, land management and concession rights within protected life support systems (§9). Article 10 establishes the principle of rehabilitation following the degradation, natural or human, of a life support system area.

Preservation of Biodiversity

The preservation of ecosystems and the diversity of plant and animal species shall be partly achieved through the maintenance of natural sanctuaries in their original condition (§12). The reserves, divided into strict nature reserves or wildlife sanctuaries, will also protect life support systems (§14-15). The establishment, utilisation and management of the reserves and buffer zones will be implemented by government regulation (§16).

Research and development of science, education and other activities protecting breeding stock will be permitted in strict nature reserves. In wildlife sanctuaries, limited tourism is also allowed. But it is prohibited to carry out an activity which changes the integrity of a nature reserve or sanctuary (§19). Species within sanctuaries will be protected from interference to maintain their natural balance with their habitat.

The export, collection, destruction, transportation or trading of protected plants, live or dead, is prohibited (§21). The same restrictions apply to protected animals which also may not be injured or reared. The internal or external export, trading or possession of goods made from protected animals, or skins, bodies or other parts of a protected animal are prohibited as is the destruction of eggs or nests of protected animals (§21). The only exceptions are for the purposes of research, science, safeguarding of the plants or animals or the protection of human life (§22).

Sustainable Utilisation

Sustainable utilisation of living natural resources is to be achieved by two means: through use of the nature conservation area in a manner which maintains its conservation function and through use of wild plants and animals, taking into consideration their long-term potential, carrying capacity and species diversity (§26-28). The law

acknowledges a role for hunting, trading, exhibition, species exchange, cultivation of medicinal plants, research and development (§36).

Nature Conservation Areas are specific terrestrial or aquatic areas whose main functions are to protect life support systems, to preserve diversity of plant and animal species and to conserve living natural resources and their ecosystems for sustainable use (§1). They consist of: National Parks, Grand Forest Parks and Nature Recreation Parks. Activities relating to research, education, breeding enhancement, culture and nature tourism are allowed in all three as long as they do not diminish the main function of each area.

National Parks must possess natural ecosystems which are managed through a zoning system for research, science, education, support cultivation, recreation and tourism. Activities affecting the integrity of the Core Zone are prohibited as are those inconsistent with the function of the other zones in the National, Grand Forest or Nature Recreation Parks (§33). A Grand Forest Park consists of a collection of indigenous and/or introduced plants and animals used for a variety of purposes (§1). The main purpose of a Nature Recreation Park is recreation and tourism (§1).

The parks will be managed by the Government but private developers may be licenced to run tourism and recreation facilities established in the Utilisation Zone (§34). The Government may, by further regulation, delegate to local government some of the responsibilities for implementation of this Act (§38).

Article 35 gives the Government the power to close parts of the parks if it is 'necessary for the maintenance or recovery of living natural resources' (§35).

Any person who intentionally conducts activities which could change the integrity of a strict nature reserve, wildlife sanctuary or core zone of a National Park can be jailed for up to ten years and fined up to 200 million rupiah. Lesser penalties are provided for other offences under the Act (§40). Investigations of criminal actions relating to living natural resources can be carried out by police investigators or designated civil servants (§39).

Presidential Decree 32 of 1990 concerning Management of Protected Zones provides for the establishment of special areas, management of which aims to prevent damage to their environmental function. These zones are intended to protect soil, water, climate, plants, animals, historical values and culture; and maintain biodiversity and natural uniqueness (§2).

Protected zones are divided into four categories:

Category 1: Zones Providing Protection to their Subordinates consist of protected forest, peat and water absorption areas (§4, 7-12).

Category 2: Local Protection Zones consist of coastal boundary lines, river boundary lines, the surrounds of lakes/reservoirs and springs (§5,13-20)

Category 3: Nature Reserve and Cultural Reserve Zones include nature reserves, marine and other water reserves, mangrove forest, National Park, Grand Forest Park and Nature Tourism Park, and Cultural Reserve and Scientific Zones (§6,21-31).

Category 4: Natural Disaster Critical Zones including those identified as under high risk of volcanic eruption, earthquake and land slide (§3,32-33).

The Provincial Government shall stipulate certain areas as Protected Zones after consultations with various sectors and Regional (*Kabupaten*) Governments. If there is inter-sectoral conflict of interest, the Provincial Government shall forward it to the National Spatial Management Team which will recommend a settlement.

The Government has the obligation to make the community aware of its responsibility towards Protected Zones (§36). In Protected Zones, cultivation activities which disturb the protection function are prohibited. Existing cultivation having an important impact on the environment shall be subject to the AMDAL process. If environmental impact analysis finds that the activities disturb the protection function, development of the activities will be prevented and the zone's protection function will be restored in stages (§37).

Mineral and ground water exploration are permitted. Exploitation of deposits, water and other natural riches considered valuable to the State is also permitted in accordance with legislative regulations in effect, and shall be carried out while still maintaining the protection function of the zone (§38). Provision is made for protection and rehabilitation by mining companies and these shall be further regulated by the relevant Minister.

The Regional (*Kabupaten*) Government is responsible for the monitoring and supervision of the Zones but if it is unable to do so shall transfer this responsibility to the Provincial Governor who may pass it on to the National Spatial Management Co-ordinating Team. Each Provincial Administration is expected to stipulate a regional regulation (*Perda - Peraturan Daerah*) stipulating Protected Zones within two years of promulgation of KepPres 32/1990 (§40).

Existing regulations pertaining to the conservation of living natural resources and their ecosystems remain in effect in so far as they do not conflict with UU 5/1990 (§42), but the following legislation is abolished: Hunting Ordinance 1931, Protection of Wild Animals Ordinance 1931, Hunting Ordinance for Java and Madura 1940, Protection of Nature Ordinance 1941 (§43). The Basic Provisions on Forestry Act (UU5/1967) also contains some provisions relevant to conservation and has been summarised in the resources section above. To the extent that this act conflicts with Act 5 of 1990 it will no longer apply.

Act 5 1992 on the Protection of Cultural Heritage Materials places all materials of at least fifty years antiquity which are determined to have cultural, scientific and historical significance under the authority of the nation. The law provides for the registration of heritage materials and their repatriation according to international conventions. Penalties of from one to 10 years gaol and fines of 10 to 100 million rupiah are provided under the law.

Pollution

Act 4 1982 Basic Law on Management of the Living Environment (UULH 4/1982)

Act 5 1984 The Industries Act (UU 5/1984)

Ministerial Decree 134 1988 Handling Environmental Pollution from Industrial Activities (KepMen 134/1988 - Min of Industry)

Ministerial Decree 3 1991 Effluent Standards for Existing Industries (KepMen 3/1991 - Min of Environment)

Until the rapid industrialisation of Indonesia over the last decade, pollution was not regarded as a serious problem. Legal mechanisms for dealing with pollution questions depended upon the Dutch colonial Nuisance Ordinance of 1926 which was vague and largely unenforced (Cribb 1990:1125).

The subsequent development of legislation for the control of industrial impacts in Indonesia is now adequate, according to the World Bank. However, institutional arrangements for monitoring and control of pollution and enforcement powers require strengthening (1990: xxxiii). These matters were partly addressed by the establishment of BAPEDAL, the instigation of the Clean Rivers Program (Prokasih) and the drafting of regulations to control water and air pollution.

The general principles concerning control of pollution are enshrined in the 1982 Basic Law on Environment which proclaims the right of every Indonesian to a healthy environment and their responsibility to prevent and abate environmental pollution (§5). Sustainable development is also established as a legal principle and licensing condition (§7).

The Act paves the way for environmental protection through statutory environmental quality standards covering the quality of the ambient environment as well as domestic and industrial waste. These standards may vary according to differing environments, regions, systems of utilisation and technological development (§15). The specification of standards and provision for pollution prevention and abatement are left to subsequent legislation (§17).

Rehabilitation and civil liability are covered in the Act. Those

responsible for environmental damage or pollution are liable for the costs of restoration, and could be subject to compensation claims from private victims (§20). Details regarding procedures for making complaints, investigating damages, and determining restoration costs are left to future legislation, including the provision for strict liability, in which it is not necessary to prove fault to incur liability for an incident of pollution or environmental damage (§21).

The Act sets maximum penalties for environmental damage while allowing penalties appropriate to specific conditions to be set by subsequent legislation. An intentional action which causes pollution or environmental damage is considered a crime, while an act of negligence constitutes a misdemeanor. A maximum penalty of 100 million rupiah and/or 10 years imprisonment applies to the former while the latter may incur a fine of up to one million rupiah and/or one year in prison (§22).

The Industries Act (UU5/1984), which sets out basic policies for the industrial sector, also covers pollution control. It states that industrial development in Indonesia shall be based on preservation of the environment as well as economic democracy, self-sufficiency and community benefit (§2). To this end, companies are obliged to preserve resources and prevent environmental damage and pollution. Provision is made for some small industries to be exempted from this requirement. The Government's role is to provide guidance and regulations for the implementation of measures to prevent environmental pollution and damage (§21). It may stipulate areas to be developed as industrial centres (§20). In addition, the Industries Act requires that all new and expanding industries, except exempted small-scale industries, obtain an Industrial Operation Licence (§13).

Penalties which apply to deliberate or negligent breaches of the environmental clauses of the Industries Act are the same as those for the Basic Environment Law outlined above (§27). Failure to obtain a licence can result in a similar penalty and in certain circumstances the offending premises could be closed (KepMen 134/1988).

Water Pollution

Water Resources Development Act (UU 11/1974)

Ministerial Decree on Water Monitoring for Health Purposes (KepMen 173/1977 - Health)

Ministerial Decree 12 1978 Prevention, Handling and Mitigating Environmental Pollution Caused by Industrial Activities (KepMen 12/1978 - Min of Industry)

- Presidential Decree 22 1982 Protection of Irrigation Water (KepPres 22/1982)*
Ministerial Decree 286 1989 Guidelines for Granting of Operating Permits to Industry (KepMen 286/1989 - Min of Industry)
Government Regulation 20 1990 Control of Water Pollution (PP 20/1990)
Ministerial Decree 416 1990 Water Quality Standards for Drinking, Sanitation, Bathing, Swimming (KepMen 416/1990 - Min of Health)
Ministerial Decree 528 1990 Ground Water Quality Standards (KepMen 528/1990 - Min of Health)
Ministerial Decree 3 1991 Effluent Standards for Existing Operations (KepMen 3/1991 - Min of Environment)

Problems with the water supply and water pollution could prove to be two of the greatest limiting factors on development in the highly populated and industrialised parts of Indonesia. Demand for water, especially from industry, is expected to increase substantially over the next ten years and those industries which are expanding most rapidly are also highly polluting. The downstream sections of many rivers are already seriously polluted (Makarim & Jardine 1992:3).

The importance of controlling surface water pollution was recognised through the establishment in 1989 of Prokasih, the Clean Rivers Program, which is the flagship project of BAPEDAL. A number of regulatory provisions had also been set by various government agencies at central and provincial level prior to the introduction of this program.

Development of water resources is the primary responsibility of the Ministry of Public Works and it carries some of the responsibility for monitoring ambient and point source water quality in relation to agriculture (UU 11/1974 and KepPres 22/1982). At least eight other central government agencies are involved in water resource management, including the Departments of Health, Industry and Agriculture).

Under the Water Resources Development Act (UU 11/1974) it is mandatory for corporations, associations and individuals to obtain licences for the use of water resources (§11). Licensees are required to carry out certain conservation measures including steps to ensure the conservation of soil and water resources, and to control water pollution (§13). Anyone who deliberately transgresses provisions of the Act can be imprisoned for up to two years and/or fined five million rupiah. This Act is outlined in greater detail in the Resources section above.

The Ministry of Health is responsible for monitoring the chemical and bacterial content of drinking water as well as the quality of water in rivers, lakes and groundwater. In 1977, the Ministry introduced guidelines for water quality and discharge limits on industrial waste-water based on World Health Organisation Guidelines (KepMen 173/1977). These related to drinking, irrigation and aquaculture, while subsequent regulations cover domestic and recreational water use (KepMen 416/1990; KepMen 528/1990). The Public Works Department is also responsible for the monitoring and evaluation of water quality, controlling water pollution, and the supply of clean water for drinking.

The Ministry of Industry is responsible for the control of industrial waste and research into the development of clean technology. A 1978 Ministry of Industry decree concerning industrial pollution covered the use and storage of industrial substances and required the installation of waste water treatment facilities. The decree proved ineffective and was repealed by Ministry of Industry Decree 134/1988.

Similarly, the Water Resources Development Act (UU11/1974), giving provincial governments powers to enforce standards and charge firms for water and waste water discharge have not been exercised because standards were regarded as 'too stringent for existing conditions' (Makarim & Jardine 1992:13). A subsequent government regulation (PP 20/1990) gives Provincial Governors responsibility for the control of water pollution (§13) through the setting of water quality standards in consultation with the Environment Minister (§15) and the licensing of discharges of liquid waste (§26) as part of the environmental impact analysis process (AMDAL). The Public Works Department is also responsible for the monitoring and evaluation of water quality, controlling water pollution, and the supply of clean water for drinking.

Under the new regulation, the Provincial Governor with technical advice shall categorise each waterbody by use and determine the water quality standards appropriate, complying with the overall water quality standards set by the central agency (§10). According to the regulation, the categories for water use in order of water quality are: drinking water which does not require processing; drinking water which requires processing; water for fisheries and cattle breeding; water for agricultural purposes, small, urban business, industries, and hydroelectric power generators (§7).

The Minister for the Environment shall determine waste-water standards after consulting relevant ministers and heads of govern-

ment agencies. The Provincial Governor may, after consulting with the Minister, set standards that are more stringent than those set by the Minister (§15). These, along with the water quality standards and the pollution load carrying capacity must be reviewed every five years (§16).

The regulation foresaw the discharging of liquid waste being controlled through the incorporation of discharge conditions in permits usually issued by the Provincial Government under the Nuisance Ordinance (§26). For activities subject to environmental impact analysis (ANDAL) the conditions set out in the RPL or RKL would also be included as permit conditions. In the case of liquid waste discharge limits set for ANDAL being more stringent than those set by the Minister or Governor under Article 15, the ANDAL standard would prevail (§28).

The 'polluter pays' principle is enshrined in the regulations. The Provincial Government can charge a 'retribution' for the discharge of liquid waste into a water body, location, channel or waste processing facility (§21,22). The cost of prevention and clean-up of water pollution shall be borne by the party responsible (§36), although the Provincial or Regional Government may carry out restoration (§36).

Each person licensed to discharge liquid waste is required to submit a six monthly report to the Governor (§32). Provincial Governors may appoint a regional supervisory authority for the monitoring and evaluation of liquid waste levels, water quality, pollution, and evaluation of reports on liquid waste discharges (§30). Officials of the supervisory authority are authorised to enter any place which is the source of pollution, to examine waste processing equipment and take pollution samples (§31).

The Governor must act immediately to control the spread of any pollution and must report the results of water quality inspections to the Minister for the Environment and other related Ministers (§30). The Governor shall determine and declare water sources that are so polluted as to be hazardous to the public safety (§24) and shall instigate programmes to improve water quality where it falls below the standard for the category concerned (§11).

Reports of suspected pollution may be made to the Provincial Governor through the regional government or police. If the provincial investigation finds the report to be proven, the Governor shall take immediate action to control the pollution (§29). The Governor can issue a warning to any industry/activity discharging waste in excess of the standards/thresholds set by the Minister or Governor. Failure to comply with the deadline contained in the warning shall

result in the Governor withdrawing the permit to discharge liquid waste (§33).

Administrative measures at regional government Level II (*kabupaten*) shall be applied to those that fail to provide a true report of waste discharged or who violate the conditions of discharge set down in their permits (§37). These may take the form of withdrawal of the permit to discharge waste, temporary suspension of activities, sealing of waste discharge channels or other measures provided. This level of regional government is also responsible for regulating the discharge of domestic waste (§27).

Article 34 covers the establishment of laboratories at the central and provincial level.

Effluent standards for 14 major industrial sectors, based on best practicable technology, were specifically set by a 1991 Ministerial Decree concerning Effluent Standards for Existing Operations (KepMen 3/1991). The industries covered were caustic soda, metal planting, leather tannery, oil refinery, oil palm, pulp and paper, rubber, sugar, tapioca, textile, urea fertilizer, ethanol, monosodium glutamate and plywood. For industries not included on the list, the Provincial Governor was given the power to stipulate standards based on general standards attached to the Decree (§7). In implementing KepMen 3/1991, the Governor was also given the discretion to stipulate stricter standards (§12). Article 6 allowed the Government to assist cottage industries in meeting the effluent quality standards (§6). Standards for new and expanded operations were expected to be issued in 1993.

Air Pollution

Act 14 1992 Road Traffic and Transportation Act (UU14/1992)
Ministerial Decree 2 1988 Directives for Determination of Environmental Quality Standards (KepMen 2/1988 - Min of Environment)

There are few national legislative measures to control air emissions in Indonesia and those that have been promulgated have proved difficult to apply. Provincial and capital city governments have produced some regulations to control air emissions.

Under the Road Traffic and Transportation Act (UU14/1992), all motorised vehicles must comply with the limits on exhaust emissions and noise levels to be set down in subsequent regulations (§50). Breaches of these limits can be penalised by up to two

months' gaol or a fine of a maximum of two million rupiah (§67).

BAPEDAL and the Environment Ministry introduced new air pollution regulations in 1993 with BAPEDAL responsible for enforcement. Implementation of the regulations regarding emissions from vehicles and industry would involve the co-operation of several other Ministries and Government agencies including Police, Land Communications, Mining and Energy, Health, Industry and Provincial authorities. In the meantime, Environment Ministerial Decree 2 of 1988 concerning Directives for Determination of Environmental Quality Standards covers ambient and emission standards for air quality.

The Ministry of Industry is responsible for the control of emissions from Industry, while the Ministry of Transportation covers emission testing of vehicles and monitors air quality. In the Provinces, the implementation of air quality standards and control of air pollution is the responsibility of the Governor's office.

Hazardous Materials

Hazardous Substances Ordinance (377/1949).

Act 31 1964 Basic Provisions on Nuclear Energy (UU 31/1964)

Government Regulation 7 1973 Control and Distribution, Storage and Use of Pesticides (PP 7/1973)

Ministerial Decree 453 1983 Hazardous Materials (KepMen 453/1983 - Min of Health).

Government Regulation 20 1990 The Control of Water Pollution (PP 20/1990)

Ministerial Decree 148 1985 Treatment of Poisonous and Hazardous Materials in Industry (KepMen 148/1985 - Min of Industry)

Draft Ministerial Decree 1993 Management of Hazardous Substances (Min of Environment)

Draft Ministerial Decree 1993 Management of Hazardous Waste (BAPEDAL)

Hazardous Substances

Several Ministries are responsible for the regulation of hazardous materials and substances, primarily Industry, Health and Environment.

Ministry of Industry Decree 148 of 1985 concerning the treatment of poisonous and hazardous materials makes companies responsible for the management of hazardous substances from the point of procurement through storage, processing, packing and transportation. It requires companies to produce a safety manual and to report accidents involving hazardous or poisonous materials.

The Department of Health is responsible, under the Hazardous Substances Ordinance of 1949, for the licensing of companies who want to import, manufacture, transport, supply, sell or use disinfectants, cleaning agents, destructive agents or poisonous substances that are hazardous to health. The Ordinance is implemented through Minister for Health Regulation 453 of 1983 concerning hazardous materials which divides these into four classes depending on the degree of danger posed (§2). The Minister may establish a

Commission of experts to recommend classifications of particular materials.

The importation, production, distribution and storage of second, third and fourth class hazardous materials requires a special licence (§3). Production and distribution of first class hazardous materials, those posing extremely high danger, are prohibited unless under special permit from the Minister (§16).

Certain restrictions are also placed on the transportation, storage and use of different classes of hazardous materials (§16). While labelling requirements are spelled out in some detail, the controls on storage and transportation outlined in the regulations are very general (§12).

The Director General of Drug and Food Control is charged with implementing these regulations. In addition to the controls outlined in the regulations, the Director-General can stipulate safety devices to be used in transportation, specify the method of handling hazardous materials and the equipment to be used, and determine further specifications regarding containers and marking (§9,14).

The Minister of Health has the power to prohibit the use of certain hazardous materials in a specified manner or for a specified purpose (§8). Furthermore, the Minister of Health shall stipulate certain hazardous materials which shall be registered with the Ministry prior to production or importation. The procedure for registration shall be set up by the Director General (§11).

The Ministerial regulation does not apply to materials stipulated under Act 31/1964 concerning atomic energy and Act 20/1960 concerning the licensing of firearms.

Regulation PP7/1973, concerning the Control and Distribution, Storage and Use of Pesticides set up a system to control the use of pesticides through registration and directions attached to permits issued by the Minister of Agriculture. It is prohibited to use a pesticide which has not been registered or issued with a permit (§2). Only those pesticides regarded as effective, safe and fulfilling other technical requirements will be given permits (§4) and their circulation, storage or use must comply with the directions on the permit (§6). Ministry of Agriculture officials are authorised to check on storage, worker safety, labelling, packaging and residue levels (§7). Controls on the importation and distribution of pesticides can be imposed by the Minister of Trade on the recommendation of the Minister of Agriculture (§2). Human safety factors shall be regulated by the Minister of Health and Minister of Manpower (§10). Presidential Decree 3/1986 further restricts the distribution of pesti-

cides as part of a program to reduce pesticide use in Indonesia (Fox 1991:74-84).

Hazardous Waste

Relevant legislation includes Minister of Health Regulation 453, 1983 concerning Hazardous Materials which provides that the Minister of Health shall stipulate requirements for the destruction, reprocessing and management of hazardous materials. According to Regulation PP 20/1990 concerning the Control of Water Pollution, the discharge of radioactive materials shall, after consultation with the Minister for the Environment, be arranged by the head of the government authority responsible for atomic power (§18).

At the beginning of 1993, there were no laws specifically dedicated to hazardous waste and few that referred to it in detail. However, BAPEDAL, the Environment Ministry and other relevant Ministries were in the process of drafting government regulations on hazardous waste management. These were intended to cover collection, storage, transportation, labelling, licensing and permits, location of treatment plants, environmental impact assessment (AMDAL) requirements, warning processes for breaches of the law, and penalties. Permits would be handled by the relevant sectoral and provincial departments as well as BAPEDAL at both levels. In a related development, feasibility studies were being conducted for two central hazardous waste treatment facilities to be located in East and West Java. A hazardous waste treatment facility in Jakarta has recently opened and is handling waste for deposit in its secure landfill. Physical-chemical treatment and incinerator facilities are under construction at the site (P. Neame, personal communication, 1994).

The question of the importation of waste from other countries has been a contentious issue in Indonesia because of the dangers of toxic contamination as well as the effect of the waste trade on the recycling industry in Indonesia and the large population of scavengers who depend upon it (*Environesia*, Apr-Jun 1993). At the end of 1992 the Minister of Trade issued a circular (SK 349/1992) banning the importation of plastic waste (*Tempo* 5 December 1992).

Notes

1. Indonesian legislation sets out broad principles of law, but depends upon the issuance of government regulations (*Peraturan Pemerintah*), Presidential and Ministerial Decrees (*Keputusan Presiden/Menteri*) for implementation and enforcement. Often 'the principles for environmental regulation are in place in various pieces of legislation, but the implementing regulations are non-existent' (Arimbi 1993:14).
2. Implementation of court decisions is another problem. Even if the court finds in favour of the complainant, very often penalties, compensation or jail sentences are not carried out (personal communication, 1994).
3. A chlorine gas leak at the Indorayon plant in 1993 once again threw the company's practices into the limelight, prompting the Minister for the Environment to demand a complete environmental audit of Indorayon's operations (*Tempo* 20 November 1993). In March of 1994 Bapedal recommended sanctions including halving of pulp production at the Indorayon plant (*Kompas* 8 March 1994).
4. See Government Regulation 22 of 1967 (PP22/1967) on Forest Exploitation Rights [HPH] and Forest Product Royalties.
5. See Government Regulation No 7 of 1990 (PP7/1990) concerning Timber Estate Forest Concessions [HTI].
6. 'Hutan Kita Milik Siapa'.
7. The 1990 World Bank report also pointed to economic inefficiency and resource decline resulting from underpricing of Indonesia's timber. It recommended raising royalties and recognising smallholder rights to forest products so that both large concessionaires and local people have a stake in the sustainable management of forest resources (1990:137-38).
8. SKEPHI is the acronym for the Indonesian NGO Network for Forest Action.
9. See the Regional Government Act (UU 5/1974). The Ministry of Home Affairs has primary responsibility for overseeing regional and local governments, and is the official liaison between these and central government.
10. Hereafter referred to as The Environment Act.
11. Previous regulations (PP 29/1986) required an additional preliminary information document (PIL). This has been eliminated under the revised rules (PP 51/1993) in order to simplify and speed up the impact assessment

- process, with a consequent increase in responsibility of AMDAL Commissions to properly scope the significant impacts to be assessed in the ANDAL (Neame and Lubis 1993:2).
12. KepMen 15/1994 establishes a special commission specifically to deal with multi-sectoral projects requiring assessment. It includes representatives of BAPEDAL, the Environment and Home Affairs Ministries, Investment Coordination Board, National Land Agency, relevant central government ministries, representatives of the relevant regional government, and of non-government organizations.
 13. In the 1993 regulations, all references to the Ministry for the Environment were deleted, giving BAPEDAL clear responsibility for coordination and supervision.
 14. See the summary of working group discussions among AMDAL consultants and government department representatives in Doberstein (1993:23-35).
 15. Similarly, conflicts of interests arise when AMDAL Commission members are permitted to act as consultants producing the ANDALS which they are engaged to review.
 16. See KepPres 57/1989 and UU 24/1992 regarding the establishment and function of the National Spatial Management Team.
 17. In the case of waterworks, mentioned under the Water Resources Development Act (UU11/1974), water quality standards shall be determined by the Minister for Public Works after consultation with the Minister for the Environment (§10).

Glossary

ADB – Asian Development Bank
 AMDAL – Analysis of Environmental Impact
 AMDAL Commission – commission within each sectoral agency appointed under environmental impact assessment regulations to approve and evaluate AMDAL documents for the authorised government agency at provincial and central government level.
 AMDAL Kawasan – refers to assessment of special-use areas designated by legislation such as Industrial Estates which come under Kep 53/1989 and Tourism areas covered under UU 9/1990 (§13, PP51/1993).
 ANDAL – Environmental Impact Assessment
 BAPEDAL – Environmental Impact Management Agency
 BAPPEDA – Provincial Development Planning and Coordination Board
 BAPPENAS – National Development Planning and Coordination Board
 BKBM – Investment Coordination Board
 BPN – National Land Agency
 CIDA – Canadian International Development Agency
 EMDI – Environmental Management Development in Indonesia Project (Canada- Indonesia)
 HPH – Forest Utilisation Right (Logging Concession)
 HTI – Industrial Forest Plantation
 KA – Terms of Reference for environmental impact assessment established in the scoping process
 KLH – Ministry of Population and Environment
 LBH – Legal Aid Institute
 LSM – Lembaga Swadaya Masyarakat (Non-Government Organisation)
 NGO – Non-government Organisation (LSM in Indonesian)
 PIL – Preliminary Environmental Information Report (eliminated under PP 51/1993)
 PROKASIH – The Clean Rivers Program
 PSL – University-based Environment Study Centres
 REPELITA – Five Year Development Plan
 RKL – environmental management plan

RPL – environmental monitoring plan
 Scoping – the process of establishing the key aspects of significant impacts to be assessed in the ANDAL
 SKEPHI – Indonesian Society for Forest Protection
 UCE – University Consortium for the Environment (Canada - Indonesia)
 WALHI – The Indonesian Environmental Forum (non-government)

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