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Short-term Expert Report 27

The Role of the Environmental Agency in Forest & Land Fires South Sumatra, Indonesia

*Institutional Strengthening & Capacity Building
Of Provincial And District Environmental Agencies*

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PREFACE

The South Sumatra Forest Fire Management Project (SSFFMP) is a technical co-operation project jointly funded, in terms of the financing memorandum IDN/RELEX/1999/0103, by the European Commission and by the Government of the Republic of Indonesia through the Ministry of Forestry (MoF).

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The report has been prepared by:

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The report is acknowledged and approved for circulation by the Project Co-Director when duly signed below.

Palembang, December 2004

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EXECUTIVE SUMMARY

The South Sumatra Forest Fire Management Project requested two months consultancy with two major interrelated tasks 1) Tasks with a focus on Institutional Strengthening and 2) on Capacity building. The consultancy was implemented in the period 8 Sept-8 Nov. 2004. The main focus is on monitoring of fire risk, ongoing fires and fire impacts and the role of the Environmental Agency (BAPEDALDA) in the Province of South Sumatra and three priority Districts (OKI, MUBA and Banyuasin)/

The consultant analysed the organizational structures and mandates in relation to forest and land fire management, the institutional strength and weaknesses, the gaps in competencies and the need for capacity building and training in relation to assumed future mandates and tasks in forest and land fire management. A workshop was organized together with BAPEDALDA Province on the role of the EA¹ (Environmental Agency) in Forest and Land Fire Management with National level (Ministry of Environment), Province and all Districts. A study tour was organized to Riau Province to study the provincial organization on forest and land fire management and the key role and activities of BAPEDALDA Riau.

Recommendations were made for organizational development and institutional strengthening, capacity building and training. Recommendations were also made for environmental monitoring systems and the development of good environmental governance criteria and processes at village and beyond. Several products typically related to mandate of the EA and their assumed role in forest and land fire management are discussed including the options for product and service improvement. Proposals were made to adjust the AWP of SSFFMP for 2005 to include funds for organizational development of the EA and funds for capacity building / training and for the development of environmental governance and monitoring at Village (Desa) level.

The consultant was much encouraged by the open attitude and genuine interest of the EAs' key managers to analyse the organization and to develop plans together on organisational development and training.

The main findings are:

- 1) More than a million hectare of the province has not yet a stable landuse and resource management, and is subject to conflicts on land ownership/tenureship, resource entitlements. The deterioration of natural resources through illegal logging, uncontrolled forest and land (mainly peat) fires is worse than ever during the last 5 –10 years, while the problem of peat fires is increasing.
- 2) The government has no effective strategy or management in place yet to deal with this enormous pressure on resources and the largely uncontrolled conversion of forest.
- 3) The role of the EA in the Province as well in the three Districts in forest and land fire management is very limited. However, the EAs'role in forest and land fire management is more prominent at National Level and in some Provinces, notably Riau.

¹ the EA This refers to different forms of Environmental Agencies (BAPEDALDA, Dinas LH, and joint offices of LH with Mining and Energy etc.

- 4) The organization of the EA is relative young with initial development of personnel and organization structure. It was recently (2002) merged with the Ministry of Environment (MenLH)
- 5) The decentralization drive within the Government of Indonesia since 2001 had a huge impact on the Government agencies, in particular at the Districts. The recent splitting of Districts since the decentralisation causes a temporary weakness in available personnel, expertise and management and networks.
- 6) The prevailing local Government development paradigm is focusing on short term exploitation of natural resources, priority for income generating investment and taxes, Relatively very little funds are made available for environmental policy development, environmental impact assessment and management, and environmental governance / law enforcement which constitute the main mandate of the EA/ LH
- 7) The recruitment and placement of key personnel for the EA is often not in line with required competencies on the subject matter of environmental monitoring, law enforcement and policy development. The turn over of key personnel is high and weakens the organization
- 8) The organization development of Environmental Agencies is diverse and shows a lack of consistency. The lack of synchronized organisation models constrains development of standard operational procedures and vertical relations between the environmental agencies at national, provincial and district level.
- 9) The low status and budgets of the EA at the Province and the Districts constrains horizontal relations. The participatory development with other line agencies is weak.
- 10) The synergy development with Commercial Enterprises is growing, but the synergy with other line agencies, with the academia and with NGOs is very low so far. The synergy between District Line Agencies has growth potential. The Multi Stakeholder Forum initiated by SSFFMP stimulates synergy development in the District between Line Agencies and with NGOs
- 11) Programs for development of Environmental Governance and official public consultation processes and mechanism are rudimentary and not structured.
- 12) Several policies and guidelines have been developed at national level but are not yet translated in local policy guidelines and local regulations at Provincial and District level notable the PP4, 2001 dealing with forest & land fire management)
- 13) The task divisions on forest and land fire management between the line-agencies are insufficiently specified and therefore subject to confusion on mandates and tasks in particular between Forestry and the EA/LH. The provincial Government of South Sumatra has assigned a number of tasks to KesBangLinMas (Organisation for National Unity and People Protection). This organization has not been able so far to implement a coordinating task between agencies due to its status in the Government, its limited mandate (disaster management) and lack of expertise and no effective linkage with the largely autonomous District Governments.. This organizational set up with KesBangLinMas as a coordinating agency has therefore constraint the development of an effective fire management and resulted in a lack of long term policies
- 14) There is a lack of a holistic long term development concept: Comprehensive fire management can be viewed as consisting of a) prevention and law

- enforcement, b) early warning systems, c) fire suppression activities, d) fire impact assessment and e) environmental rehabilitation aspects. So far very little attention has been given by the Government to fire prevention and law enforcement, impact assessment and rehabilitation. Most attention has gone to, mainly ad hoc, fire suppression activities, hotspot analyses and dissemination.
- 15) the EA has developed its role in EIA (AMDAL), specifications on zero burning regulations for commercial enterprises, and its role in water pollution monitoring. However its role in monitoring and impact assessment of fire and smoke is so far not implemented
 - 16) the EA offices have not yet developed a capacity building and training plan. Most offices have not yet allocated budgets for training of personnel. 15)

The main recommendations are:

- 1) Implementation of PP4, 2001 at Provincial and District level.
- 2) Organize workshops to pursue adjustment of the Provincial Forest and Land Fire Management and Government mandates: Assignment to the EA Provincial level to coordinate the (comprehensive) Forest and Land fire management activities instead of KesBangLinMas
- 3) Organize workshops to upgrade the status of all district Environmental Agency offices to BAPEDALDA status and synchronize the organization structure and task description and to speed up the standard operational procedures in particular related to participatory planning and monitoring and regulating public consultation mechanism.
- 4) Develop standard operation procedures for stakeholder participation in the preparation of the annual environmental report.
- 5) Include the problem of forest and land fire management as main thematic topic for the environmental annual report of 2005 or 2006
- 6) Give priority to development of the Fire Danger/ Threat Map for each District and the stakeholder analyses of fire users in land preparation for the three priority Districts.
- 7) Develop synergy between the EA and the Academia (particularly PPLH and PSL) and NGOs on good environmental governance and environmental monitoring and capacity building / training
- 8) Develop synergy between the province and the districts on forest and land fire management
- 9) Improve information on the role of the EA to a wider public, and to obtain the understanding and vital support of people representatives (DPR).
- 10) Give priority to training of environmental investigators (Penyidik Lingkungan), environmental law enforcement and legal cases on forest fire using the Environmental Law 23, 1997 art 38
- 11) Give follow up on the capacity building and training plan development with four focus groups including a) group on Annual Environmental Report , b) on Environmental Information Systems, c) on Monitoring of fire prevention and preparedness of Commercial Enterprises (HTI, Oil Palm) d) Environmental Investigation and legal cases related to forest and land fires; Make combined Provincial and District training groups.
- 12) Develop Village (Desa) level institutions for resource management, and test criteria and mechanisms for development of good environmental governance.

- 13) Expand data system and village profile (Desa) to include key environmental aspects and in particular environmental and institutional aspects related to forest and land fire management.
- 14) Develop a on-the-job-training program with BAPEDALDA Riau and take profit from lessons learned.

ABBREVIATIONS

Acuan Kerja	Work Manual
ADB	Asian Development Bank
AMDAL	Analisa Mengenai Dampak Lingkungan
AO	Advocacy Organization
APL	Areal Penggunaan Lain
BAPEDALDA	Badan Pengendalian Lingkungan Daerah
BFMP	Berau Forest Management Project
BMG	Badan Meteorologi dan Geofisika
BPS	Badan Pusat Statistik
CBD	(International) Convention of Biological Diversity
CBO	Community Based Organisation
CIFOR	Centre for International Forestry Research
Desa	Lowest Government level Village/ administratively clustered villages and hamlets
DHV	A large Dutch Consultancy firm
DPR	Dewan Perwakilan Rakyat
EIA	Environmental Impact Assessment
El Niño	Extreme (dry) weather period
EU	European Union
FDRS	Fire Danger Rating System
FFPCP	Forest Fire Prevention and Control Project
FWI	Forest Watch Indonesia
GEG	Good Environmental Governance
GFW	Global Forest Watch
GIS	Geographic Information System
GO	Grassroot Organizations
GPS	Global Positioning System
GSO	Grassroot Support Organisation
GTZ	Gezellschaft für Technischen Zusammenarbeit
HTI	Hutan Tanaman Industri
ICRAF	International Centre for Research in Agro-Forestry
IDR	Indonesian Rupiah
IPCC	International Panel for Climate Change
JukLak	Judul Pelaksanaan
JukNis	Judul Teknis
KALPATARU	Indonesia Symbol of sustainable development used by Ministry of Environment for the Annual Environmental Award
KepPres	Keputusan Presiden
Kes BangLinMas	Kesatuan Bangsa dan Perlindungan Masyarakat
Kpts	Keputusan
LH	Lingkungan Hidup
MDF	Management Development Foundation
MenLH	Menteri Lingkungan Hidup
MoU	Memorandum of Understanding
MUBA	Musi Banyuasin (a new District)
NGO	Non Governmental Organisation
OKI	Ogan Komering Ilir (a new District)

PELH	Pertambangan Energi dan Lingkungan Hidup
PERDA	Peraturan Daerah
PP	Peraturan Pemerintah
PPLH	Pusat Penelitian Lingkungan Hidup (environmental Research Centre ((of State Universities)
PROPER	Program Penilai Peringkat Kinerja Perusahaan dalam Pengelolaan Lingkungan Hidup)
PSL	Pusat Studi Lingkungan (Environmental Study Centre ((of Private University)
PUSDALKARHUTLA	Pusat Pengendalian Kebakaran Hutan dan Lahan
RKL	Rencana Kelolaan Lingkungan
RPL	Rencana Pemantauan Lingkungan
SATKORLAK	Satuan Koordinasi Pelaksanaan
SATLAK	Satuan Pelaksanaan
SK	Surat Keputusan
SO	Service Organization
Sonor	fire: Sonor rice field cultivation where land (grass bush) clearance in peat swamp is done by fire.
SOP	Standard Operational Procedure
SSFFMP	South Sumatra Forest Fire Management Project
SumSel	Sumatera Selatan
SUPER	Surat Pernyataan
Tauke	Middlemen: people purchasing natural products; often providing village people starting capital for forest clearance and product extraction for natural areas
The EA	Environmental Agency This can be BAPEDALDA, Dinas Lingkungan Hidup (Environment Agency), or a joint office such as office for Mining, Energy and Environment
TOP Agreement	Terms of Partnership Agreement
ToR	Terms of Reference
USFS	US Forest Service
UNDP	United Nations Development Program
UNRI	Universitas Riau (in Pekanbaru)
UNSRI	Universitas Sri Wijaya, (in Palembang)
USD	US Dollar
UU	Undang undang

1 INTRODUCTION:

The consultant (international short-term expert) had two major related tasks 1) Tasks with a focus on Institutional Strengthening and 2) on Capacity building. The consultancy had duration of two months including the period from 8 September to 8 November 2004. The main focus is on monitoring of fire risk, ongoing fires and fire impacts and the role of the Environmental Agency BAPEDALDA in the Province of South Sumatra and priority Districts *See Appendix 1 Terms of Reference*

In 1995 the Government of Indonesia and the European Union started the Forest Fire Prevention and Control Project in South Sumatra (FFPCP). This project was part of the larger European Union's Indonesian Forestry Program. The FFPCP was implemented from 1995 until 2001.

As a follow-up to the FFPCP, the South Sumatra Forest Fire Management Project (SSFFMP) started in January 2003 with a planned 5-year implementation period. The new SSFFMP project is mainly set in a provincial context and in accordance with the Financing Agreement to work with stakeholders in South Sumatra Province and selected priority districts.

The overall objective of the Project is to establish a model for the rational and sustainable management of the country's land and forest resources.

The specific objective (project purpose) is to aid and facilitate the establishment of a coordinated system of fire management at province, district and sub district and village level throughout South Sumatra, in which all involved stakeholders, including the private sector, work together to reduce the negative impact of fire on the natural and socio-economic environment.

1.1 Comments on the terms of reference:

The South Sumatra Forest Fire Management Project (SSFFMP) is working in the Province of South Sumatra and three Kabupaten namely Ogan Komering Ilir (OKI), Banyuasin and Musi Banyuasin (MUBA).

Consultant Ms. Anja Hoffman had studied earlier The institutional set up in relation to fire management by Forestry (Dinas Kehutanan) and the One Nation and the People Protection Agency (KesBangLinMas) are already being studied by SSFFMP (Hoffmann, 2004). The consultant would therefore focus only on the Environmental Agency (BAPEDALDA/ Lingkungan Hidup (LH).

The terms of reference proved to be relevant but only partly feasible.

Firstly, the mandate and task description within the EA/LH as shown from organisational structure and official task description of the EA/LH did not explicitly mention anything about fire. Activities or products directly related to forest and land fires were rare or non-existent. However, the broad mandate of the EA /LH would logically include many activities related to fire if only the job descriptions were further specified, and the products and services to be provided were further developed. In stark contrast the Ministry of Environment (MenLH) and the EA in some Provinces (notably BAPEDALDA Riau) play a very prominent role in Fire management. So for the time being several recommendations for institutional

strengthening and capacity building will necessarily be based on *assumed future* mandates and tasks with a direct and clear relation to fire and land management.

Secondly, the task to train staff from the provincial and district environmental agencies in aspects of fire risk and fire impact monitoring seemed to be largely premature. First the organisational and institutional development should be revised and officially relate to fire management before making elaborate training programs and training people on these aspects. Also, the organisation should have a genuine interest in training, be receptive to make a training plan together and allow in-depth study of the organisation its strength and weaknesses, opportunities and threats.

Based on genuine interest in organisational development and capacity building expressed at Provincial level and in some Districts initial plans for capacity building were developed despite organisational uncertainties and based on the existing general broad mandate and the assumed further revision of mandates.

During the latter stages of the consultancy several parties including the EA province and Kabupaten became convinced that the EA /LH should play a much more prominent role in fire management. The change in perception was much influenced by two major events organized during the consultancy. A workshop on the role of the EA in fire management co-organized by BAPEDALDA Province and SSFFMP with participation of all the EA/LH of the Kabupaten/Kota, and a study tour to Riau Province with the management of BAPEDALDA, Forestry and KesBangLinMas. See Ref. BAPEDALDA and SSFFMP (2004). and Wind, Jan (2004) Peranan dan Tugas Bapedalda, Kehutanan dan KesBangLinMas/Satkorlak berkaitan dengan Kebakaran Hutan dan Lahan. *See Appendix 12. Present and Future Role of EA National Province and District in Fire Management*

The work on the capacity building and training programs is continued and further developed by a national consultant Mr. Adriyanto during a one months' consultancy . Mr Adriyanto and the consultant could work with an overlap of a week to pursue continuity of the work.

The consultant had to obtain first a consensus on the “*basic question*” for the institutional development and capacity building which is:

Which organizational development/ institutional strengthening and capacity building of the EA/LH in the Province and the Districts is needed to provide lead and support services to prevent and reduce environmental destruction and pollution caused by forest and land fires and smoke/ haze, to decrease the impact of fire and smoke/haze and to rehabilitate the impacted environment?

The basic setting of the project as a framework for the consultancy job is briefly highlighted as following:

South Sumatra has an increasing problem of fire and haze., and is a major contributor to haze problems affecting Sumatra's high investment areas of Palembang, Pekanbaru, Batam and those of neighbouring countries Singapore, Malaysia and Thailand The economic losses related to destruction of natural resources, to trade, communication-air flights, tourisms, is very substantial within Sumatra and in Singapore, Malaysia and Thailand. Singapore is directly in the downwind area of Lampung, South Sumatra and Jambi peat swamps.

The number of hotspots is increasing especially from peat swamp areas. The number of hotspots in South Sumatra Province is increasing in particular in the peat swamp areas (pers. inf. MenLH Mr. Herwono Sigit 12 Oct 2004). and in the Southern part of Sumatra (MenLH, 2004, Status Lingkungan Hidup Indonesia 2003) T

The losses of fire and haze from the 1997/98 El Nino affected fire and smoke haze were 2.3 to 3,2 Billion USD. If carbon emission are calculated also the total figure would be some 5,1-6,0 billion USD. The main losses were from east Kalimantan (75%). The relative losses related to smoke haze are 20-30% at least. The peat swamp fires contributed some 75-90% of the smoke haze. (Luco Tacconi (2002) CIFOR. and some 30% of the global carbon emission derived from land conversion worldwide during 1989-1995 (IPCC 2000 ref. Tacconi).

The large scale conversion of forest areas through uncontrolled and largely unplanned agricultural expansion shows multiple point fires of slash and burn agriculture in forest frontier areas. Some two million ha is in the conversion process. Parts of these areas are planned for investment and establishment of oil palm estates and tree plantations. Large-scale land clearing for development of estates and oil palm, rubber, tree plantations has been the cause of extensive fire so far. The most impacting area is the 1,2 million ha of peat swamp which is heavily degraded, deforested and subject to sonor rice culture. This area has an increasing high fire risk of peat fires typically with very dense haze impact. The high risk and dense smoke haze from peat swamps justifies to design separate legislation and development of these areas . Deep peat areas of more than 90 cm have restricted use and areas of more than 3 m deep are not to be developed (Presidential Decree 32, 1990). A holistic approach is needed including deep peat domes as an ecological integrated unit or drainage system.

The South Sumatra Province does not score well in regard to forest protection and management. Within Indonesia the discrepancy between Registered State Forest Areas and Actual Forest Covered Areas is high. In South Sumatra this is the highest of whole Indonesia in absolute number of hectares (2,7 million ha difference) and the highest also in percentage together with Lampung 36-38% actual forest covered areas compared to Permanent State Forest Areas. *FWI/GFW (2002) The State of Forest: Indonesia See also Appendix 2. State Forest Area and Actual Forest Areas in 1997.*

The Central Government has regulated zero burning policies, which gradually becomes more effective in the tree plantation and oil palm estate establishment. However no answer is found to the problem of fire use in the extensive areas under smallholder slash and burn regimes, and the highly vulnerable peat swamps under cultivation of “sonor” rice field and expanding tree plantations.

The government has done very little in terms of fire prevention and long-term strategies. Most inputs are limited to fire suppression only. The Government organization in South Sumatra on fire management is particularly weak. Roles of Government agencies on fire management in a comprehensive sense are largely unspecified, unbudgeted and therefore not effective. There no organisation and budgeting yet at District level Coordination of Fire management has been included mainly under the Disaster management of SATKORLAK, with some organisation at provincial level and ineffective outreach to Desa level. SATKORLAK development at

District level is absent. Forestry has mainly focussed on fire identification and suppression programs with little effect so far.

Initial development is taking place at oil palm, rubber estates and tree plantations to set up own fire fighting facilities, organisation and trained personnel, equipment and field adjustment (fire belts, water ponds, watch towers)

The SSFFMP project (2002-2007) is linked with Forestry as Government counterpart agency. The project area includes three Districts (MUBA, OKI and Banyuasin all located at the coastal and peat swamp zone. Fifteen villages/ Desas have been selected priority and demonstration areas for land use planning and community development with decreased fire risk. Multi-stakeholder forums with each four working groups and a secretariat have been established in each of the three Districts The project focuses on bottom up and participatory development and covers a broad range of consultancies on land use planning, fire crew training, community development, environmental monitoring, institutional development, training, fire information systems, gender, legislation, NGO development, etc.

There is little attention of the impact of fire on Biological Diversity. of 36 donor – assisted projects in Indonesia related to fire management only WWF addressed impact of fire on biodiversity. (Secretariat CBD 2001). The possible role of the EA is not yet specified in the development of regional strategies to formulate specific amelioration plans or strategies to decrease fire risk in biodiversity hotspot areas, such as Sembilang Mangrove National Park, Kerinci Seblat National park and other conservation areas

2 MANDATE AND TASKS RELATED TO FIRE MANAGEMENT

The mandate and tasks of the Environmental Agency should be reviewed in relation to the comprehensive aspects, which ideally form part of fire management. The comprehensive fire management will ideally include the aspects related to pre-fire, ongoing fire and past fire conditions.

Five main aspects are considered:

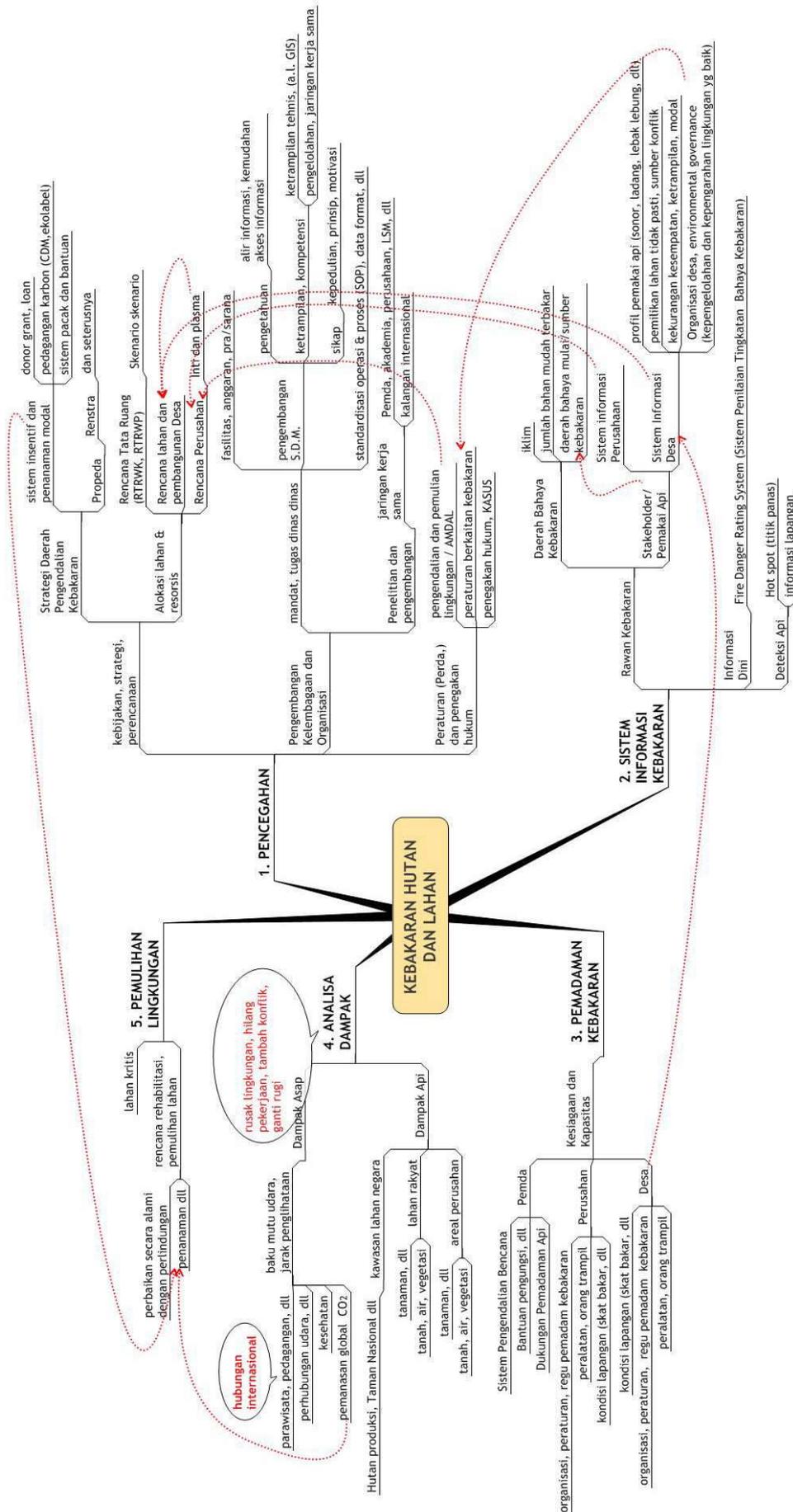
- Pre-fire
 - Prevention
 - Early warning
- Ongoing fire
 - Fire detection
 - Suppression of fire
- Post fire
 - Impact Analyses
 - Rehabilitation

So far the tasks related to early warning and detection and to fire suppression have obtained most attention of the Government and the commercial enterprises, while prevention, impact analyses and rehabilitation are still largely ignored. It is in particular these latter aspects, where the EA would likely play an important role.

The project SSFFMP has little concern or no components related to Post fire activities according to Dr. Steinmann project leader SSFFMP. Activities are related to prevention, early warning, detection and suppression of fire.

The consultant has developed a comprehensive overview of the 5 aspects and sub aspects *see next page Figure 1 Mind Map Comprehensive Fire Management (see also Wind, Jan (2004))*

Figure 1: Mind Map Fire Management (Indonesian language)



A number of questions can be asked on the tasks and performance of The EA before we look more in detail at current profiles.

A number of questions can be asked to look at the role, function, performance of the EA as an organization within the current setting of extremely fast environmental destruction, loss of natural resources, unplanned conversion of land uses, and even increased poverty in some rural areas.

- To what extent does the organization contribute to halting or decrease in environmental pollution of air, water and soil, and increase the environmental rehabilitation activities? Does it decrease the fire risk, fire incidence, haze incidence and distribution, impact of fire and haze?
- To what extent does the EA contribute to the development of environmental awareness, environmental law enforcement and development of environmental regulation.
- To what extent does the EA implement its role in Environmental Law Enforcement
- To what extent does the EA contribute to the synergy development between NGOs, Government, Commercial Enterprises, and Academia to improve on environmental awareness, to decrease environmental deterioration, and to rehabilitate the environment?
- To what extent does the EA give policy advice to Provincial and District Governments and the line agencies to improve environmental conditions and, to prevent destruction of natural resources and to remedy environmental pollution
- To what extent does the EA contribute to strengthen environmental governance at Provincial, District and Desa level. Does it design specific instruments of environmental governance? To what extent does it stimulate environmental governance and the processes to institutionalise (formalize/legalise) meaningful citizen participation and public consultation in environmental governance?
- Does the EA effectively strengthen an environmental friendly policy and planning at Provincial and District level?
- To what extent does the EA play a role in facilitation role in conflict resolution between stakeholders in inter and intra community resource/ environmental conflicts, and conflicts between the communities and commercial enterprises or between communities and the Government?.
- Does the EA play a role in the social movements, to increase environmental governance and regional/territorial development to give support to victims of environmental deterioration in particular the natural resource dependent poor, landless, smallholders, women?
- To what extent does the EA identify and develop win-win relations with NGOs and NGO networks be it Advocacy Organisations, Grassroot Support Organisations, Service organizations and/or Grassroot Organisations?
- To what extent does BAPEDALADA develop win-win relations and synergy with academia (PPLH, PSL, etc) and with local, national and international research and training networks and programs? To what extent does it try to access information flows, pertaining to methodologies of environmental evaluation, rapid rural appraisal, public consultation mechanisms, etc.
- To what extent has the EA insight and data on environmental stakeholders/ actors, powers and pressures and impacts? To what extent is the EA able to

obtain information on the “drivers” in the environmental development including for instance the middlemen (“tauke”) and subcontractors employing locals in resource exploitation and land grabbing?

- What is the role of the EA is decentralization and devolution of environmental governance, and to stimulate formal recognition and legal protection of locally based institutions of environmental decision-making. And what its role in up-scaling of successful models of Community based Natural Resource Management

One can argue that much of the above mentioned does not refer to the actual mandate of the EA. However, one can also argue that the EA could logically play a role in all of this be it in close partnership with other partners in the Government, with Commercial Enterprises, NGOs, Academia, and international partners.

2.1 National, Province and District level and Village (Desa) level

The organization structure at national level (Ministry of Environment (KLH) does reflect clearly the relation with fire management. This is not the case at the Province and the Kabupaten/Kota offices of the EA/ LH. No direct relation with the fire could be found in the titles of the organization and divisions, sub-divisions of the EA/LH offices in the province and Kabupaten. *Ref. Appendix 3a,b,c,d Organization structures of BAPEDALDA /LH at Province and Districts*

Also, the Strategic Plan 2003-2008, of BAPEDALDA Province of South Sumatra does not mention any program related to Forest and Land Fires.

BAPEDALDA has so far a very limited linkage with or outreach to the Village (Desa) level. A new development paradigm is needed (amongst others) to develop traditional/local peoples’ institutions, which will be able to change their perception towards sustainable use and protection of natural resources (Dr. Dodi Supriadi Head Of Forestry South Sumatra Province.2004)

2.2 Current status of offices at Province and District

The current low status of several of the offices of the EA/LH in the Kabupaten/Kota does not support very well the development of the organisation. Not a single organization structure was found where fire was included in the divisions, subdivision or lower down.

The diversity within the EA has increased since 1999 the beginning of the new decentralisation policies. The District offices are independent from the Provincial Offices since the decentralisation.(UU No 22, 1999) Linkages and communications between The EA Provincial and District offices have been severely constraint since.

There is no standardisation in the organisation structure Some environmental offices are included as part of other Line Agencies such as Mining and Energy.(example District OKI and Banyuasin) Most personnel and budgets relate then to Mining and Energy and a minor part to environmental office. This is related to the paradigm or perception of local Government that Line agencies, which produce Tax Money and Income, have a higher priority than others that only cost money and do not produce income for the Kabupaten. (Darsono 2002). The combined function with other line

agencies does not only undervalue the status of the environmental agencies but also has potential conflict of interest

The variation in divisions and subdivisions results also in variation in task descriptions. See *SkGub no. 220, 2001 SumSel* and the different SK Bupati for the different Districts. (*Dinas PELH Banyuasin is based on Kpts 925, no 15 –2003; BAPEDALDA MUBA based on Kpts no., 2002*) Task descriptions are only specified up to subDivision level. In the case of the EA in the District OKI there is no official task description issued yet by the District Government.

The restructuring of Kabupaten/Kota administration is subject to PP8, 2003. This decree regulates the maximum number of line agencies per Kabupaten/Kota as 14. The status of offices is further regulated by scoring system to obtain Dinas level and if offices will be minimum offices with only two divisions or extended offices with maximal 6 divisions. The current restructuring process could offer possibilities to upgrade the status of offices.

The current status of offices is as following:

District MUSI BANYUASIN (MUBA)
Status BAPEDALDA

3 Divisions (Bidang) 11 SubDivisions (SubBidang (1 Bidang dan 5 SubBidang positions are vacant)

1. Division (Bidang) Planning and Prevention (Perencanaan & Pencegahan)
 - a. SubDivision (SubBidang) Program and Evaluation (Program & Evaluasi (vacant)
 - b. SubDivision (SubBidang) EIA (AMDAL)
 - c. SubDivision (SubBidang) Permits (Perizinan)
 - d. SubDivision (SubBidang) Development Capacities and Involvement Local people (Pengembangan Kapasitas & Peran Masyarakat)
2. Bidang Pengawasan (kosong)
 - a. SubDivision (SubBidang) Implementation of (Penerapan) RKL/RPL &UKL/UPL (vacant)
 - b. SubDivision (SubBidang) Environmental Deterioration/Loss (Kerusakan Lingkungan)
 - c. SubDivision (SubBidang) Water and Soil Pollution (Pencemaran Air dan Tanah
 - d. SubDivision (SubBidang) Air Pollution (Pencemaran udara) vacant)
3. Bidang Penanggulangan
 - a. SubDivision (SubBidang) Natural Resources Inventory (Inventarisasi Sumber Daya Alam) Vacant
 - b. SubDivision (SubBidang) Water, Soil and Air Quality Improvement (Pemulihan Kualitas Air, Tanah & Udara (vacant)
 - c. SubDivision (SubBidang) Rehabilitation of Land (Pemulihan Kerusakan Lahan)

District BANYUASIN**Status DINAS PE & LH (Dinas Pertambangan Energi dan Lingkungan Hidup)**

4 Divisions (Bidang) including 1 Division and two SubDivisions related to the Natural Environment Bidang

1. Division (Bidang) Environment (Lingkungan Hidup)
 - a. SubDivision (SubBidang) Guarding/Control and Improvement (Pengawasan dan Pengendalian)
 - b. SubDivision (SubBidang) Management and Monitoring (Pengelolaan dan Pemantauan)

District OGAN KOMERING ILIR (OKI)**Status KANTOR PE & LH**

2 Bidang termasuk 1 yang terkait LH dan 2 Seksi (1 Bidang dan 1 Seksi kosong)

1. Division (Bidang) Natural Environment (LH) (vacant)
 - a. Section (Seksi) Improvement and Guarding/Control (Pengendalian dan Pengawasan)
 - b. Section (Seksi) Monitoring and Improvement (Pemantauan dan Pemulihan) (vacant)

We see from the above that the organisation structure in the three Districts has no direct relation with Fire Management, that many positions are still vacant. The MUBA office is best developed. All offices have additional so-called functional temporary staff with no Government employee status yet. Most of these temporary personnel fall into supporting administrative staff positions.

2.3 Task Descriptions

The task description of BAPEDALDA Province and the EA/LH in the three Kabupaten did not show a direct relation with fire problems. The word “fire” did not occur in the official Governor’s decree for BAPEDALDA Province or Bupati’s decree for positions in the EA /LH offices in the Kabupaten. One of the consequences is that fire management is not dealt with in the Five Year Strategic Plans of BAPEDALDA It does then also not occur in annual plans and related budgets. No projects or program components have been specified in direct relation to forest and land fire.

No follow up has been given yet in the Province and in the Kabupaten/Kota on the Government Decree 4, 2001 concerning the destruction and/or Pollution of the environment in relation with forest and land fires. (*PP 4, 2001 tentang Pengendalian Kerusakan dan atau Pencemaran Lingkungan Hidup yang berkaitan dengan Kebakaran Hutan dan atau Lahan*). This Government Decree explains a number of tasks, which should be implemented at Provincial and Kabupaten Government level.

These are : The Governor/Bupati/Walikota is responsible to provide information to the people concerning forest and land fires and its impact including.

- Location and total area of forest fire and land fires
- Result of the measurement of the impact
- Risks for peoples’ health and ecosystems
- Impact on peoples’ livelihood
- Steps taken to decrease impact related to forest and land fires

The PP4, 2001 also regulated reporting needs on fire incidence

The task division so far is incomplete and subject to confusion. There are task descriptions per individual. The tasks are described in general term per Bidang (Division) and SubBidang, (SubDivision) and through the formation of Functional Teams (such as the team for preparation of the Annual Environmental Report or the team for Environmental Information Systems). The task description for the members of the team, are typically not much specified either. The positions in the team are named but the content of the task are not specified. This typical for cultures where the collective is given priority over individualism. (Hofstede 1980 Culture's consequences: International differences in work related values cited by Gibson, Ivancevich, Donnelly 1987)

However, also modern management structures of more individualistic societies have been worked out including several Standard Operational Procedures. These provide detailed guidance to organize the process, steps, input and outputs. This is in particular the case in the well-established procedures for Environmental Impact Assessment and Monitoring (AMDAL/RKL/ RPL) and the Annual Environmental Report (Status Lingkungan Hidup Daerah).

Riau Province has done pioneering work by specifying the organisation for Forest and Land Fire Management in the province. A detailed standard operational procedure has also recently been developed. *See BAPEDALDA Riau (2003) Prosedure Tetap Mobilisasi Sumber Daya Kebakaran Hutan dan Lahan.*

The Riau approach is worth studying in detail for possible application in South Sumatera. The set-up is clear and logical. However, the coverage of fire prevention and fire impact assessment activities are still limited and incompletely covered.

2.3.1 the EA's own perception of tasks and products

the EA's Province and Kabupaten/Kota own perception on their possible role and tasks in fire management was "there is a very limited role only, mainly related to hotspot distribution and haze monitoring". This was at least the case when the consultant started. The general perception was that Forestry was the agency to handle forest fire issues. Some were also aware of the role of KesBangLinMas in Disaster Management including Fire Disasters. This perception was/is endorsed by the fact that budgets related to fire management in the province and the Kabupaten/Kota are channelled through Forestry.

The perception has however changed during the last during the consulting period October-November due to several factors including:

1. The increased awareness of the role of national level KLH in fire management and their many activities; A meeting was organized in October at national level inviting representatives from the EA of fire threatened provinces to share experiences and evaluate their role in fire management in relation to
 - (1) Evaluation of Local People Participation
 - (2) Evaluation of Fire occurrence at people's land
 - (3) Evaluation of Fire occurrence at Forestry Land/ Commercial Estates
 - (4) Evaluation of Organisational development (related to implementation of PP4, 2001)
 - (5) Evaluation of the Monitoring of Commercial Enterprises concerning their implementation of "zero burning" and related Law enforcement;

2. The increased awareness of BAPEDALDA Province that BAPEDALDA in other Provinces plays a prominent role in Fire management (e.g., Riau as secretariat of the Forest Fire Organization/ *See Appendix 4 Pusat Pengendalian Kebakaran Hutan dan Lahan*). The consultant initiated a study tour to Riau which turned out to be a successful learning experience. *See Appendix 5. Laporan Studi Banding (Report Study Tour to Riau Province and Appendix 6: Matrix Comparison Synergy Development BAPEDALDA South Sumatra and BAPEDALDA Riau*

3. The perception that certain tasks already included in the EA could / should logically be extended; a) Assessment of Risk Areas including Flood Risk but also Fire Risk etc.) BAPEDALDA Province thus included in October 2004 Preparation of Fire Risk Map and data (Daerah Bahaya Kebakaran) as a additional task for the Working Group “Environmental Information Systems”.

4. the EA is clear about their task in monitoring of air pollution including forest/land fire related haze/smog. They are however not yet equipped to monitor air pollution. Also, the methodology for data evaluation and Standard Operational Procedures (SOP) for follow-up action has not yet been developed. There is no clarity of the use of haze monitoring data. The number and distribution of people affected by haze is much larger area and scale than people affected by fire. International stakeholders are organized through the ASEAN Haze Agreement meetings. However, the haze affected people within Indonesia are not as such subject to a separate organization, interest group or action group.

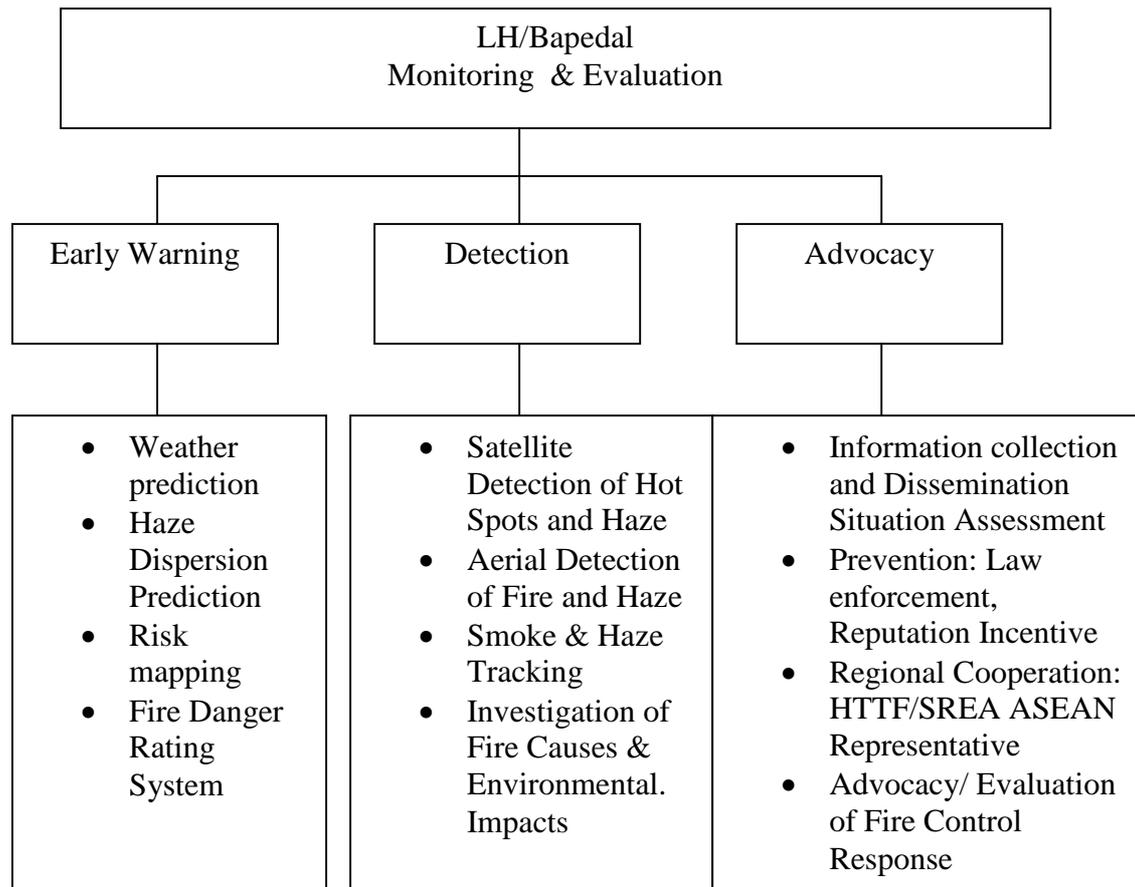
5. the EA has no research on the link between haze and economic impact related to health, communication-air flight, trade, tourism, etc. The health data collected for the environmental annual report includes data on respiratory deceases. The possible relation with temporary haze is not analysed. Also the relation between haze and economic impact such as delay and cancellation of flight, decrease in tourism and trade opportunities are not mentioned and analysed.

Several products can be distinguished as related to fire management. Tasks to produce information such as data, maps, analyses, recommendations etc. have not clearly divided between the organizations in the Province and Districts.

The role of the EA in fire information and early warning system is defined by the Government regulation at least at national level. Thus task divisions related to fire management are allocated between RAKORNAS, Forestry and Men LH/ BAPEDAL. MenLH/BAPEDAL is assigned to:

- Prediction of weather and Haze dispersion
- Prepare a fire danger map
- Fire Danger Rating System)
- Detection of Hot Spots and Haze by satellite
- Detection of fire and smoke areas
- Tracking of fire and Haze
- Investigation of the causes of fire and its impact

(Kantor Menko Kesra dan Taskin Sekretariat Bakornas PB),.(Sektor Utama Penanggulangan Kebakaran Hutan/ Lahan 21 July 2000



Source:

Office of the Coordinating Minister for People's welfare and Poverty Alleviation/ Secretariat of the National Disaster Management Board (Kantor Menko Kesra dan Taskin Sekretariat Bakornas PB), Leading sectors for forest fire management. (Sektor Utama Penanggulangan Kebakaran Hutan/ Lahan 21 July 2000

Based on result of coordination meeting and follow up letter Minister (Menko Kesra) Ref. B142/Menko/Kesra/VI/1999 dated 16 June 1999.

Other sources mention additional task to belong to the EA/LH including

- Monitoring of permit issuance and their matching with spatial plan, land allocation and zoning. This seems in particular urgent to monitoring the issuance of permits related to establish of commercial enterprises in oil palm, tree plantations.
- Monitoring of forest fire risk preparedness by commercial enterprises and local Government
- Monitoring of Line Agencies e.g., Forestry in the implementation of their responsibility/ mandate of protecting biodiversity assets and production forest and plantation against fire and fire risk
- Checking the accuracy of environmental data used by Government agencies. The data on forest areas (Kawasan Hutan), forest covered areas (Areal Hutan) of different categories, burned areas (Daerah yang terbakar) are often not accurate and not up to date
- Promoting good environmental governance and awareness on environmental regulations
- Enforcing environmental laws and regulations

- Facilitating conflict resolution of stakeholders involved in disputes over environmental pollution cases.

The Minister of Home Affairs argues that each Kabupaten should have a separate Dinas LH (*Ref Departemen Dalam Negeri RI no 660.1/1728/V/Bangda tentang Pewadahan Lingkungan Hidup di Daerah dated 20 Oct. 2003*). The following existing and future conditions are mentioned stressing the independent position:

LH should have authority to exercise adequate control over permit issuing and should have be operation with related budget to rehabilitate the environment (pemulihan lingkungan) and should be able to serve the public. It should address the following main environmental problems a.o.

- Deforestation and Forest fire
- Decrease of environmental functions
- Processing of industrial and other waste
- Soil, water and air pollution
- Climatic change
- Inaccurate and unauthorized data and information
- Land use and allocation inconsistent with officially agreed land-use allocation
- Weak institutions and lack of law-enforcement in environment and spatial planning

Altogether the above sources view a broad and independent role of the EA/ LH, broader than currently undertaken by the EA/LH

Below we review the EA/LH 's role and their own perception on a number of products and services more specifically related to forest fire.

2.3.1.1 Prediction of Weather and Haze Dispersion

At Provincial level and District level the EA has no field surveying and information on haze. Monitoring and measurement of air pollution so far is very limited and restricted to important industries and urban environment.

The only systematic information is collected by BMG.(Badan Meteorologi dan Geofisika or Meteorological Service) BMG assesses data on air visibility as measured at the air port of Palembang, in relation to flight safety standards. Landing of airplanes is only allowed at visibility of over 800 meters.

the EA has no surveying and monitoring of rural areas or haze related processes. However BAPEDALDA Province regards this very much as its task. Measurements will be made as soon as budgets for surveying and surveying equipment is (made) available. The haze is typically a District boundary-crossing phenomenon. This makes it fall within the responsibility of the Provincial BAPEDALDA

2.3.1.2 Fire Danger or Risk Map. (Daerah Rawan Kebakaran).

The Provincial Government has assigned this task to KesBangLinMas However, KesBang LinMas has not yet produced a map. At District Level responsibilities are not yet specified which agency should produce which products (maps, reports, cases, etc) There is hesitation to undertake these tasks and make these products. Map Legends and SOP to collect data, process and analyse data and specify follow up actions are not yet officially accepted and institutionalised by the Government.

In Riau Province BAPEDALDA prepares Fire Danger Area maps. Separate maps are prepared for each District. The Fire Danger Maps give BAPEDALDA high visibility in their task and mandate in Fire management. BAPEDALDA Riau has not yet prepared procedures how to use the data/ maps for policy development and planning.

There is not yet a standard format and legend MenLH has prepared draft format *see ACUAN Kerja 02-ESD Pedoman Umum Pembuatan Probabiliti Potensi Daerah Rawan Kebakaran Hutan dan Lahan.*

Other formats are available from the EU-Berau Forest Management project *see Foggerty, Liam, Marcel Steenis, Medy Santoso, (2002*

The latter gives a overview of fire danger risk based upon Fire ignition risk related to landuse and spatial factors, to hotspot history, and to fuel load. The high risk zones are forest frontier zone/ end of the road zones where pioneer farmers (land grabbers) and (mainly illegal) loggers are active. *see also Steenis, Marcel and Liam Foggerty (2001) Determining Spatial Factors associated with Fire Ignition Zones BFM ffm-07*

In Sumatra several fire risk zones are related to areas held by large commercial firm in oil palm, and tree plantation development, which are in the process of opening up of areas.

The factor of danger of asset loss to fire and smoke should also be included as a separate factor. Different assets should be distinguished included man-made structures and natural assets including agricultural crops, natural production forest and plantations, and cash crops, and biodiversity assets in particular those found in biodiversity hotspots, National Park and other conservation areas as well as species rich natural production forest etc. Fire and Dense smoke –haze does not only affect people but also animals, wildlife.

The preparation of Fire Danger Maps can be instrumental for further planning of the needs for fire risk preparedness and investment in amelioration plans.

It is noted that one of the most important ecological effects of burning is the increased probability of further burning in subsequent years due to changed condition with more exposure to sun and drying up, increased fuel-loads of dead trees, and extended areas of fire prone grasses (alang-alang)

The mentioned reports by the Berau Forest Management Project provide a powerful tool to anticipate fire development. in relation to current landuse and landuse development trends and the spatial patterns of land use development. This in turn may provide tools for the design of alternative of land use development scenarios with lower fire risk.

2.3.1.3 Drought Warning and Fire Danger Rating System

The Fire Danger Rating System should be distinguished from Fire Risk/ Threat .Map and Drought Warning System. Ref.*Liam Foggerty, Marcel Steenis, Medy Santoso, (2002) Use of Fire Management Information System to support Decision Making BFMP ffm-029*

The Drought Warning System predict the likely occurrence of drought such a long dry seasons / (expected consecutive dry months) and very long dry seasons (El Nino periods) The Drought Warning System is updated once every 1-3 months.

The Fire Risk/ Threat Map gives a spatial overview of fire risk areas with map updates usually of once in 1-5 years. The data may be based upon Flammability/ fuel loads, climatic zones, and potential ignition zones depending upon land use and land use development. The fast changing of land use and the conversion of forest in South Sumatra makes it urgent to have a fire threat map at least once a year and an update before every new dry season.

The Fire Danger Rating is based on seasonal and short-term change of vegetations and their increasing flammability during long dry seasons. The fire Danger Rating can be based on vegetation and soil moisture data monitored on short intervals as danger rates increase. The assessment takes place during the dry season on a weekly or even daily basis when drought becomes severe.

The Fire Danger Rating is also mentioned as a MenLH activity in BAKORNAS, MenLH 2001. However the EA Province and Kabupaten had no knowledge, information about the content and procedures of Drought Warning and Fire Danger Rating Systems, nor did they have any view yet on their possible future role in this. MenLH has produced a draft procedure *ACUAN Kerja 02-ESD Pedoman Umum Pembuatan Probabiliti Potensi Daerah Rawan Kebakaran Hutan dan Lahan. Februry 2004. see also comments under 2.3.1.2*

MenLH does not distinguish Drought Warning System and Fire Danger Rating System. The draft procedures developed (Acuan Kerja) by MenLH have not been ratified and have not yet been forwarded to Provinces or District for review or possible application.

2.3.1.4. Hotspot data and analyses

Hotspot data can be downloaded from the Internet. SSFFMP (mr. Solichin) has provided a comprehensive guideline on information sources and content.. MenLH has a mandate to disseminate hotspot data. The intended link with the the EA Provinces and Districts does not yet function well due to technical difficulties. Hardware facilities provided to MenLH under the ADB regional networking have been installed at the provincial office and two pilot Districts (Lahat and Palembang Kota). Also other offices download and disseminate hotspot data including SSFFMP, Forestry Province / Intaq and BMG. Forestry makes an overlay with land use data.

MenLH is ambiguous about its task of daily hotspot dissemination, and would rather focus on policy than on actual implementation activities. (Personal comm. Mr. Sudariyono Deputi Bidang Pelestarian Lingkungan 8 Nov., 2004). MenLH uses the hotspot data also for trend development and policy recommendations. The number of hotspots in South Sumatra Province is increasing in particular in the peat swamp areas (pers. inf. MenLH Mr. Herwono Sigit 12 Oct 2004)

The province South Sumatra and the Districts have not yet assigned the agency/ organisation that should download and disseminate hotspot data. Currently Forestry (Intaq), BMG) and SSFFMP are downloading hotspot information. Dissemination is irregular and not structured yet. Forestry combines hotspot data with overlay map with district boundaries.

In Riau Province BAPEDALDA is responsible for downloading and disseminating hotspot data. The data are geo-coded and the location of hotspots is listed separately specifying Sub Districts, commercial enterprise, and village area.

2.3.1.5 Investigation of the causes of fire and its impact

the EA has no structured task and procedures developed to investigate the causes of fire and its impact. No reports on this subject are produced so far at the the EA Province and District level. No budgets are allocated to make surveys or outsource studies. However, the EA thinks it may have a future role in impact assessment of fire and haze, and regards the impact assessment as part of its mandate.

The general perception is that the causes of fire are well known and need little or no further study. This is a misconception in my view. Further study including stakeholder analyses, resource entitlements and insecurity over resource entitlements, tenure will give insight in the structural problems in regional development and environmental governance

There is no good analysis yet of the stakeholder groups/ categories of people using fire in land management and the reasons they do so. There is little knowledge on the opportunities and alternatives to local smallholder farmers to be an agriculturalist without using high risk fire practices.. Not only a fire risk map is missing but also a profile of fire risky stakeholder groups, their needs and opportunities.

The impact of fire and smoke-haze on loss of assets, on the health of people, on biodiversity is all poorly studied so far. This in turn results to a lack of realistic planning.

2.3.1.6 Social Movement and Development of Good Environmental Government

The question how long will it take to get the fire problem under control and to lower the fire and haze risks to acceptable levels. What is needed for this in terms of land use development and more importantly in terms of social movement and institutional development and development of good governance. And what is the current and possible future role of the EA /LH in supporting social movement, development of good environmental governance and governance institutions at different levels, Province, District, and Village. *Reference Schachhuber, Adam (2004) Social Movements, Environmental Governance and Territorial Development. An international Perspective <http://www.risp.org/getdoc.php?docid=2508>*

It is noted that BAPEDALDA at Provincial level is much isolated and has little involvement in active social movement and structural support for environmental governance. The link with active social groups such as NGOs or otherwise is ambivalent. NGOs are not (yet) regarded as partners on development of environmental governance. At District level horizontal linkages between the line agencies are under more promising development

The link with commercial enterprises on environmental management and governance is more evident. Procedures for developing synergy with commercial firms are being developed in relation with EIA (AMDAL), environmental monitoring plan (RPL) etc. see below 2.3.1.9 EIA and fire risk management

The main gaps in knowledge are related to:

- Land hunger and the effect of strategies of “plasma-inti” (mix commercial enterprise development and smallholder 50-50%)
- Opportunities for win-win relations commercial enterprise and smallholders and translation in contracts and
- Governance on large areas under transition through forest logging, forest conversion to smallholder agriculture and commercial estate development with temporary lack of protection and management. It is estimated that in South Sumatra province some 1,5-2,5 million hectares of land are in transition and almost without pro-active government control, thus resulting in disastrous effect on resources and fire risks. There is a lack of planning and data on land status, resource entitlements, tenureship and management authority in line with field realities and pressures..
- Environmental Governance Development at Village and District level; the mechanisms and specific instruments to institutionalise meaningful participation and public consultation and the possible role of the EA/LH the EA activities on Governance development are limited and none is directly related to fire management.:

BAPEDALDA MUBA organised in 2002 and 2003 training for creation of Environmental Kader [Pelatih Kadar Lingkungan] each 15 Villages (Desa) including 2 key people per village three days. The province and Districts have activities to raise awareness of environmental regulations

At national level MenLH attention is given to develop environmental Governance under the concept of “Pamong Praja”. Earlier environmental governance programs such as PROKASIH to improve river water qualities have been very successful.

2.3.1.7 EIA and Fire Risk Management

The EIA (AMDAL) is a well-established mechanism used by the EA. The mechanism allows for a clear link with fire management. This link is increasingly made. All new commercial estates of oil palm plantation, tree plantation (HTI) are subject to EIA. EIA consist of AMDAL (Environmental Impact Analyses), RKL Rencana Kelolaan Lingkungan (Environmental Management plan) and RPL Rencana Pemantauan Lingkungan (Environmental Monitoring Plan.) In addition the EA applies a “soft approach” through the program for guidance on synergy on environmental management (PROPER or Program Penilai Peringkat Kinerja Perusahaan dalam Pengelolaan Lingkungan Hidup). In case the commercial enterprise does not adhere to the RPL it signed earlier, then a SUPER (Surat Pernyataan or declaration) is to be signed to commit with agreed sanctions to implement the missing management obligations. In case also this is not adhered to then legal action (LEGISLATIF) will follow.

This PROPER/SUPER/LEGISLATIF program pertains to the synergy between the EA and commercial enterprises in the implementation of EIA and RPL or environmental management. (The PROPER mechanism includes a checklist of adherence of environmental management plans. Ratings of the performance of the commercial enterprises are published. However the PRPOPER does not include data on fire management specifically; BAPEDALDA Riau has developed a PROPER specifically specifying a rating related to fire management) to fill this gap.

The effect is that the policy of zero burning in land development for commercial estates is becoming more widely accepted. The policy was included as law in PP4, 2001 art. 11, and endorsed by Ministry of Agriculture and Estate Crops (see Perkebunan, 2004) and included in EIA/ RPL since 2003/4.

The Environmental management plan (RPL) sets a number of conditions for the commercial enterprise to apply zero burning management. Land clearance for plantation development so far was and still partly is done by burning the existing vegetation. This is regarded cheap and fast and it kills pathogens/ diseases and makes available easy uptake of fertilizer in the form of ash of burned vegetative matter. However the risk of wild fires is very high and the impact of haze from large burning areas is very high to disastrous. The RPL will thus include management practices to as alternative to burning. Land clearance practices without burning are specified such as composting, or making windrows, The preparedness to fire incidence is specified in establishment of fire crew/ organization, training of fire crew, purchase of fire fighting and communication equipment, making of water ponds, fire belts, etc.

In Riau province there is also regulation on the responsibilities of commercial enterprises and 3 km belt around the commercial estate concerning cooperation on fire fighting in case of fire incidence.

The RPL details or specifications depend largely on the attentiveness of the EA and the consultant hired by the company to prepare the Management plan. The expectation is that much gain can be made in the application of zero burning and the fire fighting preparedness in commercial estates provided gaps in mechanisms and enforcement are identified and addressed.

The main gaps in development are:

- No PROPER specifically for fire management
- Insufficient details on fire prevention management and fire preparedness
- Insufficient technical knowledge and motivation of consultants, which usually are hired by commercial enterprises to prepare the RPL Environmental Management Report.
- Lack of detailed and surprise field monitoring of commercial enterprises on the fire prevention and fire preparedness.
- Lack of official standards on minimal provisions needed by commercial firms on fire fighting equipment, trained personnel and others in relation to total area of plantations and /or local field conditions
- The issue of conflicts and potential conflicts between commercial enterprises and smallholder/ farmers and local communities is not sufficiently dealt with in the EIA/ AMDAL. The unsolved conflicts may be a (major) cause of deliberately set forest fires and plantation fires.

2.3.1.8 Environmental legislation and law enforcement

the EA /LH has a definite role in creation of awareness, knowledge on environmental regulations and law, development of regulations, and the enforcement of law and regulations. At BAPEDALDA province 5 people have training as Environmental investigator (Penyidik Lingkungan), and thus the authority to investigate environmental crime and even to take people in custody for two days before handing them over to the police.

There is however no program for the environmental investigators, no operational budget, no equipment or facilities specifically arranged for them. No court cases are so far prepared. There are no Environmental Investigators (Penyidik Lingkungan) yet in the three Kabupaten.

The activities are limited to facilitation in environmental cases (“kasus lingkungan”) The role of the EA is to facilitate in the process of negotiation between a complaining party (often a local community or individual) and a commercial blamed for pollution or damage. None of the cases so far related to forest fire. Most are related to water pollution. The numbers of cases facilitated are limited: Less than 10 in Province and Districts per year.

In the organization of BAPEDALDA RIAU and in the PUSDALKARHUTLA environmental law enforcement is very prominent and high priority. The Provincial PUSDALKARHUTLA (Gov. Decree, 2004) consist of three divisions one of them being Environmental Law Enforcement. BAPEDALDA processes currently 10 cases and has won a large court case using the Environmental Law 23, 1997 art 38. in a case concerning forest fires with a fine of IDR 9,6 Billion or about one Million USD. See *Appendix 5: Laporan Studi Banding Riau*.

Riau has recently trained 30 Environmental Investigators with a duty station in the Districts.

2.3.1.9 Production of Annual Environmental Report (SLHD)

The Environmental Status Report (SLHD) is a typical product by the EA/LH. It is based upon a routine process developed in the eighties by MenLH. Detailed guidelines developed by MenLH exist specifying type of data to be collected and the method of processing. Both Province and Kabupaten/Kota use the same format and data sets.

The routine production has been broken at the Province and the Kabupaten. The province did not budget anymore for the SLHD in 2004 for unclear reasons. However it was decided by the new management to yet produce the 2004 report (discussing the 2003 status) by shifting some budget from other sources so as not to create a data gap. Of the Kabupaten only MUBA produced an Annual Environmental Report. The office PELH District OKI did produce a report since 1999 and District Banyuasin since 2002.

The reports produced by District MUBA and the Province do not analyse forest fire and haze to any extent.

Concluding: There are several weaknesses in the production of the SLHD, which may need attention

- Several Kabupaten do not produce (have not yet produced, or have discontinued the production of the SLHD);
- Secondary data sets are partly difficult too obtain, are incomplete, not accurate or out-of-date
- Official accepted figures may not have much reality value. Figures on forest are often out-of-date as they express the area of State Forest Land (Kawasan Hutan) but do not express the real areas still covered by Forest / vegetation. Also the Kawasan Hutan area still under control by Forestry may be much less

than the official figures suggest. Smallholder farmers and commercial enterprises have already occupied many areas.

- There is no stakeholder process to identify major issues to be analysed in the Annual Environmental Report. The participation of stakeholders is very limited or not included in the problem identification and design stage and also not in the data analyses and conclusion stage. the EA has not yet institutionalised much the participatory forms of environmental governance and not yet introduced the available cutting edge methods of evaluation.
- the EA has still a poor record on inclusion of Environmental NGOs in environmental evaluations and policy development. The link with Advocacy Organizations (AO), Grassroot Support Organisation (GSO), Service Organizations (SO) and Grassroot Organizations (GO) has yet to be structured.
- The standard data collected include only the obligatory required routine data (per SOP). However additional data will be needed to analyse important trends in environmental changes typical for the quality of the local Provincial and District environment. The existing SOP does not include any data requirements related to forest and land fires.
- The existing data sets used so far do not relate to the problem of Forest and Land Fires. This gap should be addressed. The Riau Province SLHD 2004 and other SLHDs can be used as an example where Forest and Land Fires has been discussed to some detail. (Reference: ...
- The user needs are not assessed
- The analyses are shallow and fragmentary. The trends are not well analysed. Conclusions are very limited and unspecific. Policy recommendations are few and of very general nature.
- The dissemination of the report is very limited and the use is not researched. The use will be limited in relation to (lack of) detail in the analyses and (lack of) specific conclusions and policy recommendations.

2.3.2 Perception by others of tasks and products of the EA/LH

the EA /LH with an important role in the Environmental Management, Good Environmental Governance is not much supported under the current setting and prevailing development paradigm The perception or development paradigm held by the local, decentralized Governments is priority on economic development, short term exploitation of natural resources, attraction of foreign and local investments in industries, estate crops. Local Government Income from tax and permits receive high attention, while relative little attention is given to long term development and Environmental Management and Good Environmental Governance.(GEG).

The prevailing perception and paradigm result in several external constraints to the EA/LH . The main constraints are:

- Minimal operational budgets,
- Frequent change of managers,
- Appointment of personnel without specific education and experience in the required subject matter of environment,
- Limited funds for accommodating a participatory approach.
- Little outside (and inside) efforts to create synergy.
- Low status of organization

On the other hand MenLH and therefore the EA as linked to MenLH have a positive image with the general public due to a very visible role of the Ministry and local Government. Men LH is well known for its mission in the past 30 years in fighting environmental crime and regulation the environmental management with the well established mechanisms such as AMDAL, giving incentives in improving the environment by programs such as PROKASIH and KALPATARU.

The decentralisation has given a temporary set back to environmental management as discussed above. The organisation of the EA has not yet reached stability and received only limited recognition due to organizational changes (1985.started as separate organization then in 2002 becoming integrated within MenLH)

The decentralization led to a very divers setting and status of the EA/LH offices. Budgets are limited. In the case of Districts Banyuasin and OKI the setting is very limited indeed qua personnel and budgets. (Operational budget of 5000 Euro and less). In BAPEDALDA Province and BAPEDALDA District MUBA facilities, personnel, and activities are more developed thus affecting also the recognition. (Operational budgets equal to some 50.000 to 75.000 Euros on annual basis, but still very minor within the total Provincial and District budget)

The role of the EA related to fire management is not generally known and / or accepted. The perception of many is that the EA has no direct relation with fire issues. Fire issues are typically viewed by most as limited to fire suppression activities. The role of the EA in monitoring water, air and soil pollution and sound pollution is generally known. The role of the EA in monitoring air pollution is very limited indeed and none of it related to forest and land fires so far. The limited air pollution monitoring is related to industrial and urban air pollution levels. the EA has yet to show its role in fire management by showing related products.

NGOs see the EA as an important but not very effective agency in environmental policies, EIA, and monitoring. NGOs would like to have a much bigger role in environmental assessments, investigation, planning and decision-making. the EA provides NGO with some involvement in EIA and the evaluation of documents prepared by consultants. However the NGOs' involvement so far is very limited both in regard to the number of NGOs and the individuals. the EA is seen as rather ambivalent about its relation with NGOs, and usually gives preference to the less vocal, less critical NGOs and NGO members.

The recent establishment of (SSFFMP) Multi Stakeholder Forums in each of the three Districts has increased the communications and cooperation between NGOs and Line Agencies. However this has not much affected yet the link between the EA and the NGOs. The main reason is that the EA itself has not promoted its own profile in fire management related activities so far. Training activities supported by SSFFMP has brought NGOs and the EA together recently, where BAPEDALDA provided the training for NGO members on EIA. (AMDAL-A).

NGOs do not prospect yet any bonding with the EA in a social movement for a higher goal of sustainable environmental regional development of some kind the EA is viewed by NGOs with suspicion being a government agency as others, which typically are expected to show more interest in lining up with large commercial firms

then to protect the local people and victims of environmental pollution and degradation. This view is in practice more diverse and much dependent upon local the EA personnel involved in facilitation of environmental cases.

Commercial Enterprises have a growing awareness of the EAs' role in EIA and take more serious notice of the EA as the monitoring and law enforcement mechanism are improving. In particular in the field of water quality monitoring. The mechanisms of PROPER, SUPER and Legal action have recently been further developed. They are well structured and can much increase the synergy between Commercial enterprises and other stakeholders in regional development, provided the EA plays an active role in monitoring and law enforcement.

The academic world in particular the PPLH (Pusat Penelitian Lingkungan Hidup) of State Universities has a shared interest in scientific environmental research, and capacity building and training. However, the linkage with the EA is weak and has grown weaker. The EA has limited funds to outsource research and training. PPLH and the EA have not developed official cooperation based on MoUs or otherwise. The link of the EA with PSL (Pusat Studi Lingkungan) of private Universities is negligible. The Environmental Institutions have not developed a clear mission together with the EA. Individual consultants of the environmental centres (PPLH, PSL) are much involved in preparation EIA (AMDAL), typically paid for by the commercial enterprises. In this role they meet with the EA in evaluation of AMDAL documents. The environmental centres play a role in training on environmental subjects in particular EIA (AMDAL A, B, C)

the EA personnel both in the Province and the Districts complain about the quality of the work of several AMDAL consultants, who reportedly do not bother to do in-depth field investigation and mainly apply a digital cut and paste approach for AMDAL document preparation.

2.4 Personnel setting

The personnel setting at BAPEDALDA Province is characterized by:: Top management is new and middle management is longer established. The District offices have relative new personnel and there is several vacancies, in particular in MUBA. See Annex ... Offices and personnel.

The total number of staff in the Province is 54, in MUBA 48 and in OKI 2 and in Banyuwasin 4 people.

The tasks for the Kabupaten offices are about the same. The scope will much depend upon the number of industries, pollution points, and environmental impact assessment needed, environmental permits etc.

The OKI and Banyuwasin offices at have very little support within the local Government. They are seriously understaffed in relation to the tasks and environmental problems in the areas.

2.5 Budget provisions

The budget provisions are in no relation to the actual environmental pressure and degradation processes. They are also typically very low in relation to the overall local Government budgets. No budgets are directly related to fire management. The main

reason is that the organisation structure and task description have not been specified in much detail. Another reason is the weak overall planning. For instance the strategic long-term plans (5-Year Strategy Plans) are missing or have also not been sufficiently detailed in products and annual budgets Training plans and plans for law enforcement and long term legal awareness raising do not exist yet. Operational budgets needed for smoke haze pollution monitoring or impact assessment of forest fires have not been calculated yet.

The operational budget of the Provincial is some IDR 750 million for 2004 and only 0,35% of the total provincial budget .The budget is rather unbalanced with most funds related to water pollution monitoring and no budgets for the preparation of the annual environmental report, training and environmental investigations The budget planned for 2005 will be the same or less (500 million)

The budgets in the districts vary much following the status of offices. The BAPEDALDA office in MUBA Districts has far the highest operational budget including some 750 million for 2004. The expected budget for 2005 may be about the same The budget is more balanced than the provincial budget and includes also funds for the preparation of the annual environmental report and for training and enhancing good environmental governance (Latihan Kader Lingkungan)

The operational budgets of the environmental offices in the Districts OKI and Banyuasin are extremely low and below IDR 100 million each on annual basis. They cover a few aspects only.

The budget provisions are totally inadequate, cover a few aspects only and are too low for most products and services to guarantee the required quality.

Additional funds are available through the Government system such as for training through the Government Bureau (Biro Pemerintahan) for specific training offered. The ADB project on Regional Network for Environmental Data Systems provides training opportunities for BAPEDALDA Province and the BAPEDALDA offices in District Lahat and Palembang Kota

3 ORGANIZATION DEVELOPMENTS

3.1 Integrated Organization Model

The organisational development of the EA is summarized in the analyses of the Integrated Organisation Model using MDF methodology (MDF 2004) *See Appendix 7 Assessment Integrated Organisational Development Model*

This analyses covers mission, output, input, actors, factors, strategy, structure, systems and processes, staff, management style and culture. The first level of assessment allows defining main problems or weaknesses that may need further attention.

The main organisational weaknesses and problems encountered and in need of further attention area:

Mission:

- The Mission in fire management is not adequately translated in long-term objectives and task descriptions;
- There is not a clear synchrony of mission (statements) between central government, and local government of Province and Districts

Outputs:

- There is not a relevant range of products related to fire management; in particular Laws and regulations, court case documents, fire threat area maps, etc.
- The products and services do not adequately address gender roles;
- The volume of outputs is not substantial; Dissemination of products is very limited, and the use of different channels (e.g., internet) very limited
- There is no information on stakeholder needs or societal demands on outputs;

Inputs:

- There is not sufficient number of skilled staff
- There is serious shortage of operational funds
- The inputs are not in line with the regional development, the threats and pressures
- There is a lack of equipment in particular for e-communication (email, digital reports-libraries) and for monitoring of air pollution/smoke haze
- The data input from others is insufficient in particular on issuance of land and resource allocation permits by different authorities, on environmental profile and Environmental Governance data from the Districts and Villages, etc.
- The access to information is inadequate due to secrecy and lack of attitude and practice in information sharing;
- The access to necessary information on fire management is insufficient; The inputs in environmental management and fire management is not in balance with pressures and threats; The relations with other agencies and stakeholders is inadequate; The legal framework and regulations is partly not conducive and insufficiently specified;

Actors:

- There is no stakeholder analyses of different stakeholder/ beneficiary groups related to fire management, (e.g., on middlemen and subcontractors)

- There is no structured data system on customer and financier satisfaction for different services provided
- There is a serious lack of synergy development between line agencies, between province and Districts and with the academic world, and with NGOs, NGO networks be it Advocacy Organisations, Grassroot Support Organisations, Service organizations and/or Grassroot Organisations

Factors:

- The legal framework is only partly conducive for performance; there is a lack of legal provisions to regulate the use of fire by smallholders; there is a lack of regulations on public consultation, participatory processes, etc
- There is a lack of Standard Operational Procedures on stakeholder analyses, assessment of environmental governance, synergy development, production of fire threat area maps, impact assessment of fire affected areas and smoke – haze affected populations, etc

Strategy

- The local Government (Province and District) Strategy Plans are not in line with the Strategies, Mandate and Mission in Fire Management at Central government level

Structure

- There is not yet a logical subdividing of the organization and tasks description related to fire management
- The task divisions and responsibilities related to fire management are insufficiently communicated and understood by the staff
- There is not yet sufficient attention to gender balance in positions of men and women in the different units and levels
- The logistical support is insufficiently arranged. Field monitoring and investigation is therefore constraint

Culture

- There is an imbalance between short term and long term thinking, with a lack of long term thinking
- The individual responsibilities of team members are insufficiently specified. Team members tend to hide behind the team responsibilities
- There is not yet a learning culture and active creation of on-the-job-learning opportunities.

The consultant developed a short questionnaire handed to all EA of the Districts to obtain their view on perceived tasks and results related to fire management *See Appendix.13.Questionnaire Role of EA in forest and land fire management*. The questionnaire was filled in after the workshop of 14 October, and may have been influenced by this workshop. The EA of 6 out of 12 Districts completed the questionnaire. *See Appendix 14 Summary results of questionnaire*.

MenLH has also developed a draft questionnaire to analyse cooperation and developemnt in fire management in the Districts . This questionnaire was sent by BAPEDALDA Province South Sumatra all EAs of the Districts. Only one of two

were filled and returned was usable. The questionnaire may need some revision *Ref. MenLH (2004) Acuan Kerja -05*

3.1.1 Mission, Strategy Plan and Funding Priorities

The mission of BAPEDALDA Province has been described in the Five-Year Strategy Plan and includes four components:

1. To integrate environmental management in the development of the province and all sectors and departments
2. To provide support of personnel and facilities and institutional support in environmental aspects
3. To form and strengthen institutional environmental networks to support Districts (Kabupaten/Kota) in South Sumatra Province)
4. To promote and develop the participation of Commercial enterprises, and local people in environmental management

Component number three is of particular interest. Formal and informal relations are explained below see 3.1.1.2

The provincial Strategy plan, priorities and budget allocations provide some further insight the current developments and the vulnerability of the organisation

- The Five Year Strategy Plan 2003-2008 (signed in second half of 2004, hic!) of BAPEDALDA Province plans a budget of 8 Billion with more than half to be spend on upgrading of laboratory facilities (4.8 Billion) or 56%. The strategy shows some interesting new development including a program for guidance on synergy on environmental management (PROPER or Program Penilai Peringkat Kinerja Perusahaan dalam Pengelolaan Lingkungan Hidup). This program pertains to the synergy between BAPEDALDA and commercial enterprises in the implementation of EIA and environmental management plans. For details *See Appendix 8 Budget Plan 5-year Strategy Plan BAPEDALDA Province*

The weaknesses of the plan are amongst others:

- No funds are included for Law Enforcement and facilitation of Cases; for drafting of new environmental regulations, for organisation development and the development of synergy between Province and Kabupaten. There is no budget on related to forest and land fires; There is also no budget for special studies; There is no operational budget and budget for maintenance of premises, buildings, equipment.
- The budget for Capacity Building / Training (2.9%) and for Preparation of the Annual Environmental Report (1.2%) is relatively too small.
- No year wise details are given on strategies, programs and activities
- The 5-year plan (2003-2008) is not yet implemented as it was only developed in second half of 2004. So two years (2003-2004) went by without proper planning and the budget for 2005 could not be much adjusted anymore as the main budgets and components are already fixed in July for the next year. So in fact three years are constraint by a lack of planning. This had severe repercussions on the organization, as in 2004 there was no budget for the environmental report and for training. There is also no budget planned for training in 2005.

During the consultants' mission several activities were initiated to pursue implementation of this mission component:

- Meeting /Workshop bringing together the BAPEDALDA of the Province and THE Eas of all the Districts (Kab/Kota). The topic of the meeting was:: Synchronizing the role of the EA in South Sumatra on forest and land fires; Recommendation of the meeting are attached in *Appendix 9 Workshop Recommendations* and *See Appendix 10 Recommendations of meeting and related budget number of SSFFMP*
- Budgeting within the SSFFMP Annual Workplan –3- (2005) several meetings to develop and upgrade the status of the the EA Organisation and to synchronize the EA Province and District; Develop the role of the EA Province and District in Fire Management; The second meeting was planned in detail for 6,7 Dec. with Province and Kabupaten;
- Prepared a proposal for a adjusted organisation in Forest and Land Fire Management (PUSDALKARHUTLA). The consultant proposes BAPEDALDA Province to take the coordination role holding the secretariat *See Fig 3 Proposed Organisation PUSDALKARHUTLA South Sumatra Province*. This proposal will be discussed in a broad Provincial meeting mid December on Invitation of the Governor.
- A Cross Visit /Study tour (27-29 Oct. 2004) was made on advice of the consultant to Riau to study the organization of Forest and Land Fire Management. The study tour included joint tour with the heads of Forestry, KesBangLinMas, BAPEDALDA and SSFFMP to meet the Government official in Riau see report and recommendations
- A comparison was made on synergy of BAPEDALDA South Sumatra and Riau *See Appendix 6 Matrix Comparison of Synergy Development BAPEDALDA South Sumatra and Riau*

3.1.2 Informal cooperation and collaboration

The main (potential) players in fire management Forestry, BAPPEDALDA, KesBangLinMas at Provincial level have not developed a mechanism of meeting regularly on the issue of fire management. Inter-agency and inter-sectoral cooperation is weak.

The Environmental Agencies in the Province and Kabupaten have not developed formal cooperation and collaboration with each other or with other line agencies, with the academia or with NGOs. The EIA (AMDAL) and Environmental Monitoring Procedures (RPL, RKL) set relations with Commercial Enterprises. The SSFFMP initiated Multi Stakeholder Forum provides a possible vehicle to further develop cooperation. The Head of the District in OKI has ratified the SSFFMP Multi Stakeholder forum including membership of the EA.

The ADB funded Regional Network for Environmental Data Systems is based upon a formal cooperation between MenLH and ADB and links some Provinces and Districts within the system with the MenLH central office In South Sumatra BAPEDALDA South Sumatra Province and the Districts Lahat and Palembang Kota are included.

So far there are several informal relations such as

- With PPLH on training of personnel on AMDAL A-C; PPLH did a study on the Water basin of the Musi River for BAPEDALDA.

- With NGOs are invited to take part in evaluation of EIA report; Training of NGO on EIA (AMDAL A) supported by SSFFMP;

The study tour to Riau revealed that BAPEDALDA RIAU has a much broader development of cooperation. A special study was outsourced to PPLH Universitas Riau (UNRI) in Pekanbaru on synergy development including synergy development between NGOs, Government, Commercial Enterprises, and Academia BAPEDALDA Riau developed relations between BAPEDALDA Province and Districts through two Statements of Binding Declarations (Declarasi Pengikat Dumai and Karimum) *See Appendix 11: Monitoring of Synergy Development in Fire Management*

3.2 Personnel development

The opportunities for personnel development will be determined by a good capacity building plan based upon task descriptions, and competencies needed in terms of skill, knowledge and attitude. Of much influence is the support and attention of the executive personnel to make training plans and career planning together with the personnel and provide in-house learning opportunities as well as training outside.

The personnel development is further closely linked to constraints and opportunities of organisational development earlier discussed. In addition there are some major constraints directly related to personnel development.

- 1) the frequent replacement of personnel in the higher echelons (Head of Office; Head of Department (Bidang)) (BAPEDALDA Province, OKI);
- 2) the frequent placement of people in executive positions who have no background in the required subject matter typical for the environment agencies work such as environmental law, regulation, environmental impact assessment or environmental monitoring (BAPEDALDA Province, OKI);
- 3) a large number of mainly lower echelon personnel and non structural personnel who have no job description and received no skill training;
- 4) New Kabupaten with new and still incomplete personnel provisions with still limited training, (MUBA);
- 5) "Old" Kabupaten which lost in the process of splitting of Kabupaten the richer part and where offices have become smaller with currently very limited personnel (OKI, and Banyuasin);
- 6) Constraint relations or break in vertical relations between Province and Kabupaten hampering information exchange, hampering synergy development, limiting learning and training opportunities;
- 7) No real progress yet in information technology and the use of internet to induce self learning opportunities. No office has a working email or use of internet;
- 8) The limited exposure of personnel to outside expertise and or critical monitoring of the work;
- 9) The lack of structured participatory personnel performance monitoring and career planning;
- 10) Slow development of modern management models and lack of disciplined application of existing good standard operational procedures;
- 11) Lack of job descriptions directly related to forest and land fire management;
- 12) Lack of team spirit and cooperation within offices between departments

Also, there are main opportunities, some with low cost to develop capacities and create learning opportunities such as

- 1) Create exposure to people with different skills and stages of development working closely together in working groups of own office;
- 2) Building team spirit to assist each other in learning skills such as computer application program, search for information on internet and find publications, documentation in related offices, foreign projects, etc.;
- 3) Cross visit program, organised formally or just informally to extending the network with colleagues;
- 4) Officially including outside expertise in working groups.

The frequent replacement of executive personnel and their lack of subject matter skills or experiences easily may result in a discontinuity of programs, strategies and priorities

The personnel development in the new Kabupaten MUBA has been fast, with a almost doubling of personnel in the last year. MUBA is a new Kabupaten split of from Kabupaten Banyuasin in 2001.

The other two Districts Banyuasin and OKI have a very limited number of personnel in the environmental office. OKI, which lost part of the area to a new Kabupaten, has only one professional personnel Head of Department who was newly positioned less than two months ago.

3.3 Budget provision

The budget directly related to fire management at Provincial level and District level the EA/LH is zero. See for details *3.1.1 Mission, Strategy Plan and Funding Priorities*

3.4 Offices and equipment

There has not been a thorough study by the consultant on Equipment needs. It is noted that no operating equipment exist at BAPEDALDA Province and in the three Kabupaten to measure air quality and to monitor the haze smoke from forest and land fires. The only measurement on air quality is by BMG (Badan Meteorology and Geophysics which measures visibility at the airport in Palembang to advice planes not land at low visibility during fog and or haze/ smoke form forest fires with less than 800 m free sight.

The equipment such as computers is reasonably provided in BAPEDALDA Province but less so in the Kabupaten. Geographical Positioning Systems (GPS) are yet to be provided for all offices. There is no office yet connected to the Internet, and some will computers will need modems;

The need for purchase of specific equipment will become clearer during the further assessment of competency building needs and related training needs.

4. ANALYSIS

4.1 User information demand, information providers and information users

The Government does usually not analyse information needs, the target groups of information users, or determine the most cost effective information provider. There is hardly any interaction between the user and his/her information needs and the information provider. The role of the EA as an information provider for different target groups could / should be further researched. For instance who is the intended or assumed user of the Annual Environmental Quality report?. What kind of information is most needed, or requested by the intended or assumed beneficiaries? What are the most pressing environmental problems to be analysed?. Could with some adaptation in format or in dissemination methods (e.g., digital) more beneficiaries be reached? Does certain information already exist but is the problem in the dissemination of information to the stakeholders/ beneficiaries?

A relative easy and relative low-cost method to improve products and services is by developing participatory processes and by inviting the intended beneficiaries to discuss expectations and or design the framework for information gathering and flow. Representatives of intended beneficiaries can officially (Kpts, Letter, Decree) be included in the working groups, which will assist in putting the product together, (e.g., AMDAL/RKL/RPL, Environmental Status Report, Fire Risk Map, Village Environmental profile, Monitoring of issuance of permits for industries, HTI, Oil Palm estates and processing plants). The official Decree can describe the composition of teams, the procedure of consultation and participation, the tasks, inputs and outputs.

Take the example of measuring air quality related to forest and land fires. Who will need what kind of information? What will be done with information or air quality? There seems not yet to be a standard on air quality, on standard operational procedures related to information needs of different beneficiaries / target groups

4.2 Main gaps in mandates, tasks and information supply

Main gaps in mandates related to fire management are:

- Mandates related to fire management are few and several are still missing and not yet officially assigned to Local Government Line Agencies. There is a major discrepancy in mandates at Central Government MenLH compared with the Local Government. Still awaited is the application and translation of PP4, 2001 in local Government regulations. Mandates differ much by provinces and Districts. Bapedalda Riau Province high a much broader mandate than South Sumatra Province.
- Mandates for Public Consultation in Environmental Planning, Implementation and Monitoring are not yet assigned to the public (except in Spatial Planning and related environmental issues). Mandates for participation of stakeholders in planning, implementation and monitoring are weak and not yet structurally applied
- Legal environmental investigation and preparation of court cases using the environmental laws do not yet exist in the Districts due to a lack of officially qualified personnel. Also in the province legal investigation is missing in the

tasks although trained and certified personnel (Penyidik Lingkungan) is available

- The EA does not yet monitor air pollution including smoke–haze. Only limited monitoring of air pollution is done in industrial and urban areas.
- Environmental data are very limited There are several and severe gaps in data availability, data supply and data dissemination. Some data in particular on forest cover and state forest area use are unreliable and out of date. Data on permits for land allocation and conversion of state forest areas are not transparent.
- Data on the environmental conditions of the land category “Other Land Uses” (Areal Penggunaan Lain) is limited due to confusion on the responsibilities of line agencies and local government. These areas are typically in “transitional” land use and status.
- A regulation on mandatory exchange of environmental information and data between line agencies is missing. There are no adequate regulations on the digital data supply and use of email and Internet, categorisation of data free to use in the public domain and data with restricted use.

4.3 Organizational Strength and Development

The organisational strength and weaknesses of the EA will determine the potential development of the organization. The development of strength and the decrease of weaknesses will, for the time being, much depend upon external factors. The recent and ongoing changes in the decentralizing (and re-centralizing!) Government and the current dynamics in organisation development, makes it difficult to prospect the future role of The EAs in fire management. Therefore, the consultant gives his view outlining an Intuitive Integrated Planning Model based on perceived and assumed external and internal constraints and options. See Figure 2 *Intuitive Integrated Planning Model (a) Constraint and Options) and b) (Levels of ambition)..*

Figure 2: Intuitive organisation Development BAPEDALDA
a) Options and Constraints

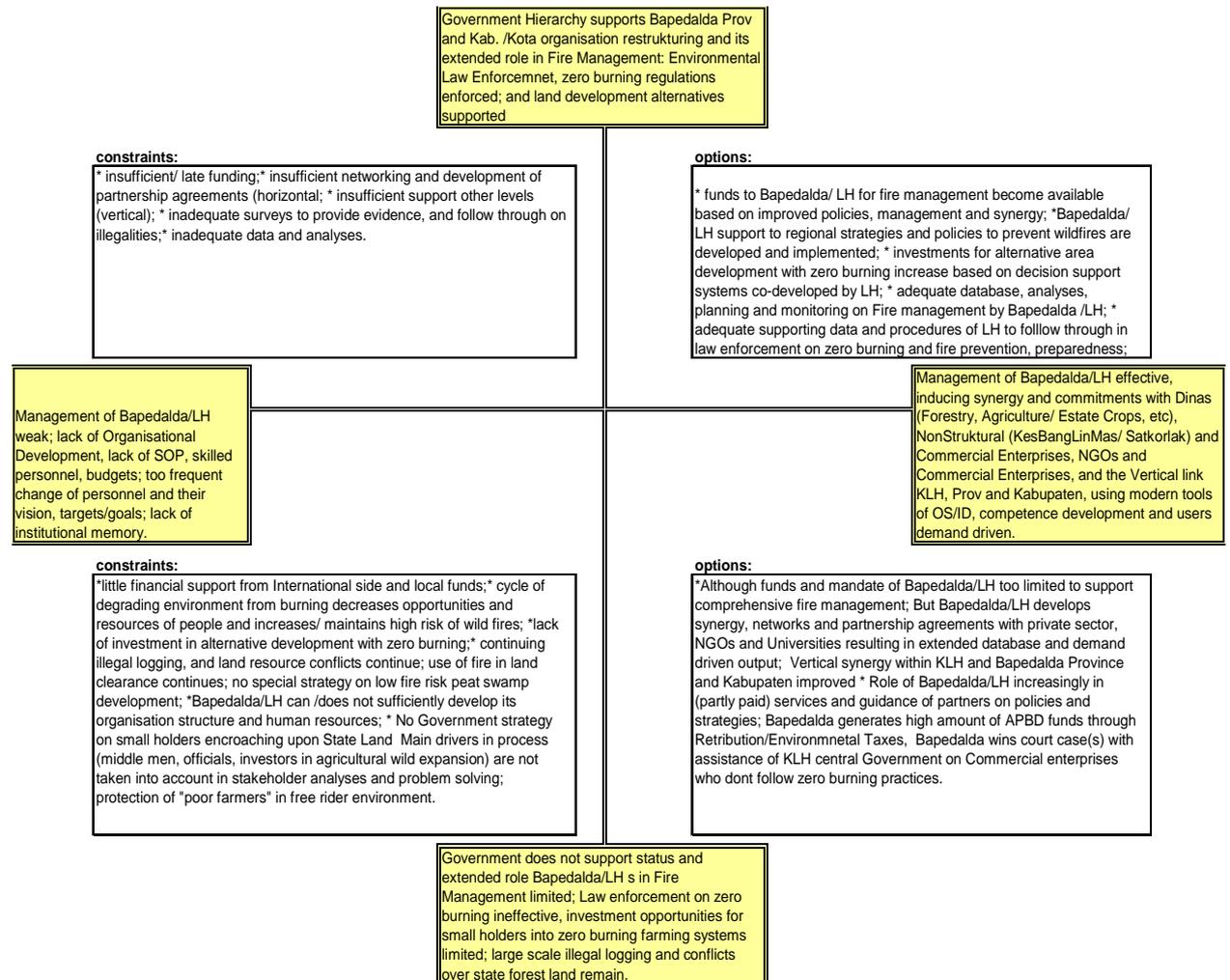
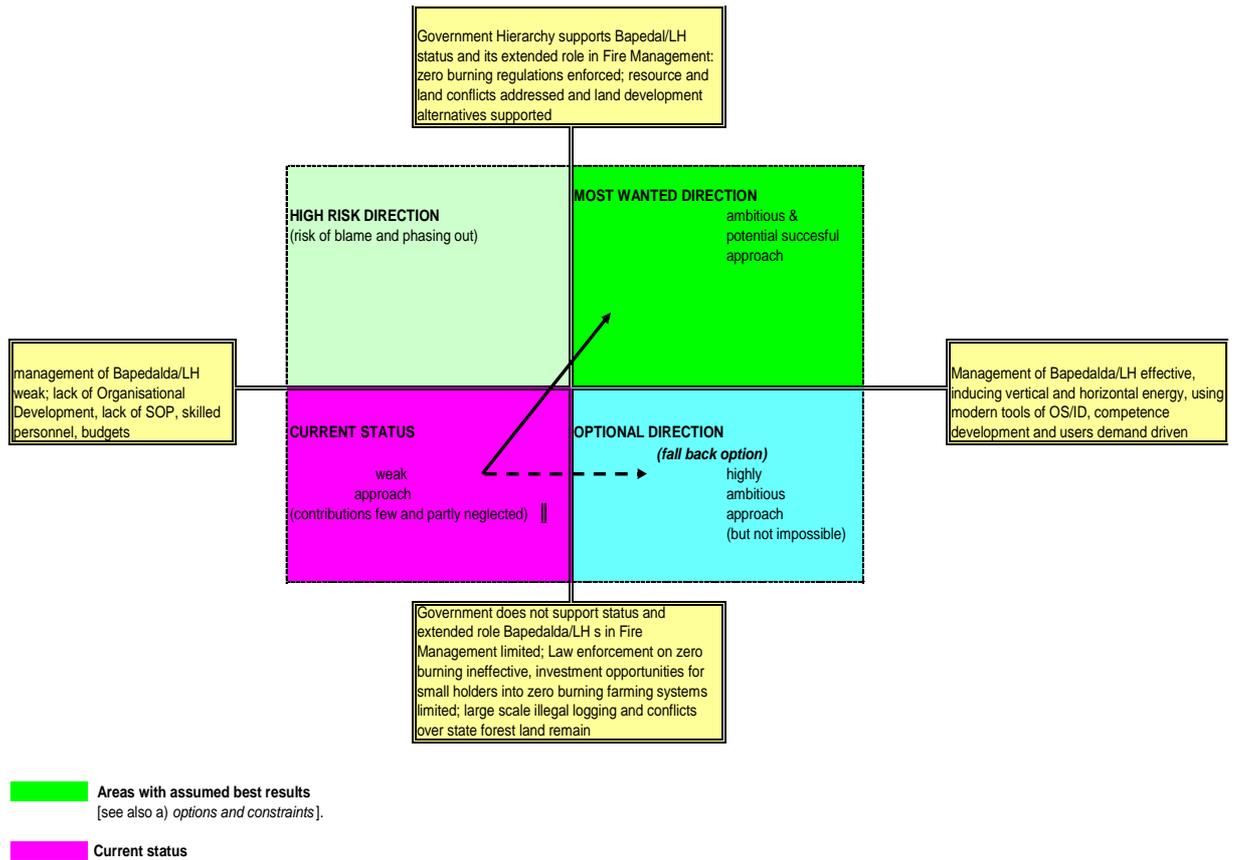


Figure 2: Intuitive organisation Development BAPEDALDA
b) Level of Ambition



One of the main determinants is that the local Government can choose its own organisation structure and financial arrangements and is independent from higher Government levels. This can be regarded mainly as strength but also as a weakness.

The Local Government under the autonomy since 2001 can take direct responsibility over its natural resources much more than before 2001.(Darsono 2002) This may increase the sense of ownership and long-term care for the resource base. The manager has a better knowledge and understanding of his own area so as to have an optional field implementation program (Darsono, 2002) The decentralisation of powers to local Districts gives better options for coordination in planning and implementation and monitoring and potentially improve horizontal relations between the line agencies

The weaknesses under the decentralisation are however many so far. The main weaknesses are the prevailing development paradigm with relative little concern for long term planning and environmental issues. Another constraint is that many offices and administration are young with incomplete personnel and limited experience.

The main option for The EA is participatory development, development of synergy, (*See Appendix 11: Monitoring of Synergy Development*) development of standard operational procedures, improved database and application of IT and training of personnel. The external factors are Good Environmental Governance, law enforcement on zero burning by commercial enterprises and addressing the conflicts on natural resources and land, the development of alternatives for smallholder agriculture. The Intuitive Integrated Planning Approach (fig. b) shows the “Most wanted development direction” and its attributes

4.3.1 Legitimacy of the organization

BAPEDALDA/LH is a legally established Government organization. The age is relative young. BAPEDAL was established in 1990 with the function to give guidance to government institutions/ organizations in the field of environmental impact assessment. In 2002 (per KepPres no 2) per Presidential Decree BAPEDAL functions and authorities were integrated within MenLH.. within the Provinces and Districts the BALPEDALDA (DA= Daerah of local / can be Province or District) was established in different forms or organization structures. See

The Organization is now subject to further evaluation and possible restructuring. in line with the PP8, 2003

The role of the EA in forest and Fire Management is not yet regulated in the province and the Districts. A revision of the Governors Decree will be needed *Ref: [Kpts Gubernur no .. 2002 ?/, Prosedur tetap Penanggulangan bencana dan penanganan pengungsi SATKORLAK PBP Pro. Sumatera Selatan*

The Development of a Governors decree for a Centre for Prevention of Forest and land Fires could possible be developed. The consultant recommends to use the example of the Riau PUSDALKARHUTLAH 2003 (Kpts Gubernur Riau No1, 2003) and the Permanent Procedure (PROSEDUR TETAP (Kpts. Gubernur Riau nomor 134/II/2004). and possible adjustment for South Sumatra at local Governments of the Province and the Districts

4.3.2 Effectiveness of the organization

The effectiveness of the organization can be assessed by different standards and criteria:

- 1) The assessment can be related to the organizations own 5 year strategy plan and task descriptions
- 2) The assessment can be related to strategy plans and activities of other, more progressing the EA of other areas
- 3) The assessment can be related to a more ideal model of mission, vision and strategies and objectives

The current position can briefly be characterized as following:

the EA plays a major role in environmental impact assessment to set standards for commercial enterprises. It plays a initial role in environmental monitoring particular to water pollution related to main enterprises. It plays a minor role in environmental analyses through its environmental annual report. It plays an almost negligible role in environmental law enforcement, a small role in facilitation of environmental conflicts. It plays no role yet in monitoring of air or soil pollution. It plays no role yet in forest and land fire management related tasks.

BAPEDALDA in the province is much isolated from mainstream developments and networks It has no in-depth data on environmental conditions and developments apart from water pollution. The inter-agency and inter-sectoral linkages with other main players in Fire Management are not yet structured.

It did not develop strong relations s with the academia and the NGOs. Its role on policy advice within the province is minor. This is mainly due to a lack on data on trends of environmental developments, and alternative developments or scenarios.

4.3.3 Cost-effectiveness of purpose (outcome) and mission (impact)

The cost effectiveness of the organisation is not known. Many environmental costs are not made explicit and are not internalised as cost. Therefore they are often not considered as cost by decision makers. This results in relatively very low budget provisions to Government Environmental Agencies in most developing countries.

Government offices do typically not work in a competitive environment or open market system. There is little or no competition from the private sector, which otherwise could possible enhance cost effectiveness. The drive for cost effectiveness will then mainly have to come from organisational development, skill training and internal management control and external auditing

However, the cost effectiveness is likely very high. Relative small budgets spend on effective monitoring of fire risk, ongoing fires and fire impacts could potentially lead to better formulation of strategies and plans and thus have a major economic impact. The relative low budget input in EIA (AMDAL) and Environmental Management (RKL) and Monitoring Plans (RPL) focussed on zero burning in commercial enterprises of tree plantation (HTI) and Cash Crop producing estates will already have a major economic impact due to reduced fire and smoke hazards.

Relative small inputs on synergy development, design of environmental legislation and law enforcement pertaining to arson event may also result in huge economic saving due to reduced asset loss and loss of opportunities for work and development,

A relative small input in strategy development and analyses on scenarios for the development of peat swamp areas with little fire risk could have a major economic impact. the EA should therefore take a lead in such developments. This would likely increase the EAs' profile and cost effectiveness.

Another area of major cost effectiveness would be investment in Good Environmental Governance at the local Government levels (Village, District), and the design of controlled fire and smoke-haze regulations for small holders.

A study on actual and potential cost effectiveness of the EA is therefore strongly recommended. This would possible result in the selection of program components and product development based on cost profiles and cost effectiveness

It is further noted that BAPEDALDA Riau Province could collect a fine on legal case of illegal use of 9,6 Billion IDR or some 1 Million USD. based on UU 23, 1997 ON environmental management law. Further investment is done in another 10 fire related court cases. The return is likely much higher than the investment.

the EA can also be a main economic player in the local Government as can be learned from the Riau example: BAPEDALDA Riau is the highest contributor to local Government tax income. Retribution funds from permits and pollution discharge is currently some 1,6 to 1,8 Billion IDR on annual basis. (Based on their local environmental regulation PERDA no 7, 1999 based on UU34) *See Wind, J (2004) Studi Banding Riau*

4.3.4 Timelines of response

The time line of response by Government Agencies is mainly determined by planning and monitoring cycles and flexibility of budgets. The main plans are the 5-year Strategy plan, the annual plan and the plans of divisions and working groups. The main categories in annual budget are set in July and budget details fixed in October-November. The budget periods follow the calendar year. The flexibility of budgets is very limited. Budgets are subject to approval of the legislative body (Board of People Representatives).

Most working groups follow in practice annual timeframes related to annual budget. However, there may be solid reasons to apply shorter and longer time frames. Monitoring of performance of personnel is annual. Auditing is annual.

Early of adjustment if 5-year strategy plans is possible in exceptional cases if serious gaps occur in the strategy. The South Sumatra 5-year strategy plan does not mention Forest and Land Fire Management. This provides a strong reason to consider early adjustment of the plan.

Short timelines of response depend on the frequency of monitoring and adjustment of work and tasks. This in turn depends largely on the management style and practice of

the management, the team spirit, knowledge sharing practices and horizontal organisation development

The main timeline of response of SSFFMP is the Annual Work Plan, which is designed in Oct-Nov each year. SSFFMP may want to plan its Annual Work Plans and budgets already in July to increase opportunities for integration of programs and budgets with the partners in the Provincial and District Government.

4.3.5 Continuity and viability

The recent process of decentralisation and the changing role and mandates of local government, the splitting of District in new administrative units is still in full swing and the continuity of the organisation is still vulnerable. The Government restructuring of District Line Agencies under the PP8, 2002 is still ongoing and may provide new opportunities and may have major positive or negative impact of the the EA of the Districts during the next period 2005-.

The frequent change of key managers presents also a threat to continuity, due to personal background, experience and preferences, which affect policies and plans.

There is a historical battle between the Ministry of Forestry and the Ministry of Environment on the mandates in EIA and Environmental Management. Different views within the Government may yet affect status and role of the the EA. The role of the Environmental Agencies and Forestry in Fire Management is one example on the fight for mandates.

4.4 Inputs by SSFFMP so far

The relationship and synergy development between SSFFMP and the EA both in the Province and in the Districts has been limited, but has a high potential yet to be tapped.

SSFFMP has included BAPEDALDA at Provincial level as supervisor and THE Eas at District level as member of the Multi Stake Holder Forum in each of the three Districts.

BAPEDALDA/the EAs have been invited to many meeting such as annual planning meeting, and meetings of working groups (Pokja). Members of the EA have been included in training events (e.g., training in GIS,) or included as trainers in SSFFMP paid training events (EIA/ AMDAL –A course for NGOs) .

SSFFMP organized a two-months consultancy to assist the EA with institutional development and capacity building (This report). This consultancy also resulted in the joint (SSFFMP-BAPEDALDA Province) organizing of a one-day workshop (14 Oct. 2004) on the role of the EA in Forest and Land Fire Management.. This workshop was attended by representatives of 11 of the 14 the EAs of the Districts in the Province South Sumatra. See workshop report BAPEDALDA-SSFFMP (2004)

A two-day study tour was also funded by SSFFMP to Riau Province with high-level representation of Forestry, KesBangLinMas and BAPEDALDA Province and SSFFMP. *See (Wind, J. 2004).*

Both the Workshop and the study tour led to the formulation of several follow up actions. The most important were included in the SSFFMP Annual Work Plan 2005 which is still awaits review and possible ratification by the EU. *See chapter 5.2 Proposed SSFFMP Approach and Support*

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Possible mandates, tasks and information supply by the EA LH

5.1.1 The main findings

The main findings are:

- 1) More than a million hectare of the province has not yet a stable landuse and resource management, and is subject to conflicts on land ownership/tenureship, resource entitlements. The deterioration of natural resources through illegal logging, uncontrolled forest and land (mainly peat) fires is worse than ever during the last 5 –10 years, while the problem of peat fires is increasing.
- 2) The government has no effective strategy or management in place yet to deal with this enormous pressure on resources and the largely uncontrolled conversion of forest.
- 3) A much needed new development paradigm is not developing because of the lack of team spirit and coordination at Provincial and some Districts between Line Agencies (e.g., Forestry, Agriculture, The EA) and a lack of leadership to create a conducive environment for this
- 4) The role of the EA in the Province as well in the three Districts in forest and land fire management is very limited. However, the EAs'role in forest and land fire management is more prominent at National Level and in some Provinces, notably Riau.
- 5) The organization of the EA is relative young with initial development of personnel and organization structure. It was recently (2002) merged with the Ministry of Environment (MenLH)
- 6) The decentralization drive within the Government of Indonesia since 2001 had a huge impact on the Government agencies, in particular at the Districts. The recent splitting of Districts since the decentralisation causes a temporary weakness in available personnel, expertise and management and networks.
- 7) The prevailing local Government development paradigm is focusing on short term exploitation of natural resources, priority for income generating investment and taxes, Relatively very little funds are made available for environmental policy development, environmental impact assessment and management, and environmental governance / law enforcement which constitute the main mandate of the EA/ LH
- 8) The recruitment and placement of key personnel for the EA is often not in line with required competencies on the subject matter of environmental monitoring, law enforcement and policy development. The turn over of key personnel is high and weakens the organization
- 9) The organization development of Environmental Agencies is diverse and shows a lack of consistency. The lack of synchronized organisation models constrains development of standard operational procedures and vertical relations between the environmental agencies at national, provincial and district level.
- 10) The low status and budgets of the EA at the Province and the Districts constrains horizontal relations. The participatory development with other line agencies is weak.
- 11) The synergy development with Commercial Enterprises is growing, but the synergy with other line agencies, with the academia and with NGOs is very low so far. The synergy between District Line Agencies has growth potential.

The Multi Stakeholder Forum initiated by SSFFMP stimulates synergy development in the District between Line Agencies and with NGOs

- 12) Programs for development of Environmental Governance and official public consultation processes and mechanism are rudimentary and not structured.
- 13) Several policies and guidelines have been developed at national level but are not yet translated in local policy guidelines and local regulations at Provincial and District level notable the PP4, 2001 dealing with forest & land fire management)
- 14) The task divisions on forest and land fire management between the line-agencies are insufficiently specified and therefore subject to confusion on mandates and tasks in particular between Forestry and the EA/LH. The provincial Government of South Sumatra has assigned a number of tasks to KesBangLinMas (Organisation for National Unity and People Protection). This organization has not been able so far to implement a coordinating task between agencies due to its status in the Government, its limited mandate (disaster management) and lack of expertise and no effective linkage with the largely autonomous District Governments. This organizational set up with KesBangLinMas as a coordinating agency has therefore constraint the development of an effective fire management and resulted in a lack of long term policies
- 15) There is a lack of a holistic long term development concept: Comprehensive fire management can be viewed as consisting of a) prevention and law enforcement, b) early warning systems, c) fire suppression activities, d) fire impact assessment and e) environmental rehabilitation aspects. So far very little attention has been given by the Government to fire prevention and law enforcement, impact assessment and rehabilitation. Most attention has gone to, mainly ad hoc, fire suppression activities, hotspot analyses and dissemination.
- 16) the EA has developed its role in EIA (AMDAL), specifications on zero burning regulations for commercial enterprises, and its role in water pollution monitoring. However its role in monitoring and impact assessment of fire and smoke is so far not implemented
- 17) the EA offices have not yet developed a capacity building and training plan. Most offices have not yet allocated budgets for training of personnel. 15)

5.1.2 The main recommendations

The main recommendations are:

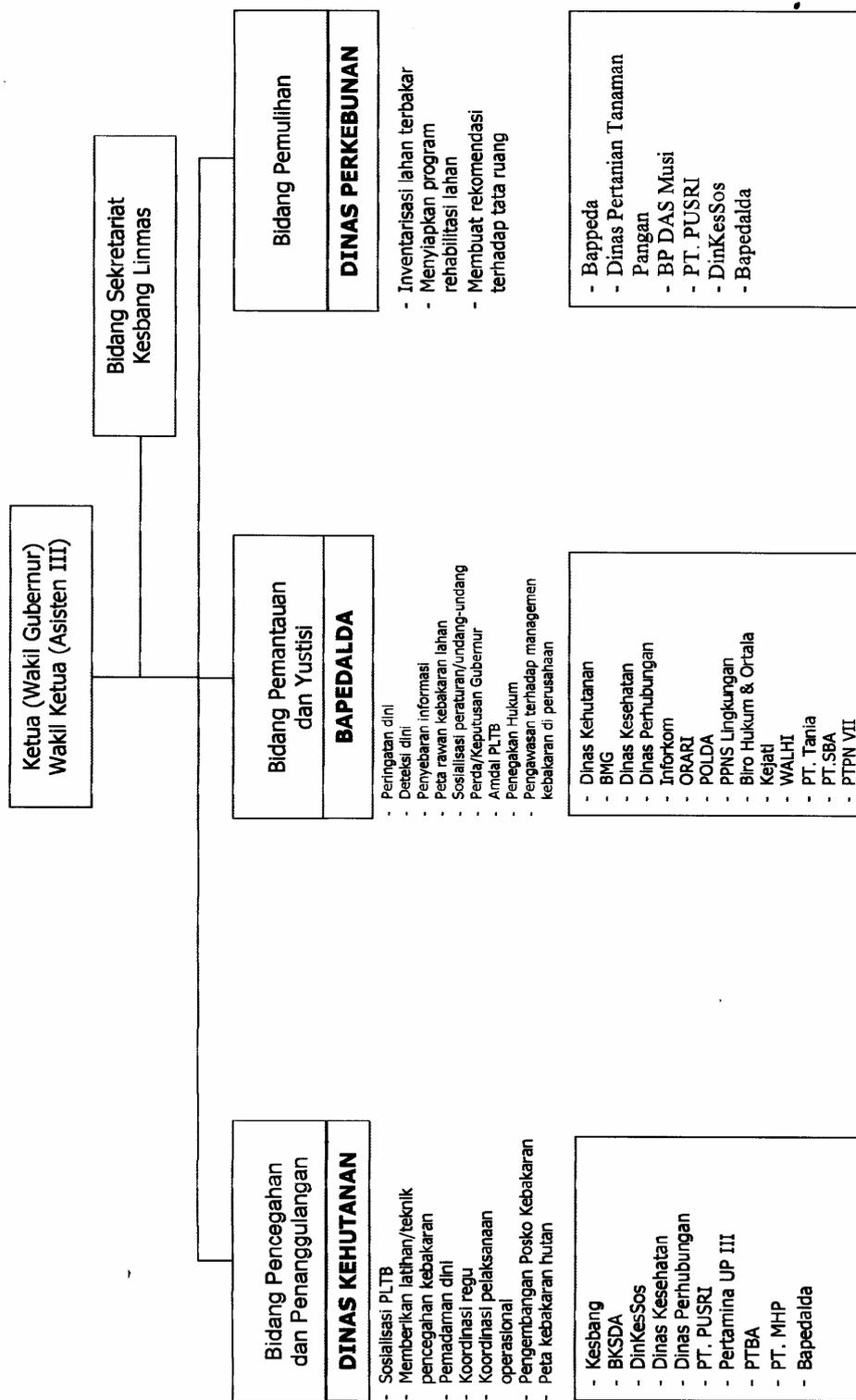
- 1) Implementation of PP4, 2001 at Provincial and District level.
- 2) Organize workshops to pursue adjustment of the Provincial Forest and Land Fire Management and Government mandates: Assignment to the EA Provincial level to coordinate the (comprehensive) Forest and Land fire management activities instead of KesBangLinMas
- 3) Organize workshops to upgrade the status of all district Environmental Agency offices to the EA status and synchronize the organization structure and task description and to speed up the standard operational procedures in particular related to participatory planning and monitoring and regulating public consultation mechanism.
- 4) Organize a (SSFFMP supported) Working Group at Provincial level to design a Fire Management Organisation following the model PUSDALKARHUTLA Riau Province

- 5) Include Fire Management in new 5-year Strategy Plans (of Province 2005-2010) and adjust existing 5-year plans (BAPEDALDA Province and EA of the Districts to include fire management
- 6) Give priority to development of the Fire Danger/ Threat Map for each District and the stakeholder analyses of fire users in land preparation for the three priority Districts.
- 7) Develop standard operation procedures for stakeholder participation in the preparation of the annual environmental report.
- 8) Include the problem of forest and land fire management as main thematic topic for the environmental annual report of 2005 or 2006
- 9) Develop synergy between the EA and the Academia (particularly PPLH and PSL) and NGOs on good environmental governance and environmental monitoring and capacity building / training. *See Appendix 11: Monitoring of Synergy Development in Fire Management*
- 10) Develop synergy between the province and the districts on forest and land fire management
- 11) Improve information on the role of the EA to a wider public, and to obtain the understanding and vital support of people representatives (DPR).
- 12) Give priority to training of environmental investigators (Penyidik Lingkungan), environmental law enforcement and legal cases on forest fire using the Environmental Law 23, 1997 art 38
- 13) Give follow up on the capacity building and training plan development with four focus groups including a) group on Annual Environmental Report , b) on Environmental Information Systems, c) on Monitoring of fire prevention and preparedness of Commercial Enterprises (HTI, Oil Palm) d) Environmental Investigation and legal cases related to forest and land fires; Make combined Provincial and District training groups.
- 14) Develop Village (Desa) level institutions for resource management, and test criteria and mechanisms for development of good environmental governance.
- 15) Expand data system and village profile (Desa) to include key environmental aspects and in particular environmental and institutional aspects related to forest and land fire management.
- 16) Develop an on-the-job-training program with BAPEDALDA Riau and take profit from lessons learned.
- 17) Synchronize the planning for SSFFMP Annual Work Plan with the Government Annual Planning: Design the main SSFFMP AWP in June/July to create better opportunities for integration plans and budgets.

The fire management organisation should be based upon a comprehensive model including all major functions as detailed in Figure 1.. *Mind Map Kebakaran Hutan (Comprehensive Fire Management)* including Pre-fire: Prevention and Early warning; Ongoing fire: Fire detection, Suppression of fire; Post fire: Impact Analyses and Rehabilitation.

The consultant proposes that organisation for Fire Management in the Province should follow the Model of Riau. The existing structure with KesBangLinMas as coordinating agency should be annulled/revised. BAPEDALDA should hold the secretariat under the revised organisation structure. A draft organisation structure is included as *Figure 3. see next page Pusat Pengendalian Kebakaran Hutan dan Lahan (PUSDALKARHUTLA)*

Figure 3: Proposed PUSDALKARHUTLA Province South Sumatra



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(comment Paul Kimman: This is the agreed upon organization structure as of January 2005)

All offices at Province and Districts should preferably get the BAPEDALDA status. A status as Dinas is not recommended. Such a (Dinas) status will not be an optimal solution, as it will not give sufficient authority and will have severe constraints in horizontal work relations, monitoring activities and (often sensitive) information flows. The same status BAPEDALDA should apply at Province and District. This will make it possible to synchronize the organization a, have a more efficient information flow vertical as well as horizontally. This will also make it easier to upscale standard operational procedures, exchange information flows, and learn from each other.

The recommended improvements will better materialize if first the cooperation between BAPEDALDA Province, Forestry and other key Line Agencies can be improved, a team spirit can be created, and hence a sound proposal based on consensus be forwarded to the Governor and the Board of People Representatives (DPR). SSFFMP should create opportunities and organization structures (e.g., a small working group to formulate the PUSDALKARHUTLA) to stimulate this process starting with key persons both at Provincial level.

5.1.3 Main products and outputs

The main the EA products so far related to fire management are only a view: the EIA or AMDAL together with the Environmental Management plan and the Environmental Monitoring plan The proposed products proposed to be added are:

- Input on *legislation development: Provincial and District Regulation (PERDA) as follow up PP4, 2001.*
- Input on *Provincial and District Legislation (PERDA) for controlled burning/ zero burning for land clearing in small holder agriculture*
- Input on *Organisation Development of adjusted PUSDALKARHUTLAH and development of Standard Procedure for Resource Development and Use (compare PUSDALKARHUTLA Riau (2003). BAPEDALDA Province is proposed to hold the secretariat of PUSDALKARHUTLA*
- *Fire Danger Threat Area maps for each District.* BAPEDALDA Province is proposed as coordinator. District coordination will depend upon District Government provisions
- *Legal Cases* related to Forest and Land Fire Management
- *Field Monitoring of Fire Preparedness of Commercial Enterprises* (e.g., HTI, Oil palm estates); PROPER Kebakaran Hutan;/ SUPER/ Kebakaran Hutan dan Legislatif (see point above Legal Cases)
- Inclusion of *Chapter on Forest and Land Fire in Annual Environmental Report (SLHD)*
- *Develop procedure for air pollution monitoring related to smoke-haze from forest and land fires;* and procedures for follow up action. This task could possibly be combined with other Provinces in Sumatra (Riau?) and Kalimantan.
- *Develop Binding Declaration(s) (“Deklarasi Pengikat”)* to specify Synergy developments needs between Province and Districts EAs
- *Develop MoU with SSFFMP* defining inputs and outputs of both parties for the period up to end of project (2007) with main focus on capacity building and methodology development
- *The design and development of environmental data and monitoring systems* at all levels from Province to Desa level to improve Good Environmental Governance. The consultant prepared draft proposal for Village

Environmental Data and Monitoring Systems *See Appendix 15 Proposed Data Environmental Village Profile and Appendix 16 Proposed Criteria and System for Evaluation of Environmental Governance*

- Other proposed products to be developed but which are not directly related to forest and land fires are:
 - *Provincial Regulation (PERDA) on retribution related to pollution and waste management. (based on UU 34). (Reference is made to BAPEDALDA Riau PERDA 7, 1999)*
 - Possibilities to also include air pollution from forest and land fires based on proposed new PERDA for controlled use of fire for land clearing by small holders could be considered.

5.1.4 Main impacts expected

The impacts of organisational strengthening and institutional development depend on both external and internal factors. The Riau experience learns that substantial progress and impact can be made if the basic setting of strong leadership, one voice and team spirit can be reached. The improvement of the processes for public consultation and participation of stakeholders and the analyses of stakeholder interest will give another substantial impact.

5.1.5 Proposed main organizational development

The optimal organisation would be BAPEDALDA at both Province and Districts, The fall back position would be Dinas Status.

The number of Divisions can potentially vary from 2-6. In case of only two Divisions the following divisions are proposed:

- 1) Division for Natural Resources Water, Soil and Air Pollution Monitoring and Improvement
- 2) Division for Human Resources, Institutional and Legal Development

The organisation should further be largely organized in Working Groups including the following basic working groups

- 1) Environmental Report Group dealing with environmental studies and the annual environmental report
- 2) Environmental Information Systems including both physical-ecological and socio-economic environmental data.
- 3) Good Environmental Governance Group dealing with facilitation of cases, law enforcement, and the development of environmental legislation and the development of good environmental governance
- 4) Forest and Land Fire Management Group dealing with comprehensive fire management aspects including prevention, early warning, suppression, impact assessment prevention, and rehabilitation aspects
- 5) Others as needed

The personnel involved in the working Groups can be selected from the Divisions-Subdivisions as well from the functional staff.. The working Groups should have a detailed description of the different positions and responsibilities within the Group, including directive and reporting lines, work procedures, deadlines etc. The tasks and responsibilities related to individuals should be specified in clear terms

The first Division should have the following Subdivisions:

- 1) Water and Soil pollution monitoring and improvement
- 2) Air and Sound pollution monitoring and improvement

The second Division should have the following Subdivisions as a minimum

- 1) Human Resources Development and Capacity Building. This would include the development of a capacity building a-training plan, in-house training and training by outsourcing of own personnel as well as providing services to train others and develop training modules and courses
- 2) Institutional Strengthening and Organisation Development. This would include development of synergy with stakeholders and partner organization, etc.
- 3) Legal Development including providing information to stakeholders on their legal right and obligations, the facilitation of environmental legal cases and out-of-court settlements (ombudsperson function), the legal investigation and preparations for in-court prosecution of legal cases. The Subdivision would also deal with design of new legislation and regulations.

5.1.5.1 Proposed main gaps to be addressed

The main gaps to be addressed in organization development are:

- Development of environmental information systems and data, and information dissemination; Access to digital information and access to internet; knowledge of English and other languages
- Forest and Land Fire Management Organisation development and the role of BAPEDALDA. Implementation of PP4, 2001 A PERDA at the Provincial and Districts levels is needed based upon this decree. The implementation will include the clear outlining of a fire management organisation at the Province and the districts, with task descriptions on organisations and their role in fire prevention, fire preparedness, fire suppression fire impact assessment, law enforcement and area rehabilitation of fire affected areas
- Field monitoring and evaluation of Environmental Management Plans including zero burning and the preparedness of commercial enterprises for fire prevention and suppression
- Air pollution monitoring including smoke-haze
- Legal investigation and preparation of documents for legal court cases
- Public Consultation development, Stakeholder analyses and stakeholder participation in environmental problem analyses, and formulation of strategies and plans
- Development of synergy between Province and District BAPEDALDA
- Development of synergy between BAPEDALDA and the academic society and with NGOs
- Public relations and lobbying with funding organisation and legislative bodies including Peoples' Representatives (DPR)
- Link with grassroots organisations and the development of good environmental governance at village (Desa) level

5.1.5.2 Main options to increase effectiveness and efficiency

The main options to increase effectiveness and efficiency are in particular in relation to Forest and Land Fire Management are:

- BAPEDALDA initiate and lead a Provincial working group on Forest and Land Fire Management; Start with the development of Provincial PusDalKarHutLa Organisation and pursue BAPEDALDA will be the holder of the secretariat
- Pursue Implementation of PP4, 2001 with Provincial and District Governments and develop follow up local Government Decrees and regulations
- Hold workshops to upgrade the status of the EA in the Districts (with priority to Banyuasin and OKI). Include provisions in the new Local Government decree which refer to tasks in forest and land fire management
- Develop more detailed job descriptions in particular with reference to fire and land management;
- Develop BAPEDALDA working group Forest fire Management
- Initiate and coordinate on the preparation of District Fire Threat/ Danger Maps and the formulation of District Improvement Plans as follow action plans
- Organize workshops with the EAs of the Districts to develop synergy and commitments for cooperation;
- Draft regulations for the controlled use of fire in smallholder agriculture with intended output local government Decree (PERDA) .The team should include key stakeholders including line agencies Forestry and BPN, etc and legal consultants and representative from smallholders and from NGOs.
- Make Capacity Building and Training Plan and arrange allocation of annual training budgets
- Implement priority training (e.g., training in the use of internet and access and dissemination of information; training in the preparation of fire threat maps

5.2 Proposed SSFFMP approach and support

SSFFMP will continue its inputs for the institutional strengthening and organisational development approach with the EAs at Provincial and District level. The consultant proposes that SSFFMP will support strengthening of inter-sectoral coordination and team building between BAPEDALDA and Forestry and other key Line Agencies.

The proposed mechanism for this is a working group with key partners BAPEDALDA, Forestry and Agriculture/ Estate Crops and others, as they may consider necessary. The working group will define a priority list of activities including the design of PUSDALKARHUTLA and Standard Procedures for this Organisation. A 5-year activity plan will be defined for the PUSDALKARHUTLA will broad participation of stakeholders both at Provincial and District level. Only after defining the organisation at Provincial level will the Multi Stakeholder Forums at the Districts give their input to define the PUSDALKARAHUTLA at the District level.

The short-term development will be based upon plans for 2005. These will largely follow the recommendations of the BAPEDALDA (Province and Districts) with SSFFMP workshop 14 Oct, and the Study Tour Riau recommendations: *See (draft) SSFFMP Annual Work Plan 3- 2005*) :

- Allocation of training funds to follow up on the training plan (under development)
- Funds for workshops on Institutional development of the EA province and District with focus on organisation development, task description, and synergy development between Province and Districts
- Funds for development of Good Environmental Governance and Village Environmental Profile and environmental information system at village level
- Funds for the methodology development of hot spot information development, Fire Danger Rating and Fire Threat Maps development, in collaboration with the EA and other line Agencies
- Funds for development of Environmental legislation (including on land clearance with zero burning or controlled fire management by smallholders; and local regulations as follow up on PP4, 2001 in Province and District regulation development)
- Minor contribution equipment for air pollution monitoring

For the actual linkage of workshop proposals and draft budget plan *See Appendix 9: Rangkup Rumusan Lokakarya Bapedalda Prov/Kab/Kota dan SSFFMP 14 Oktober 2004.*

The SSFFMP Annual Working Plan could be more embedded within the Government and the EA Program and budgets The planning forum at Provincial level lacks coordination and could be strengthened through the Provincial Working Group .The District Multi Stakeholder Forum could also strengthen its integration with Government Program and Budgets and strengthen the role of The EA.

The consultant proposes the following approach to evaluate the Annual Planning Process with the following criteria:

1. Will plan component effectively target impacting and impacted Stakeholders:
2. Will plan component likely decrease the area of fire threat through decrease in flammability and decrease in risk ignition
3. Will plan component create more institutional support and ability for comprehensive fire management at Kabupaten level and / or village level
4. Will plan component likely lead towards sustainability
5. Will plan components lead to clear legal provisions or do they have a sound administrative basis (embedding within the government system).
6. Will plan component provide sufficient opportunities to create a model and to be replicable in non-project conditions
7. Are the risk of failure adequately addressed
8. Is plan component cost effective: Cost of project against expected returns on investment [are assets saved, are economic social and cultural cost kept low high}

Give ranking on these points: (. Criteria 1-6 are considered essential Criteria 7 and 8 are optional.)

Ranking 5 to 1 (Very high=5 to Very Low=1 and unknown=?)

Compare ranking of individual assessments and discuss the differences to reach a consensus together on the ranking. The plan components with lowest cumulative ranking and those with very low ranking on one of more criteria should preferably not be funded or implemented, unless redesigned to sufficiently increase the rating.

6. CAPACITY BUILDING

6.1 Introduction

A clear distinction is needed between training needs and organizational development needs. Several improvements cannot be reached by training unless first certain organizational weaknesses and constraints are addressed and solved. Some constraints will be external others internal. The organisational weaknesses and constraints, the external and internal constraints and opportunities have been assessed in chapters 1-5 above.

The basic question for capacity building is:” (After improving organisational development needs) *What are the training needs and opportunities to optimise services of BAPEDALDA in fire management in line with agreed mandates and current gap in competencies* ”

Firstly the organizational structure and the related task descriptions should be clear. The linkages with fire management should be clearly expressed in the organization structure and the task description and organisational priorities. The organizational development needs have been dealt with above *See in particular chapter 5. Conclusions and Recommendations.*

Secondly, the management of the organisation should have a genuine interest in training, be receptive to make a training plan together and allow in-depth study of the organisation its strength and weaknesses, opportunities and threats.

These two conditions can be answered positively. Therefore, the conclusion is that a training needs assessment is fully justified It is our understanding that the management of BAPEDALDA will set new priorities, and fire management will become a priority. BAPEDALDA Province agrees on the need for organisational change for the Provincial fire management organisation. BAPEDALDA will offer the Provincial Government to take a lead in the proposed new / adjusted fire management organization and offer to hold the secretariat. BAPEDALDA will thus include a clear linkage with fire management, while a process to define adjusted organisation structures and task description has been outlined for the coming period. The management of BAPEDALDA has expressed its interest in a capacity building plan. It is well aware that further analyses of the strength and weaknesses of the organization will be crucial for the development of a realistic training plan.

Important is to assess what training is relevant, which training will improve the performance. Continuous alertness and further insight is needed a) if still other factors within and outside the organization are a constraint to learn b) if training will make a difference

It is important to note that currently no EA office has a structured capacity building and training plan. Only BAPEDALDA MUBA District has a training budget.

Training providers used so far are very limited. The main training providers are PPLH of Universities UNSRI, Palembang, IPB, Bogor, Gajamada University Jogjakarta Several staff of the Environmental Data System Group in BAPEDALDA Province were trained the ADB funded Regional Environment Network project.

6.2 Training Need Assessment

The training needs are assessed by the project training objectives and by beneficiary training needs. The project training objectives are indicated in the project document. SSFFMP specifies as indicator under the projects' specific objective that at least 60% of the personnel of three stakeholders from the Province and the Districts will be trained and apply the knowledge and skills by 2007 (GTZ, 2001). It is assumed that the project document can be interpreted as following: BAPEDALDA both at the Province and the three Districts will be one of the three stakeholders and 60 % of the EA personnel will be trained and apply the knowledge and skills (obtained in the training) .

The following need however also to be considered. 1) Not all personnel has a job with a clear relation with the project objectives. For instance a large number of personnel in The EA works in water quality related work. Water quality has no or very limited relation with problem of forest and land fire. So it is not needed to include this personnel in the training program 2) Many problems can only be solved by institutional strengthening and organisational development. The organisational and institutional aspects need to be dealt with first.

6.2.1 Main working groups and products

Five main groups of personnel are distinguished in relation with five different products and related services relevant to fire management. On this basis five Focus Groups are selected including:

1. Environmental Information/Data Systems
2. Annual Environmental Report
3. Monitoring of Commercial Enterprises on Fire Management
4. Environmental Law and Regulations
5. Good Environmental Governance: Local People Awareness and Capacity Building

The selection criteria of people are:

- People working on a well defined product/s (e.g. Annual Environmental Report;
- people sharing a specific task and related outputs (Environmental legislative investigators or 'Penyidik) ; Implementers of the Environmental Monitoring Plan/ RPL
- people organised in a functional group (Environmental Report, Environmental Data Systems;)
- people with cross divisional linkages through their functional groups/ task groups

Part of the Groups exist and have been institutionalised by Letter of the Head of the office (Kepala BAPEDALDA) or by Head of the District (Bupati). Others groups are not yet existing. There are a number of clearly defined products of some groups. New products are suggested See above chapter 1-5.

A start will be made with the existing formal and temporary informal groups. All five It is proposed to form all five Focus Groups at least at BAPEDALDA Province and BAPEDALDA District MUBA. The small number of personnel at the EA offices at District Banyuasin and OKI does not allow for group forming under the current set

up. A separate assessment will be undertaken with the personnel of the District OKI and Banyuasin.

The five Focus Groups will also look at positive linkages between the Province and Districts. Relations between groups need further analyses. The link between the environmental data system group and the other groups seem obvious. However in practice there is not yet much relation between the groups in terms of data exchange or defining data needs together. The existing environmental data systems group has a very limited mandate. Development of mandates and required capacities will go hand in hand.

6.2.2 Training Needs Assessment Procedure

Each Group will then analyze its current perceived task and specify its future task to produce certain products. Within each Focus Group or Working Group there are specified competencies needed to provide quality services and make quality products that address beneficiary information needs. The gap between existing and required competencies needs to be filled by training. The training covers three fields: attitude, skills and knowledge.

Attitude training is important to provide a basic setting for a “learning organisation”. Therefore many aspects related to emotional intelligence are important, such as social and personal competence to put a basis for listening skills, empathy, understanding others, support- service minded, collaboration skills, team-capabilities, building bonds, sharing of information, honesty and modesty, motivation, commitment, enthusiasm, optimism, adaptability, conscientious, self reflection, self criticism, initiative, achievement drive, innovation. *Ref. Daniel Goleman (1998) Working with Social Intelligence.*

In a learning environment many competencies can be increased through in-house learning and self-development. The current possibilities to access information and knowledge sources through IT and use of Internet are prominent. However, language skills in particular of English are therefore a must.

6.2.3 Focus Group Interviews and Individual Interviews

The Focus Groups are interviewed by semi-structured interviews. A small number of key persons are interviewed individually. The Focus Group interviews provide possibilities to review a number of main aspects by checklist and questions and leaves at the same time opportunities to discuss more in-depth new topic that come up.

The checklist related to main tasks performed includes:

- task description for the group and the task division within the group
- field work and office work
- standard operational procedures
- the output
- the information and data needs by users
- the direct and indirect (assumed) users groups of the product/ output
- the expected use
- the information flows and process of flow
- the learning opportunities and training received
- the training providers
- the vertical exchange of information (National-Province/ Districts)

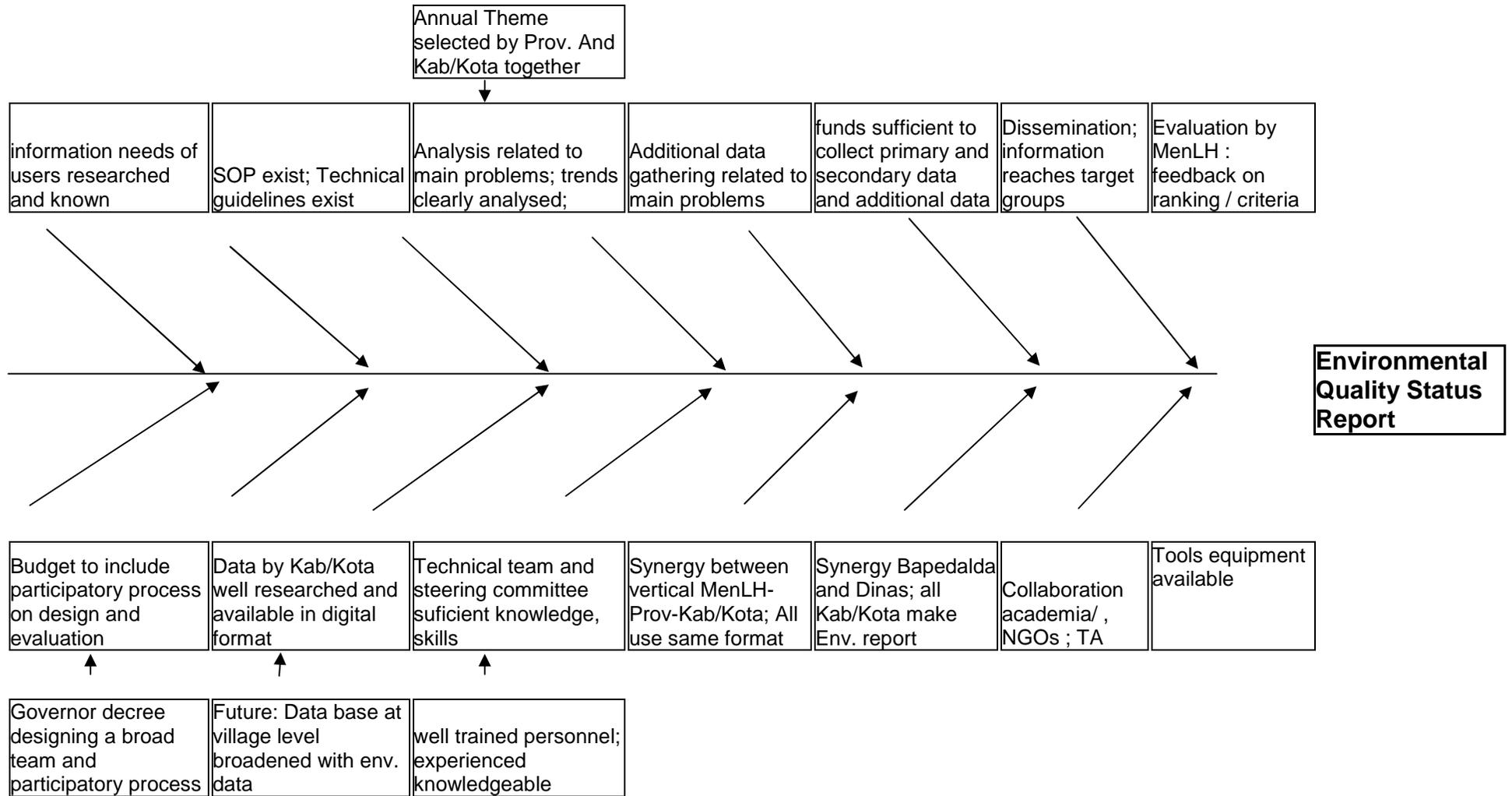
- the horizontal exchange of information within the Environmental Agency and between the EA and other agencies
- synergy within the organisation and with outsiders
- dissemination of information
- the perceived lack of skills and knowledge
- competencies: the official qualifications and diplomas needed
- qualifications within the group
- the incentives, disincentives structures and attitude related aspects
- budgets available

Individuals are interviewed within their own work environment and requested to explain how they work, what the constraints and opportunities are, and what their ambitions, etc.

A limited part of the interviews were held before the completion of the two months consultancy. These were partly done by the consultant and partly together with the national consultant. The national consultant will complete the interviews and specify the training plan

On the next page is an example of the Focus Group Environmental Status Report and the factors to produce a quality product.

Figure 4: Fishbone Diagram: Conduasive Factors for Preparation Annual Environmental Report



References

Applegate, G., Chokkalingam, U., Suyanto, S. (2001): The underlying causes and impacts of fires in South-east Asia. Final Report. CIFOR, ICRAF and USFS, Bogor, Indonesia.

Bambang Hero Saharjo, 2004 Fire Management Assessment and Recommendations for this and Estate Crops in South Sumatra
Laporan Akhir Pekerjaan Kinerja Dalam Rangka Pencegahan Kebakaran Hutan Dan Lahan

BAPEDALDADA Province South Sumatra
Reference: Status Lingkungan Hidup Daerah Propinsi Sumatera Selatan Tahun 2003 berdasarkan data Jan.-Des. 2002 (terbitan Febr 2004)

BAPEDALDA MUBA, 2003 Neraca Kualitas Lingkungan Hidup Daerah Kabupaten Musi Banyuasin Tahun 2003

BPS (2004) Statistik Potensi Desa Propinsi South Sumatra. Village Potential Statistics Province of South Sumatra 2003 BPS, Jakarta

BPS (2004) Luas Lahan Menurut Penggunaan di Sumatera 2003 Katalog BPS 5207.16

BPS (2004) Sensus Pertanian 2003 Hasil Pendaftaran Rumah Tangga Propinsi Sumatera Selatan (Angka Sementara) BPS Propinsi Sumatera Selatan

CIFOR (2000) Development of Criteria and Indicators of Community Based Forest Management Assessment, and Learning Tools, Objectives, Methodologies and Results Bogor, Indonesia. [Authors De Oliviera, N,B, Cynthia McDougall, Bill Ritchie, Herlina Hartanti, Mandi Haggith and Titiek Setyawati]

Darjono, (2003) Pengalaman Penegakan Hukum yang Berkaitan dengan Kebakaran di Areal Perkebunan dan HTI Rawa Gambut. In: *Prosiding Semiloka (with English Summary), Palembang Sumatera Selatan 10-11 Desember 2003*

Darsono (2002) Prospek dan Kendala Bapedalda dalam Otda
<http://www.bk.or.id/60.html>

Dodi Supriadi (2004) Paradigma Baru Pembangunan Kehutanan di Sumatera Selatan Makalah Kepala Dinas Kehutanan Sumatera Selatan di Workshop Annual Work Plan 2005 SSFFMP Oct 2004.Palembang.

FFPCP , 1998. Fire and Smoke Occurrence in South Sumatra Province with special reference to 1997 (project report no 47). Johan Ramon and David Wall Indonesian Forest Sector Forest Fire Prevention and Control Project (FFPCP) Palembang

Foggerty, Liam, Marcel Steenis, Medy Santoso, (2002) Use of Fire Management Information System to support Decision Making *Berau Forest Management Project ffm-029*

FWI/GFW (2002) The State of Forest: Indonesia Bogor, Indonesia, Forest Watch Indonesia and Washington DC Global Forest Watch

Gibson, Ivancewich, Donnelly (1987), Organisasi Perilaku, Struktur Proses Jilid 1.(Edisi 8)

Hoffmann, Anja (2004) Institutional Development for Integrated Fire Management SSFFMP Final Report Jan. 2004-11-06

Jalal, SP and Harso Yuli Antena and Ali Yusuf ,S (2004) Penilaian Kinerja Dalam Rangka Pencegahan Kebakaran Hutan dan Lahan Departemen Pendidikan Nasional, Lembaga Penelitian Universitas Riau, PPLH for BAPEDALDA Riau

Kantor Kesra dan Taskin Secretariat Bakornas PB (Office of the Minister for People's welfare and Poverty Alleviation/ Secretariat of the National Disaster Management Board 21 June 2000 . The direct reference is to a letter from the Minister number B142/Menko/Kesra/VI/1999 dated 16 June 1999 which assigns the tasks to deal with forest and land fires.

MDF, (2004) Tango for Organisations: 40 Tools for Institutional Strengthening And Organisational Development. ISBN-90-808685-1-5 CD-ROM 398 pp. MDF Training & Consultancy, Ede, The Netherlands

MenLH dengan UNDP , 1998 Kebakaran Hutan dan Lahan di Indonesia Dampak, Faktor dan Evaluasi (Jilid 1)

MenLH, 1998, Kebakaran Hutan dan Lahan di Indonesia Rencana Tindak Penanggulangan Bencana (Jilid 2)

MenLH (2003) Pengumuman PROPER 2003

MenLH, (2004), Pedoman Penilaian Kinerja Pemerinta Daerah dalam Pengendalian Kebakaran Hutan dan Lahan Acuan Kerja 05-ESD

MenLH, (2004) Pedoman Pengawasan Pentaatan Pengendalian Kebakaran Hutan dan Lahan, Acuan Kerja 04-ESD

MenLH, (2004) Prosedur Pemantauan Kejadian Kebakaran Hutan dan Lahan Acuan Kerja 03-ESD

MenLH, (2004) Pedoman Umum Pembuatan Probabiliti Potensi Daerah Rawan Kebakaran Hutan dan Lahan Acuan Kerja 02-ESD

MenLH, (2004) Questionnaire for Districts Kab/Kota05-ESD

This questionnaire was sent to all Kabupaten Got two replies Only one was sensibly filled in .On Institutions and coordination, HRM SDM, Facilities

MenLH (2004) Status Lingkungan Hidup Indonesia 2003, see fig 11.23 Peta Tingkat Kerawanan Kebakaran Hutan dan Lahan di Sumatera dan Kalimantan Tahun 2003 p255.

Public Consultation and Decision Making in Local Government

<http://www.oag.govt.nz/HomePageFolders/Publications/PublicConsultation/part5.htm>

PUSDALKARHUTLA Riau (2003) Prosedur Tetap Mobilisasi Sumberdaya Dalam Pengendalian Kebakaran Hutan dan Lahan

SATLAK-PBP (2003) Keputusan No 344 2003, Pembentukan Satuan Pelaksana Penanggulangan Bencana dan Penanganan Pengungsi (SATLAK PBP) KABUPATEN Banyuasin

Schachhuber, Adam, (2004) Social movements, Environmental Governance and Rural Territorial Development, An International Perspective

see <http://www.rimisp.org/get.php?docid-2508>

Secretariat Convention of Biological Diversity (2001). Impact of Human-caused fires on biodiversity and ecosystem functioning and their causes in tropical, temperate and boreal forest biomes. Montreal SCBD 42p. CBD Technical Series no 5.

Steenis, Marcel and Liam Foggerty (2001) Determining Spatial Factors associated with Fire Ignition Zones *Berau Forest Management Project ffm-07*

Suyanto, Unna Chollalingan, dan Prianto Wibowo (Editors) 2004 Kebakaran Lahan Rawa/Gambut di Sumatra Masalah dan Solusi. *Prosiding Semiloka (with English Summary), Palembang Sumatera Selatan 10-11 Desember 2003 see also Darjono*

Tacconi, Luco (2003) Fires in Indonesia Causes, Costs and Policy Implications CIFOR Occasional Paper ISSN 0854-9818

Wind, Jan (2004) Peranan dan Tugas Bapedalda Kehutanan dan KesBangLinMas/Satkorlak berkaitan dengan Kebakaran Hutan dan Lahan in *SSFFMP and BAPEDALDA (2004) Jajaran Bapedalda Se-Sumatera Selatan tentang Pencegahan Kebakaran Hutan dan Lahan Workshop 14 Oct. 2004.*)

Wind, Jan (2004) Studi Banding Riau. 27-29 Oct. 2004. *A report on the Study Tour to Riau Province to learn on the Fire Management Organisation* 4 pp. SSFFMP, Palembang, South Sumatra.

Appendix 1: Terms of Reference



South Sumatra Forest Fire Management Project

PO. Box 1229

Jl. Jend. Sudirman No. 2837 Km 3,5, Palembang 30129, Indonesia

Tel: (62 711) 377821 – mobile phone 0813 67711874



Terms of Reference for international Short-term Expert

INSTITUTIONAL STRENGTHENING & CAPACITY BUILDING OF PROVINCIAL AND DISTRICT ENVIRONMENTAL AGENCIES IN SSFFMP's THREE PRIORITY DISTRICTS

BACKGROUND

(fire history in south-Sumatra and objectives of the ssffmp)
(the EU program in Indonesia)

MAIN TASKS:

The international short-term expert will have the following tasks:

FOCUS INSTITUTIONAL STRENGTHENING

Determine the mandate, tasks, experience, expectations and technical/human/organizational capacity within provincial and district environmental agencies concerning the monitoring of fire risk, ongoing fires and fire impacts (environmental impacts such as air and water pollution).

Determine the recognition (awareness), perception (understanding) and acknowledgment (acceptance) of the role & function of the provincial and district environmental agencies concerning the monitoring of fire risk, ongoing fires and fire impacts, by others (other government institutions, NGOs, commercial enterprises, general public).

Analyse the relevance, scope and effectiveness of policies, programs and plans within or concerning the provincial and district environmental agencies that concern the monitoring of fire risk, ongoing fires and fire impacts.

Analyse the scope, relevance and effectiveness of cooperation and communication between various provincial and district institutions dealing with aspects of fire risk monitoring, monitoring of ongoing fires and fire impacts.

Make recommendations for institutional strengthening of provincial and district environmental agencies focussed on increasing the effectiveness and efficiency of their monitoring of fire risk, ongoing fires and fire impacts.

FOCUS CAPACITY BUILDING

Design a Capacity Building Program / Approach, including training needs, for the provincial and district environmental agencies focussing on their part in the monitoring of fire risk, ongoing fires and fire impacts.

Develop a system to monitor fire risk, ongoing fires and fire impacts together with provincial and district environmental agencies.

Train staff from the provincial and district environmental agencies in aspects of fire risk and fire impact monitoring

Advise and train provincial and district environmental agencies concerning the environmental impacts of alternative spatial zoning & landuse plans.

Train staff from NGOs and other relevant stakeholders in principles and aspects of environmental management, and monitoring of environmental impacts of land and resource use.

DURATION AND TIME PERIOD

The international expert shall cover the tasks within 2 person months (2 PM). The assignment is scheduled to start in the period September – October 2004.

Appendix 2

State of Forest and forest cover 1997

province	permanent state forest	actual forest cover	difference in %	shortage in ha
	a	b	b/a	
Aceh	3.335.613	3.611.953	108	-276.340
North Sumatra	3.810.561	1.891.819	50	1.918.742
West Sumatra	2.410.940	1.944.015	81	466.925
Riau	4.533.646	5.071.891	112	-538.245
Jambi	2.179.440	1.603.079	74	576.361
South Sumatra	4.269.690	1.603.079	38	2.666.611
Bengkulu	920.964	889.858	97	31.106
Lampung	991.053	361.319	36	629.734
SUMATRA	22.451.907	16.977.013	76	5.474.894
				0
West Kalimantan	8.448.175	6.713.026	79	1.735.149
Central Kalimantan	10.735.935	9.900.000	92	835.935
South Kalimantan	1.573.872	999.182	63	574.690
East Kalimantan	14.584.672	13.900.000	95	684.672
KALIMANTAN	35.342.654	31.512.208	89	3.830.446

Source: FWI/GFW 2002 *The State of Forest: Indonesia* data of 1997 before the great forest fires 1998

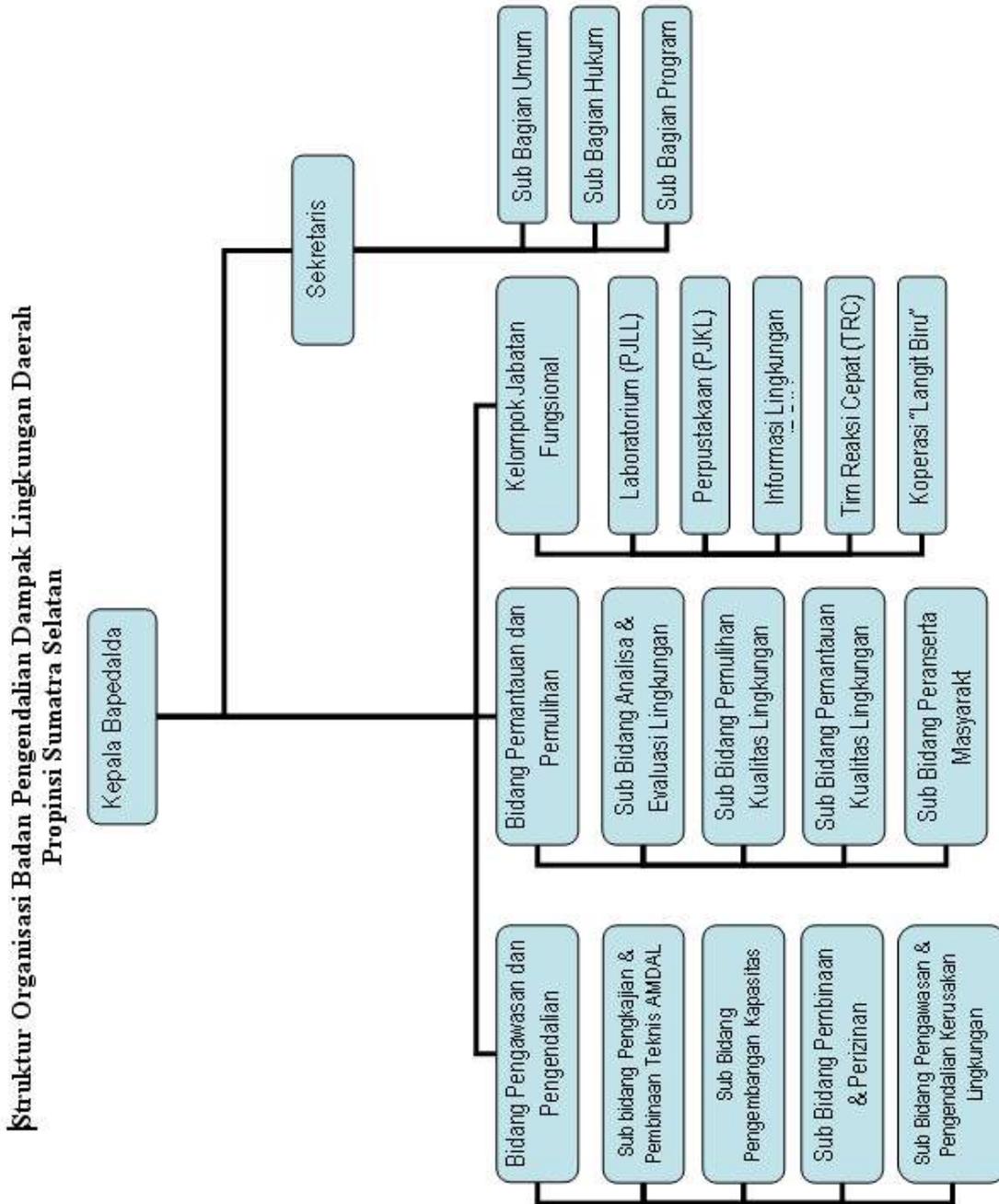
FIRE AREAS IN 1997/78 in million hectares

	total burned area	lowland forest	peat swamp	percentage peat swamp
	a	b	c	c/a
with Kalimantan	6,50	2,38	0,75	12
with Sumatra	1,75	0,38	0,31	18
with Irian/ Papua	1,00	0,30	0,40	40

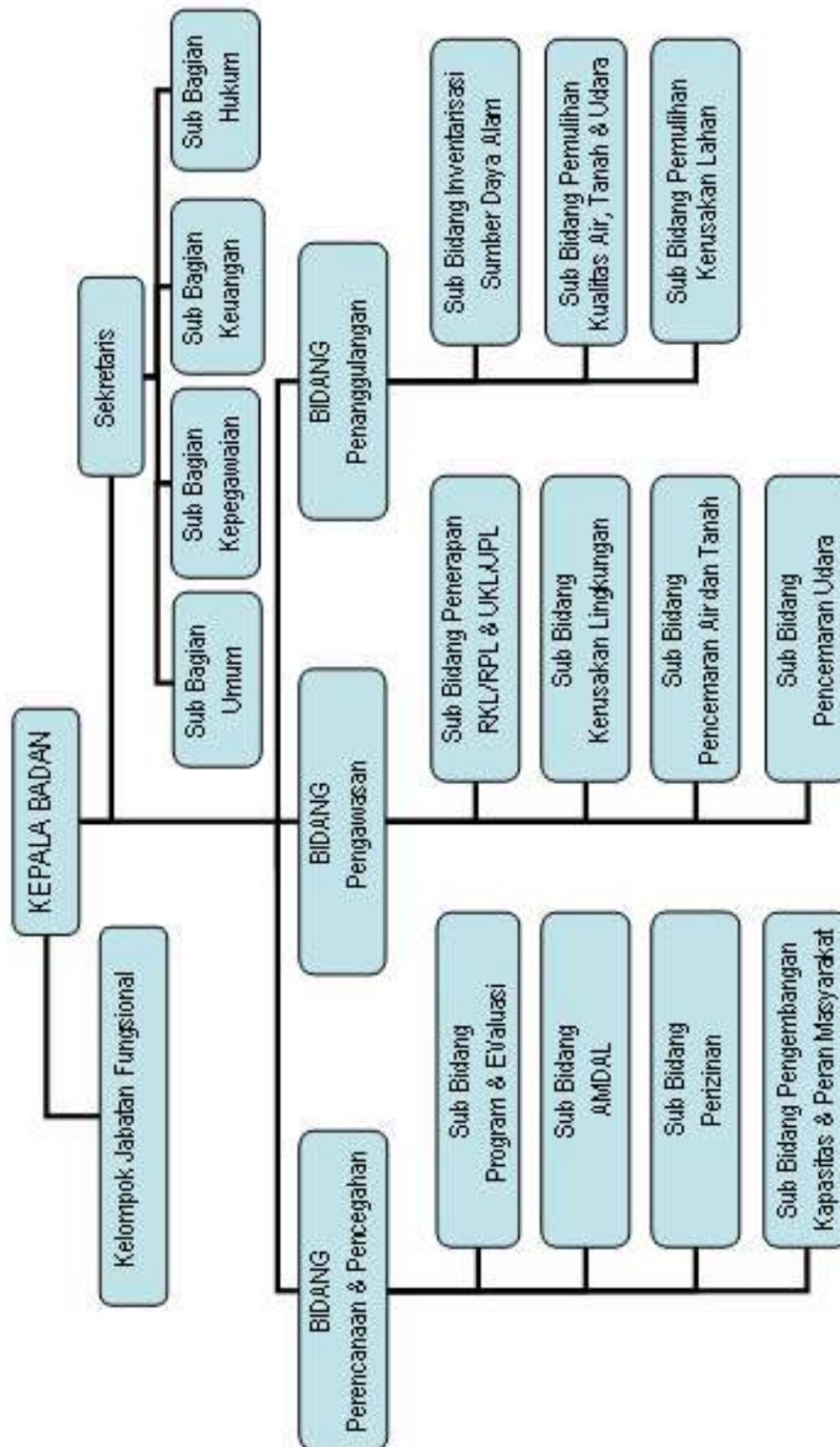
Source: FWI/GFW 2002 *The State of Forest: Indonesia*

Appendix 3: Organization Structures of EA Province South Sumatra and the Districts MUBA, Banyuasin and OKI.

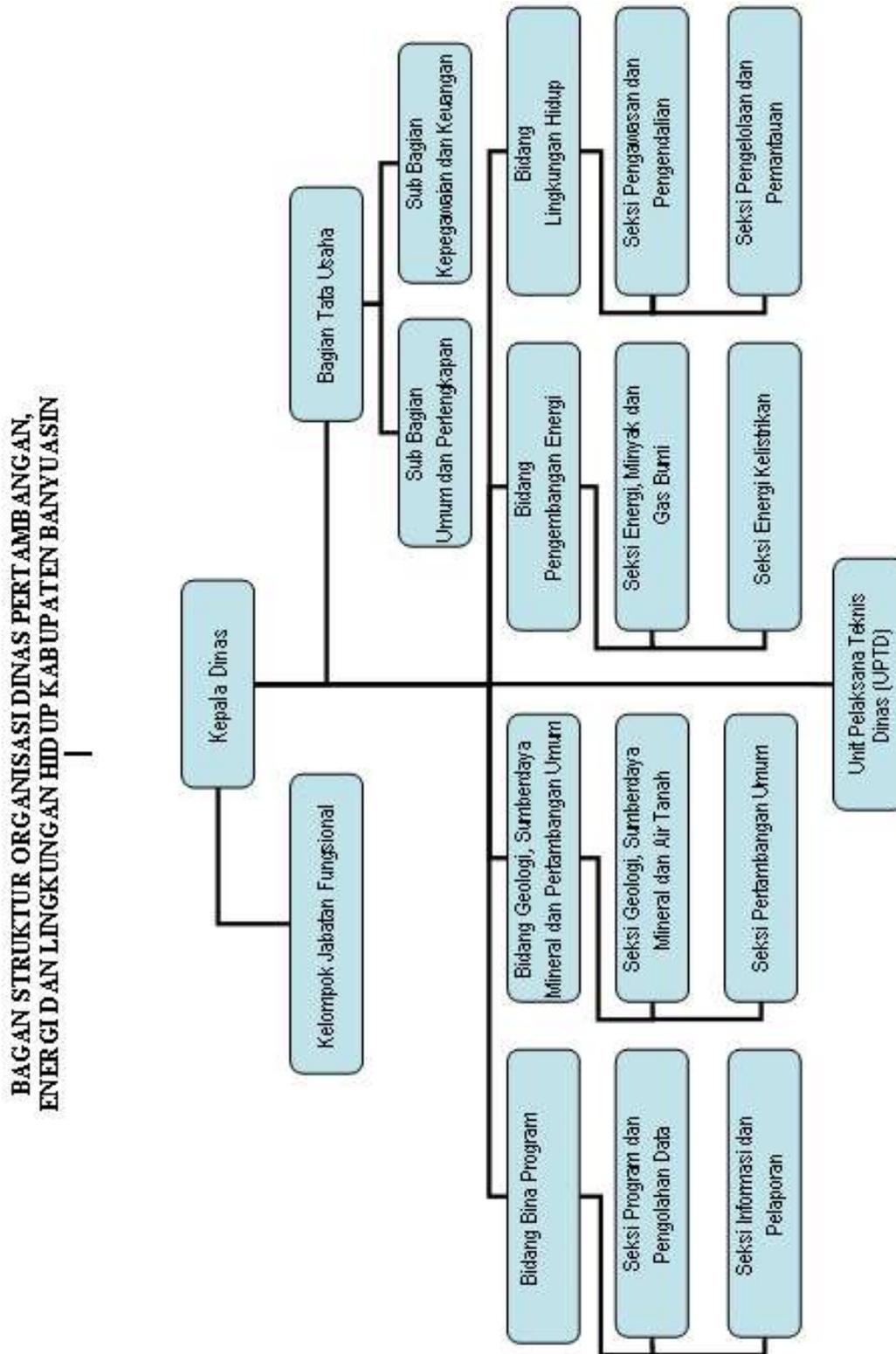
Organization Structure EA (Bapedalda), South Sumatra Province



Organization Structure EA (Bapedalda), MUBA District

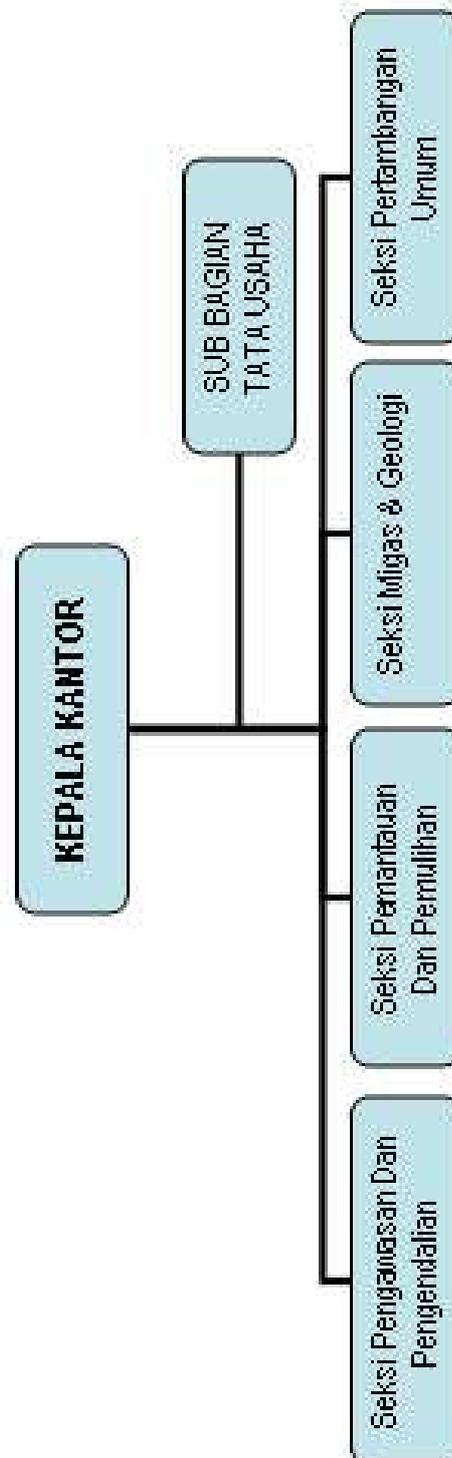


Organization Structure EA (PELH), Banyuasin District



Organization Structure EA (PELH), OKI District

STRUKTUR ORGANISASI KANTOR PERTAMBANGAN, ENERGI DAN LINGKUNGAN HIDUP KAB. OKI KOMERING ILIR



Appendix 5: Studi Banding ke Riau 27-29 Okt. 2004

1. Peserta

SSFFMP

Dr. Karl Steinmann EU-Co Director

Ir. Jan Wind, Konsultan Lingkungan

Solichin, Konsultan Sistem Informasi

Bapedalda Propinsi SumSel

M. Zain Hasanah SH, Kepala Bidang Pemantauan

Dinas Kehutanan SumSel

Dr. Dodi Supriadi, Kepala Dinas/ dan National Co-Direktor SSFFMP

Ir. Atmojo Dadas, Kepala Bidang Kebakaran Hutan

KesBanglinMas SumSel

Drs. Lahmudin Harun, Kepala

Fauzi, staf

2. Waktu

27–29 Oktober 2004

3. Acara

Rabu 27 October 2004

13.45 Berangkat ke Pekanbaru, Riau lewat Batam

18.00-20.30 Makan malam di Hotel Aryaduta Pekanbaru dengan Tim SumSel

21.30–23.30 diteruskan dengan pertemuan tim Pemda Riau (Bapedalda, Kehutanan,dll)

Kamis 28 October 2004

8.50-9.30 Pertemuan dengan Wakil Gubernur Riau H.Wan Abu Bakar Ms

9.45 –11.30 Pertemuan Instansi di Kantor Dinas Kehutanan

peserta adalah Kepala Dinas Kehutanan Pak H.Asral Rachman, Kepala Bapedalda Pak Khairul Zainal dan Pak Darjono Kepala Bidang Pemantauan; Pak Amrizal Tanjung, Kepala SubBidang Bapedalda Wilayah; Kepala Perkebunan dan staf

11.45-13.30 Pertemuan di Kantor Bapedalda

pertemuan dengan Pak Sudarsono asisten Deputi Hukum Lingkungan MenLH, Pak Khairul Zainal, Kepala Bapedalda, Pak Darjono Kepala Bidang Pemantauan Bapedalda

18.00-21.00 Makan malam di Hotel Aryaduta Pemda Riau Tim SumSel dengan PemDa Riau

Jumat 29 October 2004

8.30-10.40 Pertemuan di Kantor Bapedalda

Tim teknis SumSel dengan Khairul Zainan Kepala Bapedalda, Darjono Kepala Bidang Pemantauan dan beberapa staff

6.30-12.00 Dr. Steinman kunjungan ke PT Arara Abadi/ Sinar Mas Group

13.15 pulang lewat Jakarta. Tiba di Palembang pukul 19.00

4. Kesimpulan

- Studi Banding ini merupakan kegiatan yang sangat bermanfaat khususnya untuk memperbaiki beberapa kegiatan lanjutan yang sedang direncanakan. Kita bisa belajar banyak tentang hal-hal yang praktis dari Pemda Riau dalam menangani masalah kebakarakan hutan/lahan serta struktur organisasi PusDalKarHutLa dan kinerja yang diciptakan;
- Dukungan Gubernur dan Wakil Gubernur dan kekompakan tim gabungan dari Instansi terkait adalah kunci keberhasilan di dalam penanganan kebakarakan Hutan/Lahan Riau secara efektif;
- Pemda membentuk PUSDALKARHUTLA tahun 2000 dan memperbaharui tahun 2003 (Kpts Gubernur Riau nomor 1, 2003) dengan PROSEDUR TETAP (Kpts. Gubernur Riau nomor 134/II/2004) yang jelas dan cukup detil;
- Pemda Riau sudah sangat maju dengan penerapan PP4, 2001 (*tentang Pengendalian Kerusakan dan atau Pencemaran Lingkungan Hidup yang berkaitan dengan Kebakaran Hutan dan atau Lahan*) di Propinsi maupun di beberapa Kabupaten. (catatan: di Propinsi SumSel PP4, 2001 belum dibahas dan diterapkan);
- Bapedalda adalah Ketua dan pengelola Sekretariat PUSDALKARHUTLA dengan dukungan penuh dan kreatif dari Kepala Bapedalda dan staf. PUSDALKARHUTLA dibagi tiga Bidang:
 - Bidang Penanggulangan (Pemadaman) kebakarakan: Kehutanan
 - Bidang Pemantauan dan Pencegahan: Perkebunan
 - Bidang Penegakan Hukum: Diterse Polda;
- Dana dikeluarkan melalui tiap-tiap instansi sesuai dengan TUPOKSInya dengan dikoordinasikan oleh Bappeda dan DPRD;
- Dana dan organisasi Regu kebakarakan diatur melalui peraturan sampai Kabupaten, Camat, Desa. (Lihat PROSEDUR TETAP) SATLAK DALKARHUTLA di Kab/Kota; SATGAS DALKARHUTLA di Kecamatan; REGDAM KARHUTLA di Desa. Yang sudah ada SATLAK DALKARHUTLA di 7 dari 11 Kabupaten. Dana Propinsi hanya 120 juta (2004) Dana Kabupaten masih sifat temporer; BKSDA Kehutanan sudah ada Regu Manggala AGNI 16 Regu kali 15 orang (240 orang) dengan peralatan.
- Kontribusi Perusahaan Perkebunan cukup besar dalam peralatan dan personil di lingkungan sendiri serta 5 km sekitar areal perkebunan. (misalnya PT Arara Abadi sedang merekrut 150 orang regu kebakarakan dan mengadakan peralatan)
- Bapedalda melakukan peran besar untuk Penegakan Hukum berkaitan kebakarakan, yang mulai berhasil dan sedang berkembang 10 kasus dengan memakai UU 23, 1997 tentang pengelolaan Lingkungan Hidup (khusus Bab IX, pasal 38) Hasil denda 9,6 Milyar Rupiah (Propinsi mendapat 1,3 Milyar)
- Bapedalda Propinsi berhasil memperkuat kinerja dengan perusahaan yang terkait kebakarakan hutan dengan dukungan Gubernur, Bupati/ Wako, KLH pusat dan stakeholders . dengan sistem SUPER (Surat Pernyataan) dan Yustisi
- Bapedalda membuat PROPER KEBAKARAN HUTAN/ LAHAN (Program Penilai Peringkat Kinerja Perusahaan dalam Pengelolaan Lingkungan Hidup)
- Bapedalda membuat analisa kebakarakan hutan dalam Status Kualitas Lingkungan Hidup Daerah 2003 sebagai masalah utama dari 5 masalah pokok.
- Bapedalda berhasil mendapat uang retribusi (izin dan pembuangan limbah): retribusi tertinggi dari semua instansi di Riau untuk kontribusi PAD 1,6-1,8 Milyar per tahun (Perda 7, 1999 berdasarkan UU34)

- Bapedalda mempunyai peranan penting dengan organisasi internasional Transboundary Haze Agreement dan mengusulkan kontribusi tanah dan bangunan di Riau untuk ASEAN Haze Agreement Training Centre kalau ditempatkan di Riau.

5. Masalah dan Tantangan Lain

- Masih ada beberapa tantangan dan kendala lain yang perlu diperhatikan
- PemDa SumSel dan Riau belum menyediakan dana yang seimbang dengan besarnya masalah dan kerugian kebakaran lahan dan hutan.
- Dana pendamping Pusat dan PemDa untuk kemitraan dengan proyek EU-SSFFMP jauh kurang dari perjanjian dan terbatas di Kehutanan. Kondisi ini tidak cukup mendukung program lebih komprehensif dari PemDa dan Dinas masing masing.
- Belum ada solusi masalah kebakaran di sektor pertanian di Riau maupun di SumSel; PLTB (Penyiapan Lahan Tanpa Bakar) sedang diterapkan di perkebunan besar tetapi belum bisa diterapkan untuk petani kecil. Perlu adanya program yang realistis, transisi (pembakaran terkontrol, terbatas);
- Jumlah regu pemadam kebakaran masih kurang dan belum ada asuransi regu;
- Fokus masih kurang ke strategi jangka panjang pengembangan wilayah (Rencana Tata Ruang di Propinsi, Kab/Kota dan di Desa) dengan sistem tataguna lahan pertanian tanpa bakar; SSFFMP sedang mengembangkan program tata guna lahan tanpa bakar tingkat desa dan mengadakan studi skenario skenario pengemngangan daerah gambut tanpa bakar;
- Kegiatan untuk meningkatkan kesadaran masalah kebakaran masih terbatas. SSFFMP dan project sebelumnya telah membuat dan mengumpulkan banyak bahan dan program penyuluhan kesadaran masalah kebakaran untuk murid murid sekolah di SumSel;

2. Usulan:

- *Mengajukan Laporan Sementara Hasil Studi Banding Riau ke Gubernur oleh tim Studi Bandeng Riau dan membicarakan oleh wakil wakil tim Studi Banding*
- Rapat Gubernur Se Sumatra 24 November mendiskusikan Masalah dan perkembangan Organisasi Kebakaran Hutan dan Lahan. Propinsi Riau akan menjelaskan Struktur Organisasi dan kegiatan kinerja dengan vertikal, horizontal, dengan perusahaan. (PROSEDUR TETAP PUSDALKARHUTLA)
- Lokakarya Struktur Organisasi TuPoksi dan Perda (6,7 Desember) Bapedalda Propinsi dan Kabupaten.(program kerja sama Bapedalda –SSFFMP) Mengundang pak Khairul Zainal dan Pak Darjono dan 1-2 dari Kabupaten Riau untuk memberikan presentasi dalam Lokakarya dengan menitikberatkan pada Pengembangan Kinerja Stakeholder dalam Masalah Kebakaran)
- Lokakarya Struktur Organisasi PUSDALKARHUTLA SumSel. Desember 2004, Waktu sesudah Lokakarya Bapedalda 6,7 Desember; Lokakarya Restrukturisasi PusDalKarhutLa. Dan memanfaatkan Prosedur Tetap (PROTAP) Riau sebagai satu contoh yang sudah bagus; Program kerja sama SSFFMP-Pemda SumSel
- Usulan ke Gubernur SumSel PUSDALKARHUTLA Des. 2004
- Struktur Organisasi, TuPokSi dan Prosedur Tetap Mobilisasi Pengendalian Kebakaran Hutan dan Lahan. Sesudah hasil dari butir 1,2,3 diatas dan berdasarkan Evaluasi Laporan konsultan Kelembagaan Ms. Anja Hoffman,

konsultan Lingkungan Mr.Jan Wind, Laporan Studi Banding Riau, Hasil Rapat Gubernur Se Sumatra, Hasil Lokarkarya Bapedalda 6,7 December, Hasil Lokarkarya PUSDALKARHUTLA Desember dan lain.

- Kasus Hukum Lingkungan; Mendukung Program Pemerintah SBY dan Yusuf Kalla dalam program anti Korupsi dan penegakan Hukum Lingkungan: Mengajukan Kasus kasus. Satu Kasus dibahas dengan bantuan KLH Pusat; Perlu ada dana (diminta bantuan dari PemDa Provinsi dan MenLH Pusat;
- Program Latihan Penyidik diadakan untuk Propinsi dan beberapa Kabupaten; membiayai Pelatih Penyidik oleh SSFFMP/ PemDa
- Usulan Organisasi dan Anggaran Pemda Regu Pemadam Kebakaran
- Usulan kepada Gubernur dan Kabupaten untuk mengadakan organisasi dan dana untuk Penanggulangan (Pemadaman) Kebakaran dan integrasi Regu yang sudah dilatih dan dibekali peralatan oleh SSFFMP di 99 Desa kali 15 orang ;
- Mendukung rencana Riau Training Centre Transboundary Haze Agreement dan PemDa SumSel, PUSDALKARHUTLA SumSel dan SSFFMP akan kerja sama dalam pelatihan, mengembangkan dan replikasi metode. Sebaiknya SSFFMP membuat rencana kerja sama dengan Training Centre yang direncanakan akan dibangun di Riau. SSFFMP bisa mendukung aplikasi beberapa metode (latihan partisipatif, tata guna lahan, gender, c.d, sistem informasi kebakaran, dll)
- Program Latihan On-the-job-training Bapedalda SumSel ke Bapedalda Riau termasuk dari Bapedalda Propinsi dan beberapa Bapedalda Kabupaten khusus MUBA, OKI, Banyuasin (terkait SSFFMP)
- Kinerja dan format/ contoh dengan beberapa instansi
- Aplikasi AMDAL Propinsi dan Kabupaten dan kerja sama
- Sistem informasi Lingkungan (Pembuatan Peta Daerah Rawan Kebakaran, Analisa Profil Desa Rawan Kebakaran,dll)
- Retribusi izin, dan Pembuangan Limbah
- Pembuatan laporan Status Kualitas Lingkungan Hidup dengan analisa masalah dan kebijakan Kebakaran Hutan/Lahan (partisipatif)
- Perlu dukungan dana latihan dari SSSFFMP dalam kerja sama Bapedalda.

Laporan ini dibuat oleh Konsultan Lingkungan SSFFMP Ir. Jan Wind, 1 Nop. 2004. Laporan diperiksa Tim SumSel Studi Banding ke Riau dan laporan disetujui dengan tanda tangan dibawa oleh yang mewakili instansi:

Nama	Jabatan/Instansi	Tanggal	Tanda tangan
Dr. Dodi Supriadi	Kepala Dinas Kehutanan SumSel/ National Co-Director SSFFMP		All signed
Dr. Karl Steinmann	EU Co-Director SSFFMP		All signed
Drs. Lahmudin Harun	Kepala KESBANGLINMAS SumSel		All signed
M. Zain Hasanah SH	Bapedalda KaBid Pemantauan & Pemulihan BAPEDALDA SumSel		All signed

Appendix 6: Matrix Kinerja: Hubungan Bapedalda SumSel dan Riau dengan masing masing Stakeholder/Instansi

Instansi/Stakeholder	Tipe Hubungan Bapedalda Provinsi SumSel	Skala hubungan	Tipe Hubungan Bapedalda Provinsi Riau	Skala hubungan
KLH Pusat	Program ADB Regional Network Project; Hotspot; Polusi Udara?; Bimbingan KLH, kebijakan,	Banyak hubungan tetapi kurang dari dulu; tidak ada program yustisi lingkungan	Hubungan erat Program Yustisi; Program ADB Regional Network; Hotspot; PROPER/ SUPER; dll	Intensif dan banyak kegiatan; bimbingan banyak
Bapedalda Kabupaten	Hubungan agak terputus sesudah desentralisasi; Rapat 2003 (1x); rapat 2004 (1x dalam kerja sama dng SSFFMP); Program Latihan Bapedalda Prov pada Kab	Jauh berkurang sesudah desentralisasi; hubungan sensitif, insidentil dan jarang	MOU PEMDA Provinsi-Kabupaten dalam Anggaran; Kerja sama untuk AMDAL; Tim Satu Atap diterapkan di Daerah; Deklarasi pengikat (Karimun, Dumai)	Hubungan sedang dibangun kembali sesudah desentralisasi; beberapa kegiatan kerja sama.
Kehutanan	Board SSFFMP, komisi AMDAL; tidak ada hubungan mengenai kebakaran hutan dan lahan	Insidentil; tidak banyak hubungan	Intensif dalam PusDalKarHutLa; Komisi AMDAL, PROPER Kebakaran; Peta Rawan Kebakaran; Yustisi Lingkungan dll	Intensif dan banyak kegiatan/ hubungan; Bapedalda koordinator PusDalKarHutLa
KesBangLinMas/ Satkorlak	Tidak ada program kerja sama Bencana Alam Banjir, Kebakaran	Insidentil; Lewat Board SSFFMP	Penanggulangan Bencana Kebakaran PusDalKarHutLa	Terbatas
Dinas Perkebunan	Komisi AMDAL/ RKL/RPL	Terbatas	Dalam PUSDALKARHUTLA banyak kegiatan; Kebijakan PLTB	Intensif; Bapedalda koord. PUSDALKARHUTLA
Lain Dinas	SKHLD, AMDAL	Terbatas: Ambil data SKHLD	Kebijakan, SKLHD; AMDAL;	Banyak
Bapeda	Perencanaan Anggaran, RTRWP	Sering	Perencanaan, kebijakan lingkungan. Anggaran; Perencanaan Wilayah, RTRWP; alokasi lahan; izin lokasi;	Intensif dan banyak kegiatan
DPRD	Anggaran, Peraturan	terbatas	Anggaran, Kebijakan, Perda, Retribusi	Banyak hubungan
Kelompok Pengusaha/ HTI, Perkebunan	AMDAL/RKL/RPL, PROPER, SUPER;	Sering; pemantauan lapangan terbatas	AMDAL/RKL/RPL; PROPER/ SUPER; Yustisi; Retribusi izin & buang limbah; PROPER kebakaran	Intensif dan luas; Banyak kegiatan Kasus, Yustisi Lingkungan; Retribusi
Kelompok Peladang/ Masyarakat Desa	Penyuluhan Peraturan Lingkungan; kasus lingkungan	Sangat terbatas	Penyuluhan Peraturan Lingkungan; Pelatih Kader Lingkungan; kasus	Sering tetapi skala terbatas
NGO	Komisi AMDAL, latihan AMDAL (SSFFMP)	Terbatas; tidak banyak kegiatan partisipatif	Advokasi/ yustisi; AMDAL; Studi; SKLHD; NGO lokal dan internasional	Banyak kegaitan dan rapat partisipatif stakeholder
Akademia/ PPLH/PSL	Latihan AMDAL; PPLH sebagai Konsultan AMDAL perusahaan; Studi DAS; ahli lingkungan Kasus	PPLH sering; PSL tidak ada hubungan	PPLH sering Beberapa studi (DAS, Kinerja, dll; latihan SDM;	Banyak hubungan dengan individu/ kurang dengan Lembaga
Donor Multilateral	Program ADB Regional Network (lewat pusat) ; SSFFMP; (dulu GTZ 7 tahun)	Program dengan SSFFMP (MSF, Pokja, dsb) dua tahun tetapi baru mulai berkembang dua bulan terakhir ini	Aktif di ASEAN Haze Agreement; Usulan Training Centre ASEAN di Riau; USFS program; ADB Regional Network (lewat pusat), dll	Hubungan aktif

SKLHD = Status Kualitas Lingkungan Daerah (Annual Environmental Report); PROPER=Program Pemantauan Lingkungan

Appendix 7 IOM Check list (Integrated Organization Model)
Bapedalda Prov SumSel in Fire Management (FM)

		Positive (+)	Neutral (±)	Problem (-)	Unknown (?)	to be considered
01.0	Mission					
01.1	Is the mission related to FM clearly formulated			Red		Patterned
01.2	Are the stakeholders / beneficiaries related to FM identified	Yellow				
01.3	Is the mission in FM relevant to the situation of the stakeholders/ beneficiaries	Yellow				
01.4	Is the mission in FM understood & accepted by the stakeholders				Grey	
01.5	Is the mission in FM clearly supported by the staff and management	Yellow				
01.6	Is the mission in FM adequately translated into long term objectives			Red		Patterned
01.7	Does the organization have the same mission in FM as the LH/Bapedalda of Central Government			Red		Patterned
02.0	Outputs					
02.1	Does the organization offer a relevant range of products/ services related to FM			Red		Patterned
02.2	Do the products / services related to FM adequately address the need of the target groups?			Red		Patterned
02.3	Are the existing products/ services in FM in line with the mission and long term objectives	Yellow				
02.4	Do the products / services related to FM adequately address the different positions of the target groups?			Red		Patterned
02.5	Do the products / services related to FM adequately address the different gender roles?			Red		Patterned
02.6	Does the organization deliver asubstantial volume of outputs in products related to FM			Red		Patterned
02.7	Can the organization meet the demand for its products/ services in FM				Grey	
03.0	Inputs					
03.1	is there sufficient number of staff	Yellow				
03.2	is there sufficient skilled staff			Red		Patterned
03.3	are the premises adequate	Yellow				
03.4	is the location of the premises adequate	Green				
03.5	are the offices and equipment adequate			Red		Patterned
03.6	are the supplies of sufficient quality	Yellow				
03.7	are the data/ information from others (line agencies, etc) sufficient and of adequate quality			Red		Patterned
03.8	are the services of third parties adequate (water, electricity, phone, email, accountanc, etc)	Yellow				
03.9	are the financial means adequate and reliable in time			Red		
03.10	are the budget flexible to adapt to needs			Red		
03.11	Is there sufficient access to the necessary information			Red		Patterned
03.12	are the inputs adequately utilised considering the volume and quality of outputs	Yellow				
03.13	are the inputs balanced in line with environmental threat and damage			Red		Patterned
04.0	Actors					
04.1	Is the target group satisfied with the quality of products and services delivered				Grey	no research
04.2	is the target group satisfied with the volume of products and services delivered				Grey	no research
04.3	is the organisation satisfied with the relations with financiers/ donors				Grey	no research
04.4	are the financiers/ donors satisfied with the results				Grey	no research
04.5	are the relations with other agencies adequate			Orange		Patterned
04.6	has the organization adequate relations with policy makers in the districts	Yellow				
04.7	has the organization adequate relations with policy makers at central government	Green				
04.8	has the organization a good public image	Yellow				
05.0	Factors					
05.1	Is the socio-economic situation conducive to performance of the organization	Yellow				
05.2	Is the legal framework conducive to performance			Red		Patterned
05.3	are socio-cultural norms and values amongst the target groups conducive to the performance	Yellow				
05.4	is the physical environment (infrastructure) conducive	Green				
05.5	is political climate conducive	Yellow				

		Positive (+)	Neutral (±)	Problem (-)	Unknown (?)	to be considered
06.0	Strategy					
06.1	Is the strategy in line with the mission in FM			Red		Green
06.2	is the strategy clear and realistic	Yellow				
06.3	is the strategy related to FM translated in a clear, realistic annual plan			Red		Green
06.4	is the annual plan regularly updated	Yellow				
06.5	did the organization realize earlier annual plans and budgets	Yellow				
06.6	Is there a clear and effective work planning	Yellow				
06.7	Is the work plan monitored	Yellow				
06.8	Is the staff adequately involved in planning and monitoring	Yellow				
06.9	do plans and strategies adress gender differences among staff and target groups			Red		Green
07.0	Structure					
07.1	Is the decision making structure based upon clear divison of responsibility	Yellow				
07.2	is the division of tasks and responsibilities related to FM clear and understood by the staff			Red		Green
07.3	is there a logical division in the organization bidang, subBidang etc to relate to FM	Yellow				
07.4	is the logistical support adequately arranged			Red		Green
07.5	is there sufficient coordination between the Bidangs, subBidangs etc	Yellow				
07.6	Is there sufficient communication between management levels					
07.7	Is there an adequate balance in the position of men and women in different units and levels			Red		Green
08.0	Systems and Processes					
08.1	are financial/ administrative procedures adequate				Grey	
08.2	does the organization adhere to its procedures				Grey	
08.3	are working methods / approaches adequate			Red		Green
08.4	is there a good system for monitoring of activities			Red		Green
08.5	are realistic activity monitoring indicators developed				Grey	
08.6	are realistic impact monitoring indicators developed			Red		Green
08.7	is there an adequate planning system			Red		Green
08.8	is there sufficient attention to quality control				Grey	
08.9	is sufficient information about performance easily available				Grey	
08.10	Is there an adequate reporting system (financial, non-financial)				Grey	
08.11	Is there a positive audit last year				Grey	
08.12	Are recommendations of the auditor being implemented				Grey	
09.0	Staff					
09.1	Is staff performance adequate, considering the circumstances	Yellow				
09.2	Are the staff salaries and secondary benefits adequate			Red		Green
09.3	is performance of staff reviewed periodically				Grey	
09.4	is performance adequately linked to salaries and benefits			Red		Green
09.5	is the staff adequately utilized	Yellow				
09.6	does the staff have sufficient learning and training opportunities			Red		Green
09.7	are recruitment procedures adequate			Red		Green
09.8	is staff turn over within normal limits			Red		Green
10.0	Management style					
10.1	Is concern of management adequately divided over internal and external relations				Grey	
10.2	Is the staff adequately involved in decision making				Grey	
10.3	Is the staff sufficient informed on decisions	Yellow				
11.0	Culture					
11.1	Is there an adequate balance between short term and long term thinking			Red		Green
11.2	Is there an adequate balance between individual responsibility and team spirit			Red		Green
11.3	is the organization willing to learn from past failures	Green				Green
11.4	is there a learning culture and active investment in on-the-job learning opportunities			Red		Green

Appendix 8: Budget Plan
Five Year Plan 2003-2008
BAPEDALDA PROVINCE

(x Million) %

STRATEGIC PROGRAMS			
1	Water and Air Quality Evaluation	450	5,3
2	Conservation of Natural Resources and Environment	500	5,9
3	Inventory of Biodiversity	250	2,9
4	Inventory of environmental Pollution	100	1,2
5	Drafting of Criteria for environmental Quality Standards	200	2,4
6	Socialisation of Environmental Law/ regulations	150	1,8
PRIORITY PROGRAMS			
1	Guidance on Synergy in Environmental Management (PROPER)	353	4,2
2	Suppression of environmental Pollution	250	2,9
3	Monitoring the implementation of EIA (AMDAL) and Environmental Management Plan (RKL) and Environmental Monitoring Plan (RPL)	200	2,4
4	Improvement/ upgrading Laboratory facilities	4.775	56,3
5	Exhibition Environment in Jakarta and in Province	300	3,5
6	Environmental Award (KALPATARU)	100	1,2
7	Environmental Status Report	100	1,2
8	Development of Environmental Information System	500	5,9
9	Capacity Building	250	2,9
Total		8.478	100,0

source: *Rencana Strategis Pembangunan Pengelolaan Lingkungan Hidup Sumatera Selatan Tahun 2003-2008*
 BAPEDALDA

Appendix 9 Rangkup Rumusan Lokakarya

Bapedalda Prov/Kab/Kota dan SSFFMP

14 Oktober 2004

- 1. Peraturan Daerah (Perda)/ Keputusan (Kpts): Gub/Bup/Wako**
 - Kualitas Udara / Baku Mutu Kualitas Udara Ambien & Gas Buang
 - Lanjutan PP4, 2001 tentang Pengendalian Kerusakan dan atau Pencemaran Lingkungan Hidup yang berkaitan dengan Kebakaran Hutan dan Lahan Penyeragaman Kelembagaan/Instansi Lingkungan Hidup/ Bapedalda Provinsi dan Kab/Kota se-SumSel (Peraturan Pemerintah No.8 Tahun 2003) Revisi Tugas dan Fungsi Pokok (TuPokSI) Bapedalda/LH
 - Penyiapan Lahan Masyarakat Tanpa Bakar (PLTB)
 - Petunjuk Pelaksanaan (JukLak) Sistem Informasi Kebakaran Hutan Satuan Tugas (SatGas) Kebakaran Hutan/ Lahan di Desa, Kecamatan

- 2. Rencana Strategis (RenStra) dan Program Pembangunan Daerah (Propeda)**
 - Mengakomodir Masalah Kebakaran Hutan dan Lahan

- 3. Lain pengembangan Kelembagaan**
 - Dewan Konsortium/ konsultan Kelembagaan Lingkungan Hidup (Bapedalda/PSL/PPLH)

- 4. Data / Sistem Informasi**
 - Sistem Informasi Lingkungan berkait Kebakaran di tingkat Prop/Kab/Kota (SIL Bapedalda Provinsi); SIL Bapedalda/LH di Kab/Kota)
 - Sistem Informasi Lingkungan berkait Kebakaran di tingkat Desa (SIL Desa)

- 5. Sumber Daya Manusia (SDM), Perlatan, Sarana/Prasarana**

Ada beberapa usulan yang belum komprehensif, karena adanya kurang waktu untuk pembahasan.

Appendix 10 Rangkup Lokakarya Bapedalda Prov/Kab/Kota dan SSFFMP

		Kaitan dengan nomor AWP-3 SSFFMP
Peraturan Daerah (Perda): Keputusan/Kpts): Gub/Bup/Wako	<ul style="list-style-type: none"> • Kualitas Udara / Baku Mutu Kualitas Udara Ambien & Gas Buang • Lanjutan PP4, 2001 tentang Pengendalian Kerusakan dan atau Pencemaran Lingkungan Hidup yang berkaitan dng Kebakaran Hutan/Lahan Penyeragaman Kelembagaan/ Instansi Lingkungan Hidup/ Bapedalda Provinsi dan Kabupaten/Kota (Peraturan Pemerintah No.8,2003) • Revisi Tugas dan Fungsi Pokok (TuPokSI) Bapedalda/LH • Penyiapan Lahan Tanpa Bakar (PLTB) masyarakat • Petunjuk Pelaksanaan (JukLak) Sistem Informasi Kebakaran Hutan Satuan Tugas (SatGas) Kebakaran Hutan/ Lahan di Desa, Kecamatan 	<p>(hanya peralatan sedikit)</p> <p>4.3.1.5</p> <p>4.3.1.1</p> <p>4.3.1.1</p> <p>4.3.1.5</p> <p>(4.2.4.2/3)</p> <p>(4.3.2)</p>
RenStra dan Propeda (Prov/Kab/Kota)	<ul style="list-style-type: none"> • Mengakomodir Masalah Kebakaran Hutan dan Lahan dalam RenStra/ Propeda Prov/Kabupaten 	5.2.6
Lain pengembangan Kelembagaan	<ul style="list-style-type: none"> • Dewan Konsortium/ konsultan Kelembagaan Lingkungan Hidup (Bapedalda/PSL/PPLH) 	Tidak ada (5.2.5)
Data / Sistem Informasi	<ul style="list-style-type: none"> • Sistem Informasi Lingkungan berkait Kebakaran di tingkat Prop/Kab/Kota (SIL Bapedalda Provinsi); SIL Bapedalda/LH di Kab/Kota) • Sistem Informasi Lingkungan berkait Kebakaran di tingkat Desa (SIL Desa) • Peta /Data Daerah Bahaya Kebakaran • Peta / Data Hotspot/ F.D.R.S Daerah Dampak Kebakaran (Burnt 	<p>4.3.2.2-5</p> <p>4.1.2.4/4.2.3</p> <p>4.1.2.6/4.1.3.1</p> <p>4.1.2.5/4.2.3</p>
Sumber Daya Manusia (SDM), Perlitan, PraSarana/	Ada beberapa usulan yang belum komprehensif, karena dalam lokakarya adanya kurang waktu untuk pembahasan	SDM 4.3.1.4/
Lain Tidak dari Lokakarya	<ul style="list-style-type: none"> • Laporan Status Kualitas Lingkungan Prov. dan Kab(1) mengakomodir masalah kebakaran hutan/lahan dan dibuat partisipatori 	4.3.1.2

Appendix 11: Monitoring Synergy development in Fire Management

Systems for the monitoring of synergy directly related to fire management have been developed by Jalal, (2004) by MenLH (2004) and by Bambang

Jalal etc (2004) made a synergy analyses for BAPEDALDA Riau They have different criteria for different stakeholders including for Commercial Enterprises, Local Government, Environmental NGOs and Grassroots, Multilateral Institutions. The commercial enterprises are divided in three categories HTI, Estate crop firms and Middlemen (“Taukeh”). They state that the latter category is an often overlooked but very influential group on local communities and contributing to increase of slash and burn agriculture and exploitation of natural resources.

The multilateral organisations in this case United States Forest Service with funds from USAID is mentioned as a facilitator in restructuring of Fire Management Organisation (PUSDALKARHUTLAH) in Riau and the design of Standard Operational Procedures for this PUSDALKARHUTLAH

The NGOs are mentioned in this case WALHI in their actions for law enforcement (legal standing).

Criteria Synergy development PUSDALKARHUTLAH with Commercial Enterprises:

Main cooperation should exist of:

1. Development of an information and communication system able to detect potential fire areas and disseminate this information within province and beyond
2. Increase of competencies of people involved in fire prevention and suppression through training
3. Mobilisation of equipment and people in areas near forest and land fires
4. Prevention and mitigation of social impact of forest and land fires

Criteria Synergy development Commercial Enterprises with others

Main Cooperation should exist of:

1. Consultation by BAPEDALDA, Forest Estate Crops in setting up of organization, design of program for prevention and suppression of fires in the Commercial Enterprises
2. Adjustment of facilities for fire management conform regulations or signed commitments
3. Use of demonstration Commercial Enterprises with good organization and facilities for other Commercial enterprises; Organising of Open House inviting others (Government, Communities, People), NGOs to show fire organization, equipment etc.

Synergy development between Executive and Legislative Government

1. NGOs provide social control to stimulate action of executive and legislative government in fire related issues
2. Sponsoring by Government to support research scientific evidence, analyses of social conflicts

Jalal etc (2004) developed 27 criteria to evaluate synergy of commercial enterprises Most of the criteria are related to

- 1) fire danger preparedness : including EIA, Planning, Internal Regulations and documentations, Organisation and trained personnel for fire, Type of fire management model, funds spend on training, equipment and maintenance and readiness to use equipment, equipment quantities in relation to fire fighting personnel, expenditures on transport mobilisation of fire fighting equipment,

information and communication system, fire danger index, fire warning boards, monitoring and patrolling of the concession area; internal evaluation of the organisation and

- 2) directly to synergy development including: integrated information and communication systems, cooperation or consultations with outside institutions , coordination specialised in forest and land fires, cooperation of commercial enterprise with neighbouring communities, cooperation of commercial enterprise with other private enterprises and Government, expenditures by commercial enterprise to pay for recovery cost, social cost and for social investment as investment in prevention and mitigation of impacts from fire form the concession area, monitoring of frequency and intensity of conflict between commercial enterprise and public; reward and punishment

Appendix 12 Present and Future Roles of Env. Agency in Fire Management

	Bapedalda/LH			
	Lead party		Supporting	
	Present	Future	Present	Future
PREVENTION				
Policies, strategies, plans	Xn	Xn,p,d		Xp,d
Regional fire prevention strategies				Xp,d
Protected area systems e.g.,peat swamps, forest				Xp
Regional development & Land Use Planning				Xp,d
Spatial Plan (RTRWK, RTRWP)			Xp,d	Xp,d
Village Land Use & Dev. Plan				Xd
Commercial enterprise plan (AMDAL)	Xn,p,d	Xn,p,d		
Organization strengthening/ institution development				
Develop mandates, task government agencies	Xn	Xn,p,d		Xp,d
Proposes budgets, facilities		Xp,d		Xp,d
Env. Laws and Regulations				
Env. law-enforcement, Env. Crime investigation	Xn	Xn,p,d		Xp,d
Fire management regulations & legislation development Perda, etc)	Xn	Xn,p,d		Xn,p,d
Facilitation out-of court settlements env. crime	Xp,d	Xp,d		
Research and Development				
Cooperation and networking of government, academic, private sector			Xn,p,d	Xn,p,d
Capacity building EIA (knowledge, skill, attitude)	Xn,p,d	Xn,p,d		
Information flow, access, dissemination of data on Environmental status	Xn,p,d	Xn,p,d		
Education, training			Xp	Xp
Awareness, principles, motivation			Xp,k	Xp,k
FIRE INFORMATION (WARNING)				
<i>Fire Risk</i>				
Fire Risk Area				Xp,k
Climate				
Fuel load/ flammability				Xp,k

Risk of ignition areas				Xp,k
Fire Risk Stakeholders Analyses				Xk
Land clearing & fire management				Xk
Tenure security, conflict areas				Xk
Monitor development of institutions to control fire				Xk
Early warning				
Fire Danger Rating System		Xp,d?		Xp
Fire detection				
Satellite information, Hotspot	Xn	Xn,	Xp	Xp, Xk
Ground information	not	not	not	not
SUPPRESSION				
Monitoring Preparedness and fire fighting capacity Commercial Enterprises (RPL), PROPER		Xn,p,d		
Monitoring Preparedness and fire fighting capacity Villages				(Xd)
Monitoring Preparedness and fire fighting capacity State Forestry Enterprises		(Xp,d)?		
Actual fire fighting	not	not	not	not
IMPACT ANALYSES				
Smoke affected areas Air pollution, air quality	(Xp)	Xp, Xd		
Health			(Xp, Xd)	Xp, Xd
Visibility/ air traffic				
international relations smoke impact on health, business, tourism	Xn	Xn		
Fire Affected Areas loss of vegetation, crops, assets, biodiversity in State owned and private areas				Xp, Xd
Fire effect on Water and Soil:Peat soil oxidation-acidity;increased erosion, loss of top soils; salt water intrusion		Xp		
REHABILITATION OF DEGRADED AREAS				
Natural restoration				Xp,d
Planting, etc				Xp,d

N=National Government P=Provincial Government D=District Government

Appendix 13. Kuestioner berkaitan Kebakaran Hutan dan Lahan dan peranan Bapedalda/KL Kabupaten

Penjelasan dan permintaan:

Kuestioner ini dibuat untuk kepentingan Bapedalda dalam perkembangan peranan yang berkait dengan kebakaran hutan dan lahan. Tolong memberikan pendapat anda dengan melingkari jawaban yg dipilih.

1. Kebakaran hutan dan lahan adalah persoalan yang tidak ada kaitan banyak dengan Bapedalda/LH

Sangat setuju	setuju	Tidak tahu/ tidak tentu	Tidak setuju	Sangat tidak setuju
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2. Kerja dan pelayanan yang sudah diadakan dari Bapedalda/ LH sudah banyak mengurangi kemungkinan dan bahaya kebakaran.

Sangat setuju	setuju	Tidak tahu/ tidak tentu	Tidak setuju	Sangat tidak setuju
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3. Bapedalda tidak mempunyai tugas untuk analisa sumber dan hasil kerugian ekonomi masyarakat akibat kebakaran hutan dan lahan.

Sangat setuju	setuju	Tidak tahu/ tidak tentu	Tidak setuju	Sangat tidak setuju
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4. Tugas masing masing instansi/ Dinas sudah cukup diatur oleh yang berwenang tinggal implementasi

Sangat setuju	setuju	Tidak tahu/ tidak tentu	Tidak setuju	Sangat tidak setuju
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5. Bapedalda mempunyai tugas penting mengenai inventarisasi areal dan analisa dampak lingkungan termasuk dampak kerusakan hutan dan lahan dan kerugian ekonomi, sosial budaya masyarakat .

Sangat setuju	setuju	Tidak tahu/ tidak tentu	Tidak setuju	Sangat tidak setuju
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6. Bapedalda mempunyai buku Status Lingkungan yang banyak dipakai instansi untuk analisa kerusakan lingkungan akibat kebakaran

Sangat setuju	setuju	Tidak tahu/ tidak tentu	Tidak setuju	Sangat tidak setuju
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7. Program Bapedalda/LH pencegahan dan pemantauan berkait kebakaran tidak berkembang karena RenStra dan Tupoksi Bapedalda/LH tidak menyingung pencegahan kebakaran hutan dan lahan dan evaluasi dampak kebakaran hutan dan lahan.

Sangat setuju	setuju	Tidak tahu/ tidak tentu	Tidak setuju	Sangat tidak setuju
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8. Pembuatan peta Daerah Rawan Kebakaran adalah tugas Bapedalda /LH

Sangat setuju	setuju	Tidak tahu/ tidak tentu	Tidak setuju	Sangat tidak setuju
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9. Bapedalda/LH mempunyai tugas untuk pembuatan strategi dan program pengembangan kelembagaan desa untuk mengurangi kemungkinan terjadi kebakaran hutan dan lahan.

Sangat setuju	setuju	Tidak tahu/ tidak tentu	Tidak setuju	Sangat tidak setuju
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10. Pemantauan kesiagaan dan persiapan alat, personil dll pemadam kebakaran sesuai AMDAL untuk perkebunan dan HTI adalah kewajiban Bapedalda/LH.

Sangat setuju	setuju	Tidak tahu/ tidak tentu	Tidak setuju	Sangat tidak setuju
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11. Analisa dan evaluasi akibat penyebaran dan tingkat polusi asap dari kebakaran hutan dan lahan adalah tugas Bapedalda/LH.

Sangat setuju	setuju	Tidak tahu/ tidak tentu	Tidak setuju	Sangat tidak setuju
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12. Sistem Informasi Lingkungan dan pembuatan peta mengenai aspek kualitas dan kuantitas lingkungan di Kabupaten sebaiknya di serahkan ke satu instansi atau badan informasi lingkungan yang dilengkapi personil, peralatan dan wewenang yang seperlunya untuk buat peta, analisa peta dsb.

Sangat setuju	setuju	Tidak tahu/ tidak tentu	Tidak setuju	Sangat tidak setuju
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Terima kasi

Appendix 14 Results of Questionnaire in Role EA Districts

no	muba	banyuasin	oki	kota palembang	lahat	average score	Remarks
1	5	5	4	1	5	3,0	There are positive too very positive about fire problems and the role of Bapedalda/LH
2	2	2	3	3	2	2,0	they agree somewhat or are not so sure that Bapedalda has already done a lot to decrease potential fire and fire danger
3	4	5	2	4	4	3,0	they think Bapedalda has a definite to very definite role in economic impact assessment of lossess caused to local people through forest and land fire
4	2	2	4	3	2	2,2	they think somewhat or are not fully sure that government roles are well defined and only need better implementation
5	1	1	2	1	2	1,0	they think that Bpaedalda has a very definite role in the inventory of social economic environmnetal impact to people of forest and land fires
6	3	1	2	2	1	1,6	they think the environmental report is used a lot to analyse environmental damage resulting form forest fire
7	5	5	2	3	4	3,0	they agree that forest fire prevention and monitoring programs in Bapedalda /lh programs do not develop because they are not included in 5-year Strategic Plan and Task description of Bapedalda
8	1	2	2	2	2	1,4	They agree that Bapedalda has a role in making a Fire Danger Area Map
9	2	1	3	2	2	1,6	They agree that Bapedalda/LH has a role to make strategies and program to develop village organization/ institutions to decrease forest/ land fires
10	1	1	3	1	2	1,2	They agree that Bapedalda has a role in monitoring the preparedness of companies in fire management according the AMDAL/RKL/RPL
11	1	1	3	2	2	1,4	They agree that evaluation of the impacat of air pollution (haze) haze and movement/ distribution of haze is the role of Bapedalda/LH
12	1	1	3	1	2	1,2	They agree that information systems about environment best could be handled by one agency (instansi atau badan) which should be provided with personnel, equipment and authority to make maps, analyses etc.
SSFFMP related Districts			Other Districts				
	7	10	0	3	2		very positive rating out of 12

Conclusio

ns:

OKI has a very deviating answering compared to others

The Districts related to the SSFFMP score most positive (MUBA 7 out of 12 and Banyuasin 10 out of 12) with OKI as exception

some answers form OKI are contradictory see question 3 and 5 More or less the same questions asked different but answered inconsistently

Appendix 15

Proposal: Village based Environmental Monitoring System (with special attention to fire management related monitoring)

This Program is budgeted under 4.3.2 Capacity building at village level concerning environmental management and monitoring;

4.3.2.2 Village based environmental monitoring system developed and tested in three villages including data on Governance and fire management in at least three villages

General Objective:

- to halt environmental degradation and improve environmental conditions (air, soil and water and living environment)
- to decrease forest and land fire and smoke and their negative impact.
- Specific objective:
- To develop a village-based environmental monitoring system used for the monitoring of environmental conditions and trends with specific attention to fire / smoke threat and impact,
- To use these monitoring data for improvement of village planning and development and to decrease the impact of fire/ smoke
- To get database included in BPS village database, in Environmental Status Report (Status Lingkungan Daerah Kabupaten/Kota dan Provinsi Sumatera Selatan and in project Village Land Use Planning methodology

Activities:

- 1) Identify data user needs and existing data systems and suppliers
- 2) Design of Monitoring system, specifying data collection process, key data sets and parameters, data providers and users
- 3) Preparation draft manual for data collection and processing
- 4) Testing of data collection and processing in 5 test villages (representative for environmental conditions in South Sumatra)
- 5) Review Monitoring system and manual with stakeholders (representatives of data providers, data collectors and processors and end users)
- 6) Proposal via MSF to relevant authorities to institutionalise village based environmental monitoring system and key data to be integrated in existing and proposed Government monitoring and planning systems (e.g. BPS Village data and profile, Status Lingkungan Hidup, Village Land Use planning,)
- 7) Socialize and pursue legalizing (Perda) of village-based environmental monitoring
- 8) If accepted then train ToT for socializing/application of the village based environmental monitoring system (*See 4.3.2.4 Skill training on self monitoring of good governance/ village organizational development for at least 5 trainees per village, 40% women in three villages*) *See also Appendix 1 Proposal for Village based Environmental Monitoring System (with special attention to fire management related monitoring) and Appendix 2: Monitoring of Good Environmental Governance*
- 9) (next year 2006 to upscale the use of the monitoring system and to train villagers and Kabupaten Bapedalda personnel) (*This program component can possibly be linked with MUBA Pelatih Kader Lingkungan see*)

The following organizations should be involved: Bapedalda, Other line agencies (Health, Forestry, Agriculture/Estate Crops, Fisheries), BPS, MSF, NGO, Village Secretary and SSFFMP.

The monitoring system can include:

1. Activity monitoring (
2. Effect/Impact monitoring

Examples of Recommended Data to be collected

Primary data needed at village level

See existing systems BPS and Profil Desa Identify the gaps related to fire prevention and preparedness.

Profil Desa (Village Profile)

Peta Daerah Bahaya Kebaran (Fire Threat Map)

Deskripsi Kelompok Pemakai Api dalam pengelolaan hutan dan lahan

Annual Monitoring:

Number of families using fire in year

1) Burning waste around the house

2) Land clearing

Sonor

Fishing

Dry land agriculture

Others

3) Others

Village area data:

Areas under fire threat

Areas with high Fuel load

Specify if possible Land use type:

Lahan terlantar ... ha

Areas with history of burning

Each year

Long dry seasons only (1997)

Others (specify in case of important categories with high numbers or large areas)

Village land status

Disputed land and non-disputed land

Describe categories

State Forest Land occupied by villagers

State Forest land occupied by outsiders

Others

Socio-Economic impact of fires:

Losses of assets:

Constructions / buildings

Trees/ Crops

Others

Social aspects:

Job/Income loss: related to asset loss (losses of fruit trees, timber trees, cash crops)

How many people:

Estimated income loss on annual basis

Health aspects:

Smoke related health problems:

Visits to Puskesmas: (Puskesmas list are standardized) seasonal aspects related to fire/ smoke season?)

Description of groups of people using fire in resource management

Fishermen Lebak Lebung

Sonor

Others

(Describe for each group:

Conditions: Economic Social

Problems:

Development trends:)

Other environmental conditions:

Salt water intrusion

Ground water level and trends

Plant and animal pests (aggressive invaders/ exotic plants, wild boar, elephants)

(Lack of) Management of areas: lahan terlantar,

Water pollution

Water use for transport: trend

Daerah Bahaya Banjir; trend

Degradation of topsoils: mining areas

Loss of irrigation potential less water in dry season: trend

Description of mitigation programs related to groups

Extension work

Skill training alternative income

Others

Village scenarios / development plans/ mitigation plans

Village institutions:

Organizations formal informal

PMD (formerly LKMD)

LinMas (formerly Hansip)

Kepala Desa and apparatus

Kelompok petani

Kelompok pemuda

Etc

Village regulations by decree of the Village Head or LKMD/ PMD

Waste disposal

Maintenance of village public areas, facilities

Forest protection

Appendix 16 Criteria and indicators for the Evaluation of Village Institutions.

The following criteria are considered the key criteria:

NRM criteria:

Decrease of area where fire is used for land clearing and resource exploitation

Decrease of number of persons using fire in resource management *

Increase of permanent crop area

Decreased flammability of village land areas

*Ad b. Fire in resource exploitation as means for land clearing and resource exploitation (including for agriculture/ sonor, hunting, fishing etc)

Institutional Development Criteria:

1. Representation of interest groups in constitution of Village Organization (PMD)
2. Representation of gender in Village Organizations
3. Non Factionalism, non-enmities
4. Democratic decision making (Non-patron based governance)
5. Percentage of active members involved in Village Organization
6. Development of women programs in village related to environmental management /natural resource management and natural resources related income opportunities
7. Routine meetings/ own initiative [+ record keeping, record dissemination]
8. Routine financial record keeping [+accountability, transparency]
9. Village natural resource regulations and sanction system
10. Regulations and sanctions known and respected by the community
11. Participatory Village Land Use / development plan
12. Broadness Village Development Agenda and Action plan
13. Village development implementation and monitoring based on broad based stakeholder representation and gender
14. Village has an active fire fighting organization.
15. Village Organization able to negotiate with outside interest parties
16. Networking and linkage with line agencies, NGOs, private sector;
17. Development of Village fund and readiness for cost sharing: (No “spoonfeeding syndrome”)
18. Resource Conflict Resolution and protection of resources against outsiders
19. Effective system for cost and benefit distribution: Attention to people with lack of opportunities, poor people (women-headed single parent families/ widows, etc)
20. Link and cooperation of Village Organization with neighbouring villages and their organization.

Rating

The criteria can be rated from 1-5

1 very poor/ very bad/ very weak

2 poor/bad/weak

3 not so poor, not so bad, not so weak, positive, slightly good

4 good

5 very good

The total score will therefore vary between 20-100

Villages which score 75 –100 are considered to have mature village organizations

Villages which score 65-74 are considered to have good organizations

Villages which score 54-64 are considered to have promising organizations

Villages which score 45-54 are considered to have organisations that need much attention

Villages which score lower than 45 are in need of intensive program support.

The NRM criteria give additional information on the physical development trend.

The development trend should be included in the village profile. The NRM criteria are not scored as part of the GEG.

example of rating

Criteria 3: Non-factionalism

Rating is 5: No factionalism. Very good cooperation between groups (first specify groups and then assess cooperation- non-cooperation), Village development more important than importance of certain groups. Groups able to sacrifice for other groups

Rating is 4: No factionalism. Constructive cooperation between groups/ factions.

Rating is 3: Groups work well together. Some preferential treatment [of influential group] cannot be denied

Rating is 2: Groups can not work together, Not make a balanced planning together Easily they split in groups and have no/little consideration for the other group

Rating is 1 Worse than 2.

Criteria 4: Democratic decision making (Non-patron based governance)

Consider:

Do one or more influential people dominate the discussion/ decision making and overrule others.

Do some groups or people feel much overruled and/ or ignored. They have no say/ no influence “Bapaism” Do people usually follow the say of the influential / the “Bapak” as they feel dependent on him even it is otherwise not so much in their interest.

Do some people terrorize the village and others are therefore not speaking out.

Rating is 5: Very good consensus, people listen to each other, consider each opinion and feel to have found solutions after careful process of musharawara; or using voting system and much satisfied with the system and its outcome

Rating is 4: Good process of decision making

Rating is 3: Democratic process not so good yet, people get overruled

Rating is 2: “Bapaism”, one of few people talk and/ or decide. The others no say/ not much influence

Rating is 1: worse than 2; People feel totally overruled and feel very much dissatisfied with the decision making process

Criteria 7: Routine meetings/ own initiative [+ record keeping, record dissemination])

Consider:

Does the Village Organization organize regularly a meeting with clear schedules [e.g., certain date or day in month], frequency of at least once a month.

Does Village Organization meet on own initiative or mainly ad hoc and / or because of influence from outside the village

Does the village organization adjust to have extra meetings to discuss urgent issues

Rating is 5: Every month at least one meeting on a regular pattern [fixed day or date] and also sometime extra meetings if there are certain urgent issues. Record are kept and disseminated to members

Rating is 4: Good regularity. No extras; records are kept and disseminated

Rating is 3. More or less regular. Sometimes less than one meeting a month. Record keeping and distribution is irregular or weak

Rating is 2: Meeting are not regular and less than a month. Records are unclear

Rating is 1: Intervals of more than three months are recorded

Criteria 8: Routine financial record keeping [+accountability, transparency]

Consider:

Does the Village Organization have a proper book keeping system and record keeping

Are records regularly and routine wise updated

Does the Village Organization finance secretary share information on income and expenditure with the PMD members Is financial information on major programs actively explained to villagers through public places announcement or display on walls in public places; or actively distributed by copies of reports/ plans and finances

Does the Village Organization invite outside auditing;

Rating is 5: The Village Organization informs not only whole PMD members but also actively provides data to the larger village community and invites auditing from outside; book keeping is accurate, transparent and up to date

Rating is 4: Whole Village Organization has good access to financial data, book keeping system is good. Other villagers are also informed if they like, and can have access to financial data overviews.

Rating is 3: Book keeping system is good but information is limited mainly to PMD members

Rating is 2: Some secrecy, book keeping system needs improvement

Rating is 1: Serious doubt on financial administration and no transparency

Criteria 16: Networking and linkage with line agencies, NGOs, private sector;

Consider:

Village Organization seeks active contact with Line Departments and or NGOs for input, funding, programs in the village

Rating is 5: village organization has active linkage with more than four line agencies and with one or more NGOs and private sector.

Rating is 4: village organization has linkages with more than two Line Agencies/ NGOs.

Rating is 3: village organization has linkage with only one line agency other than agriculture

Rating is 2: village organization has only link with agriculture

Rating is 1: village organization has no link with Line agencies or NGOs

For further References See Wind, Jan (1999) Village Organization Development ERP Technical report series 2-24. See also CIFOR (2000)