

Controlling and curb of development: The case of national management of Indonesia mineral resources

Ukar Wijaya Soelistijo¹, Marwan Zam Mili²

¹Faculty of Engineering, University of Islam Bandung (UNISBA), Faculty of Mining and Oil Engineering, Institute of Technology Bandung (ITB), Centre for Education and Training of Mineral and Coal, (CETMC), Mineral and Coal Technology R&D Centre (MCTRDC), Bandung, Indonesia

²University of Halu Oleo (UHO), Faculty of Engineering, Kendari, Indonesia

Email address:

ukar@tekmira.esdm.go.id (U. W. Soelistijo), ukar_soelistijo@yahoo.com (U. W. Soelistijo), marwanzammili@yahoo.co.id (M. Z. Mili)

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Abstract: Management control and curb is basically required in securing the success of development and public administration, where integral coordination, integration and synchronization between central and regional governments is necessarily required. Control and curb need to be expanded to sub-regional, regional and international across-country by the existence of global development and require familiarization as well as exemplary in this respect human resources. For successful implementation of control and curb, national management system as a supporting element in decision making is required. In the case of mineral (general mining) development management, the intensive top-down and bottom-up coordination and cooperation between central as well as regional (local) government, private and community is necessarily required toward achieving its added value as high as possible supporting the national income. Especially, tough control and curb in the internal administration in terms of releasing mining permit standard and procedure up to supervision of the mining operation and mining reclamation and mining closure in line with the prevailing law and regulation. The method is performed in this study is based on descriptive and analysis with explanation of examples and cases.

Keywords: Management Control, Curb, Mineral Resources, Indonesia

1. Introduction

1.1. Definition and Basic Understanding

The key words of the title are management control, curb and mineral resource development with the following definition. "Control is the act or process of controlling, regulation; command; check or restraints; something that serves to control; or a standard of comparison in scientific experimentation" [4]. Control is oversight of progress (tasks) by comparing the results and targets on a regular basis and adjust the business (activity) with the results of monitoring. Curb or monitoring are the viewing and policy guidance of the running of the company [1]. In broad terms the company can be interpreted also as an institution or state. Preventive monitoring is the monitoring of the regulatory/leadership decisions regarding certain points which will be valid after the existing directives of authorized official. Repressive curb or monitoring is prevention/cancellation regulations/decisions of the headship by the competent

authority. Cling monitoring is a directly attached to each task which be the responsibility of each official. Development is a process, act, how to build. Top-down development is a development process that starts from developed countries to developing countries will be forwarded to the people. World development is the effort to change the world of the past that does not conform with the ideals of human life physically and spiritually with the aim to achieve a happy future for generations to come. Development include a wide range of fields such as the economy, politics, infrastructure, social. "Development is the act or process of developing; a gradual growth or advancement through progressive changes." [4] "Development constitutes the study of behavioral changes accompanying the growth and development of something throughout their life span " [3]. Keywords in development are growth and change. Mineral resources, in this study, mean natural resources that may include hard minerals and

coal endowed in Indonesia.

1.2. Background

The meaning of curb or monitoring and controlling of development (Figure 1.1) can be reviewed briefly as follows. Curb is one of the functions of management which in its activities require planning (PC = planning of controlling), organizing (OC = organizing of controlling), implementation (AC = actuating of controlling), monitoring (CE = controlling of controlling), and evaluation (evaluating of controlling) to monitoring itself, in order to improve the quality of monitoring from time to time dynamically (spiral management of controlling).

Controlling is a control of the functions or activities of management functions, namely the planning (CP = controlling of planning), organizing (CO = controlling of organizing), implementation (CA = controlling of actuating), monitoring (CC = controlling of controlling), evaluation (CE = controlling of evaluating). Shortly speaking, it could be stated that curb is just controlling of management as row matrix and controlling is just management of controlling as

column matrix (Figure 1.1).

Development is essentially an input-conversion-output process (ICO process). Input as development input factors or transformation or conversion which among others resources of capital, human, nature, geology, information, market, environment and technology. Output (yield) constitutes goods (commodities) and services (Figure 1.1). The output is used to ensure the dynamic growth over time for goal development, among others, prosperity, justice, security and society peace.

The above-mentioned fields of development can cover the five-fields (gatra) i.e. ideology, politics (superstructure, infrastructure and substructure politics), economic, socio-cultural and defense; and three-fields e.g. geography, natural resources, and human resources (Figure 1.2). Thus the development process must take place sustainable, efficient, effective and economical as far as possible by management activities among others curb or monitoring and controlling with attention of feedback to achieve optimal outcome or goals.

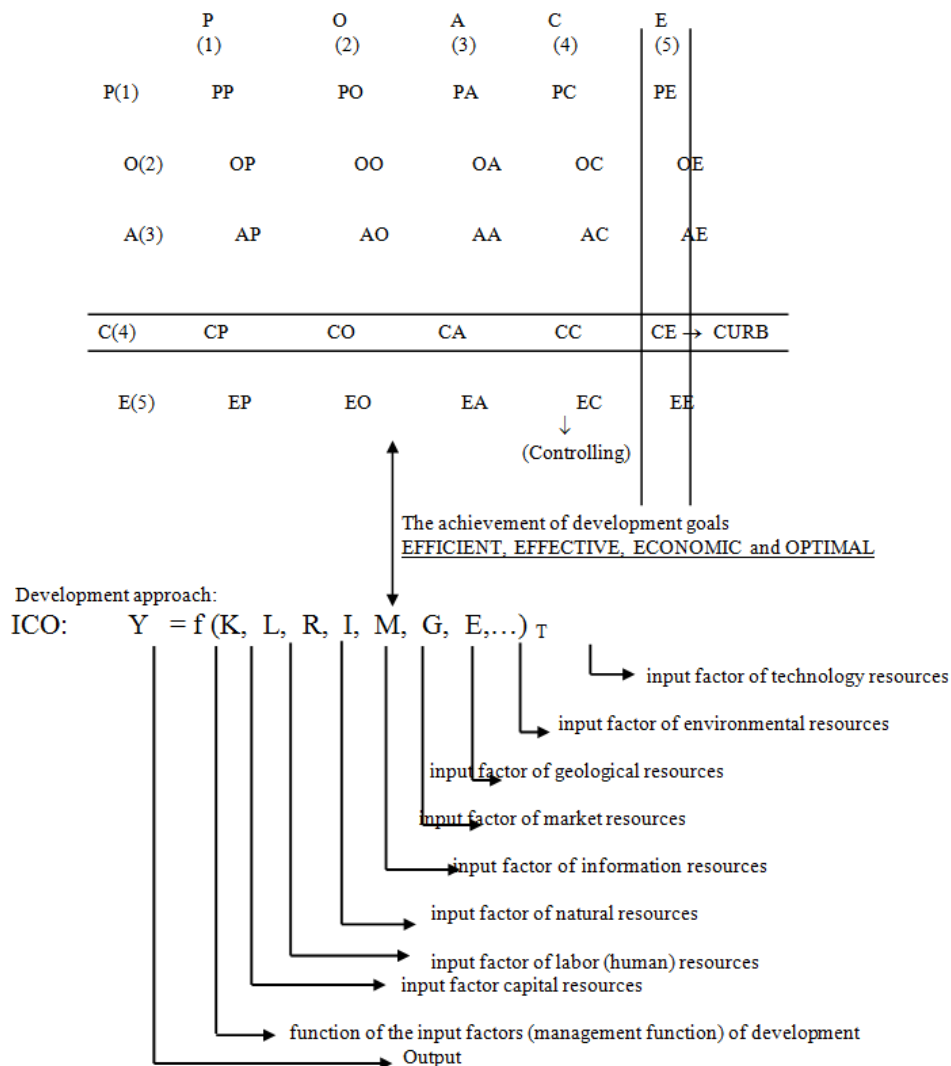


Figure 1.1. The conversion process in development and management control and curb of development.

Development Sector Examples of subject/object Monitoring and controlling description

I. Five aspects (*Pancagatra*):

1. Ideology	1. Implementation of PS	1. Pancasila (PS) as open ideology
2. Politics	2. Political awareness	2. Orderly of State Governmental Order.
3. Economy	3. Pancasila economy	3. Economic democracy (1945 Constitution)
4. Social-culture	4. Civil society	4. Bhineka Tunggal Ika (Diversity but unity)
5. National resilience	5. Equitable defence	5. National resilience

II. Three aspects (*Trigatra*):

6. Natural wealth	6. Dimension of land, sea and air	6. Sustainable.
7. Human resources	7. Qualified member of nation	7. Have an identity and independence
8. Geography	8. State limit	8. 3B's towards 2N's

Figure 1.2. Field matrix of development, subject/object and its control and curb (monitoring).

The aim of this study is how deep the influence of the national or public management system on the mineral and coal management based on regional autonomy system and mechanism in Indonesia so beneficial for the national as well

as local or regional economy as a whole.

2. Theory and Method

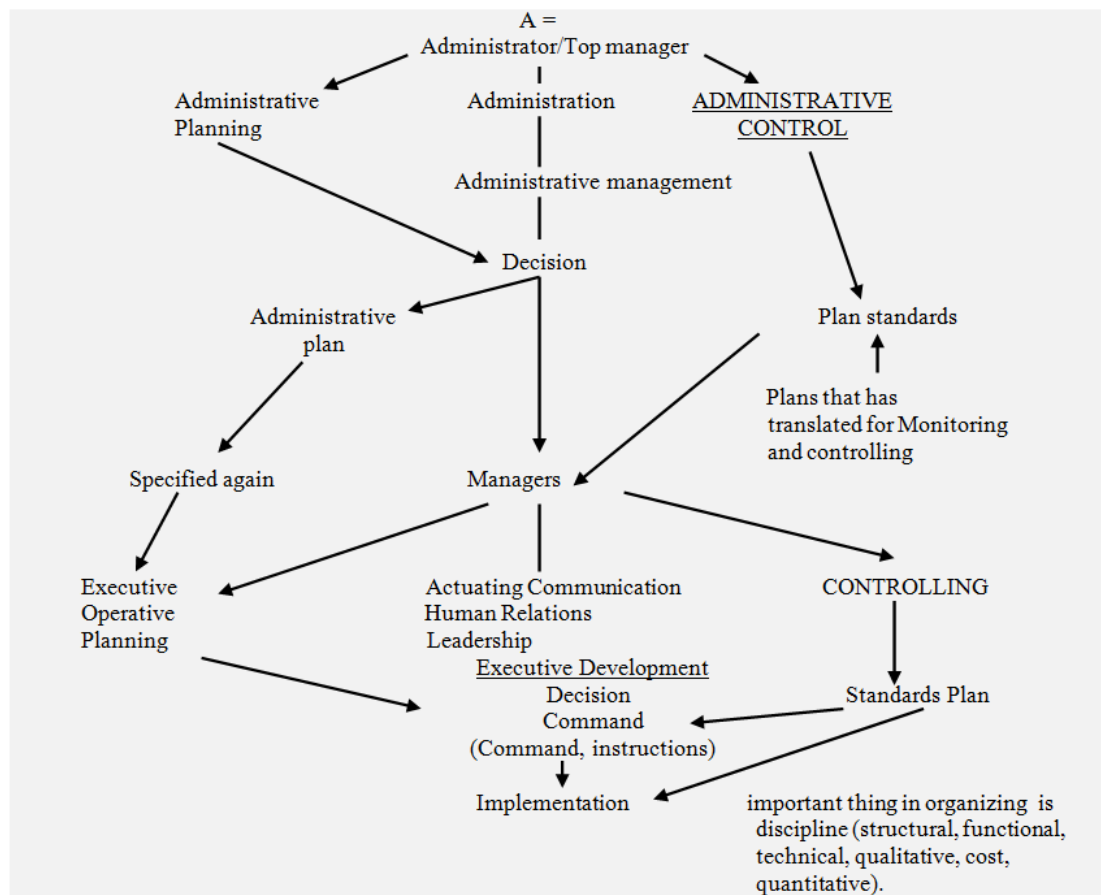


Figure 2.1. Administrative monitoring and development in decision-making chart process in two levels of management.

Administration or management of development can be described as follows.

a. State administration

State administration is one part of the public

administration, which is one of the branches of the social sciences, in which the state administration has close links with other social sciences, for example economics, sociology, anthropology, psychology and politics as well as part of the political process.

In a broad sense, the activities of the state in carrying out its political power; in the narrow sense, as an activity of the executive branch in governance [7,8,9,10].

b. Government administration

Government administration in its activities based on laws or regulations, working procedures are governed by the applicable regulations, and on the political decisions made by the competent authorities, as well as in organizational arrangements are bureaucratic [7,24, 26,27].

Government administration means that the management application and determines the direction of the executive (government), e.g the government apparatus and its functions [7,24,26,27].

c. Administrative monitoring and development

administration

Development administration is the state administration building which oriented to the direction of development, which highlights the administrative issues began from planning, implementation evaluation to monitoring and its control, which should get a solution that development activities take place more efficiently and effectively (Figure 2.1). At first, third world countries develop science and apply in an effort to overcome the problem of underdevelopment, poverty, stupidity and others to do the development in all sector such as politics, economic, social, cultural and defense [9].

The method used in this study is descriptive and analysis based on matrix of management functions plugged together with other development management variables in Figure 2.2 and all at once as mindset of development controlling/monitoring, then expressed through some examples and cases.

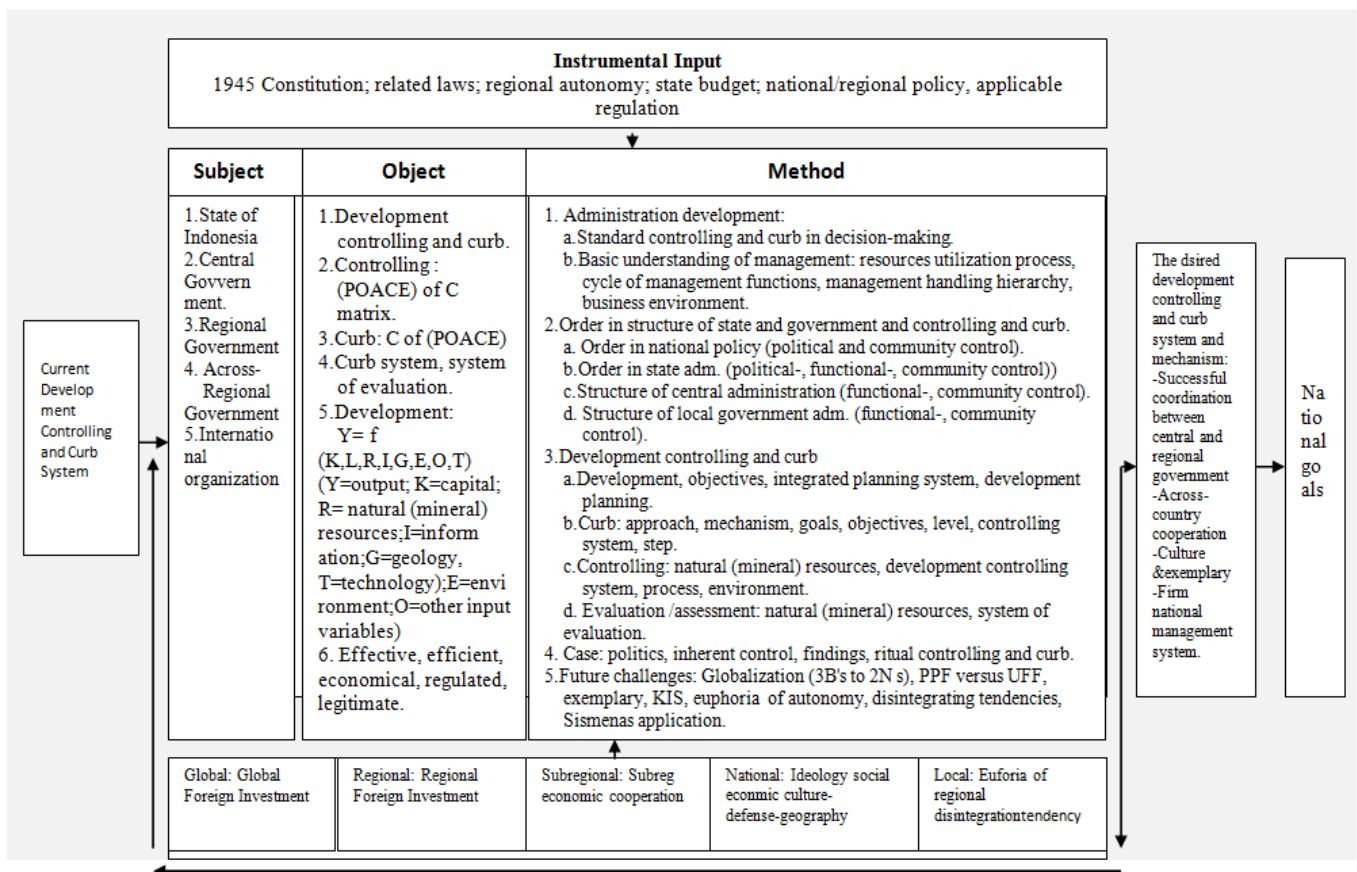


Figure 2.2. Mindset of development controlling/monitoring.

3. Results and Discussion

3.1. Impacts of administration and Management

More focused than the development administration is development management, because management is the core of the administration, which is synthesis and synergistic simulation of matrix management and development processes

in order to achieve development goals, e.g the community welfare in an efficient, effective and economical process. If in management science known motto, that by starting a job with a proper planning, it means that the actual 50% of the work has been completed, then the motto for his round is when planning a job has been perfect and if accompanied by good monitoring and controlling means that it has finished the job of 100% necessarily guarantee perfection for further

work in a sustainable (spiral management achievement and improvement).

The three basic elements of the management notion may include

(1). The utilization process of resources, where feedback relating to, among others, purchasing power and consumer tastes, habits and adjustment capabilities.

(2). Management functions cycle (spiral management) with pay attention control constantly and evaluation in number to achieve organizational management goals (Figure 3.1) [17, 22].

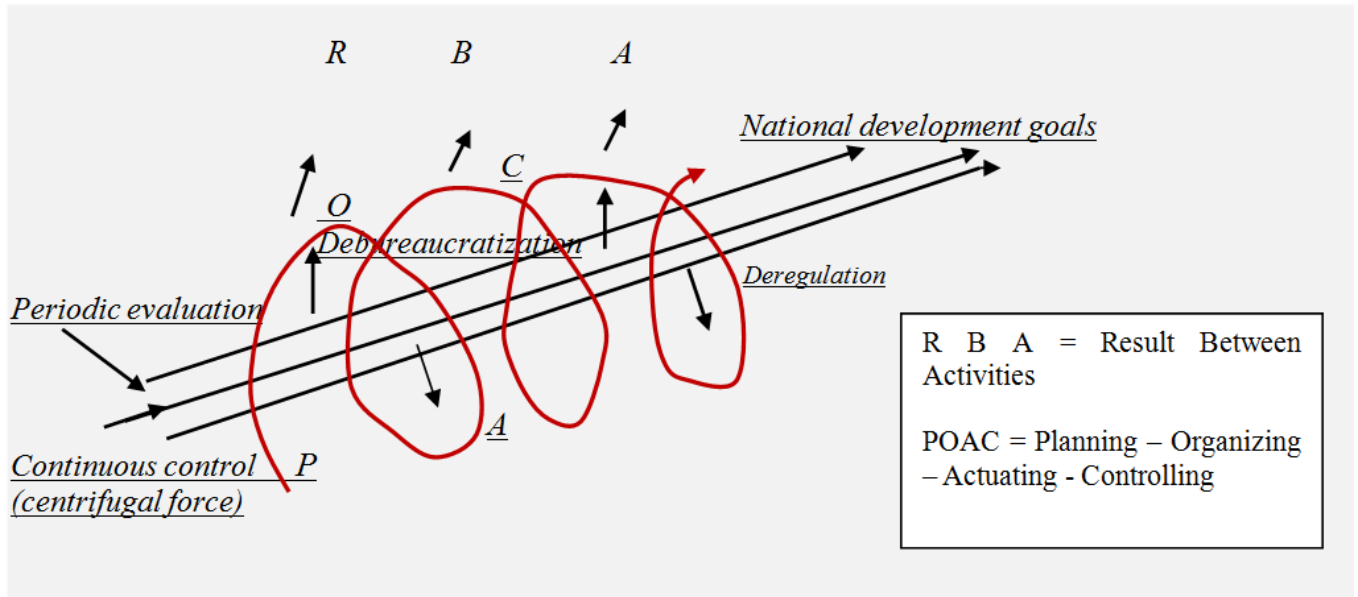


Figure 3.1. Spiral management.

(3). Handling of the management hierarchy (Figure 3.2) [23]

Formulation of policies and strategies can not be delegated, but control can be delegated.

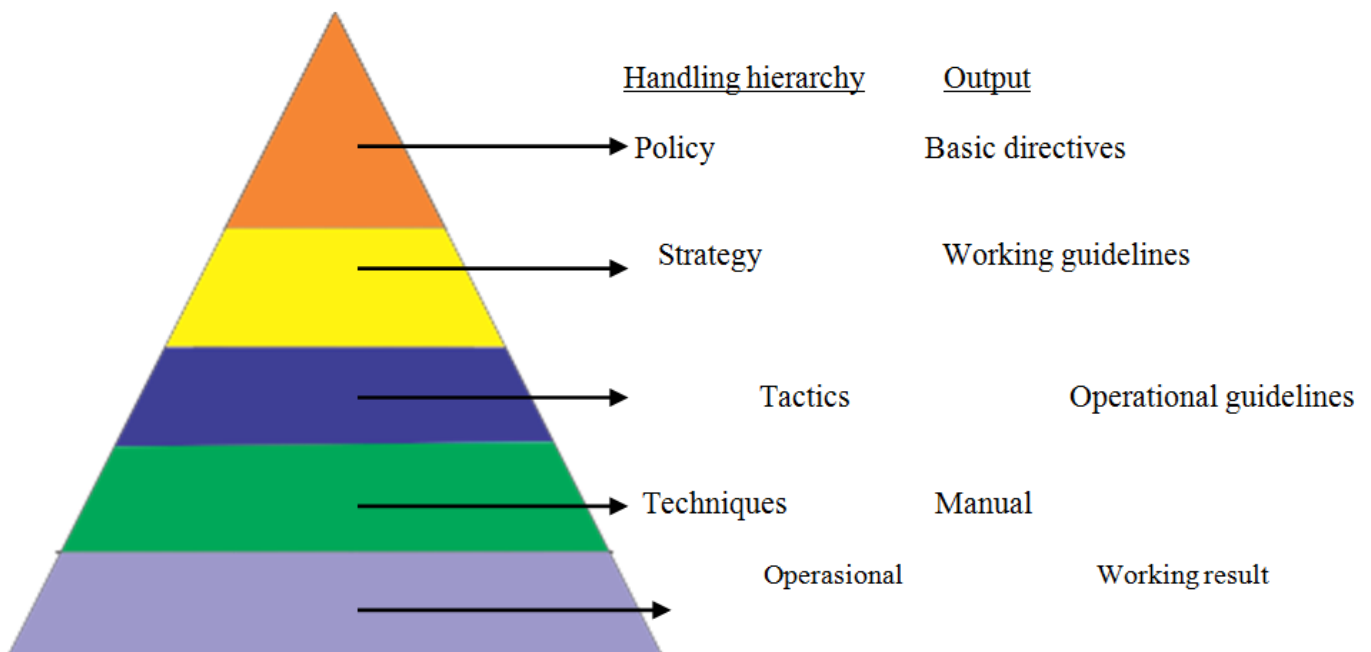


Figure 3.2. Management Handling Hierarchy.

Policies and strategies are used for converging between trends that will exist and the intended target (Figure 3.3).

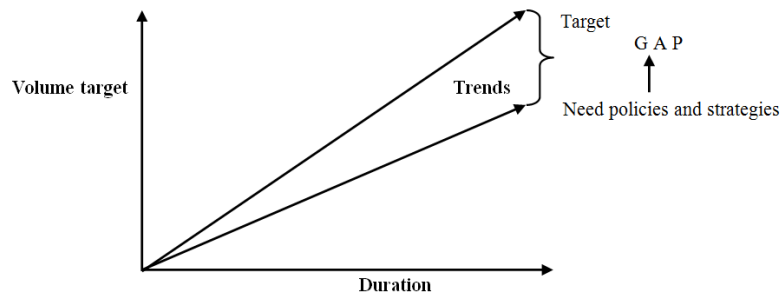


Figure 3.3. Policies and strategies to overcome gab between target and trend.

(4). Environment of activities/business between micro and macro (ideology – politics – economy – social – culture – defense and security - environment).

(5). The task of leadership constitutes task oriented of

headship (effective, secure and order labor productivity in order to achieve working success in terms of the magnetic field (positive and negative force) [26,27].

(6). Efficiency and effectiveness (Table 2.1).

Table 2.1. Efficiency competence versus effectiveness.

Factor	Efficiency	Effectiveness
1. Orientation	Intra-system	Inter-system
2. Activities phase	Related to the stage of attainment way	Relating with the use of the output stage for the benefit of consumers and the environment.
3. Describe actions	Doing things through the right/beat way with low input and by the elimination of bottlenecks and contradictions by minimizing the quantity of wastes to get the maximum output (Inward looking).	Doing the right things gratified by the consumers and acceptable by the environment (Outward looking).
4. Can be enhanced by	Applying science correctly as taught in: - Organizations and methods - Working Study. - Network Analysis - Operation research.	Applying the right art: as taught in: - The organization behavior - Management based on the objectives. - Development of organization.
5. Involves the activities of	The executor	The Headship

3.2. Several Impacts of State Administrative Structure, Government, Monitoring and Controlling

- 1) Structure/national political order: political superstructure (the highest institution), political infrastructure (political parties), political substructure

(people) (Figure 3.4).

Controlling and curb management system such as political control, inherent control, public or community control.

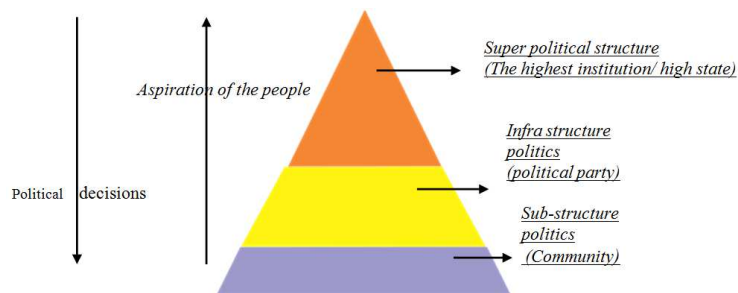


Figure 3.4. Structure/layout of National Political Structure.

- 2) State administration order in terms of maxi, macro, mediocre, mini, micro levels [23].
 - i). Maxi such as (People General Assembly (MPR) - President, House of Representatives (Parliament), Agency for Financial Investigator, Supreme Court, Constitutional Court, Judicial Court).
 - ii). Macro such as President - Minister.
 - iii). Mediocre such as Minister - Director General, Governor, Regent/Mayor.

- iv). Mini such as Regent- District Head, Head of village.
- v). Micro such as the level of directorate, regional office, district office, village secretary.

Controlling and curb (monitoring) system may include functional control (such as National Agency for Financial Supervision (BPK), National Agency for Development Financial Supervision (BPKP), Inspector General of each Ministry, regional inspector of each

level of regional government/province/regency/district/city), inherent control, community control.

It is expected that the top-down and bottom-up mechanism and synergism would be cyclically do-looped participation or coordination from maxi to micro levels vice versa to achieve national as well as regional goal of development.

- 3) Indonesian political organization chart (Figure 3.4) that may include sub-, infra-, and super-political structure.
- 4) The administrative structure of the central government [25] (Figure 3.5)
 - President, Minister, Echelon I function as executive of the central government administration.
 - Monitoring and controlling that may include National Agency for Financial Supervision (BPK), National Agency for Development Financial Supervision (BPKP), Inspector General of each Ministry.
- 5) Local government structure (Figure 3.5).
 - Governor, Regent/Mayor, Head of district, and Head of village function as executive of the regional government administration.
 - Monitoring and controlling: Regional inspector (Provincial/Regency/City Regional Inspector). Laws Number 25 of 1999 and 32 of 2004 also provide for monitoring and controlling [6,28,29,30,31,32,33,34,35,36].
- 6) The mechanism of the process/management development and monitoring and controlling
 - Coordination of construction management, in term

of budget where the level of political - strategic - managerial - technical through political control. In this case, political control where Parliament actively acts in the preparation of the state budget by the government, following the implementation of political control).

- Coordination of the development of substance management (National Planning Board and Regional Planning Board may act bottom-up and top-down planning, Ministerial Bureau of Planning with the Regional Office in the implementation/monitoring).
- Coordination of monitoring and internal controlling (direct control and functional control accompanied inherent control) and external one .

3.3. Further Impacts of Monitoring, Controlling and Development

- 1) Development
 - i). National development goals: to realize a just and prosperous society that are materially and spiritually based on 'Pancasila' (national ideology, The Five Principle National Ideology) within the unitary state of Indonesia an independent, sovereign, united and sovereign people in the life of the nation safe condition, orderly and dynamic in a world that is independent milieu, friendly, orderly and peaceful.
 - ii). Examples of the integrated planning system

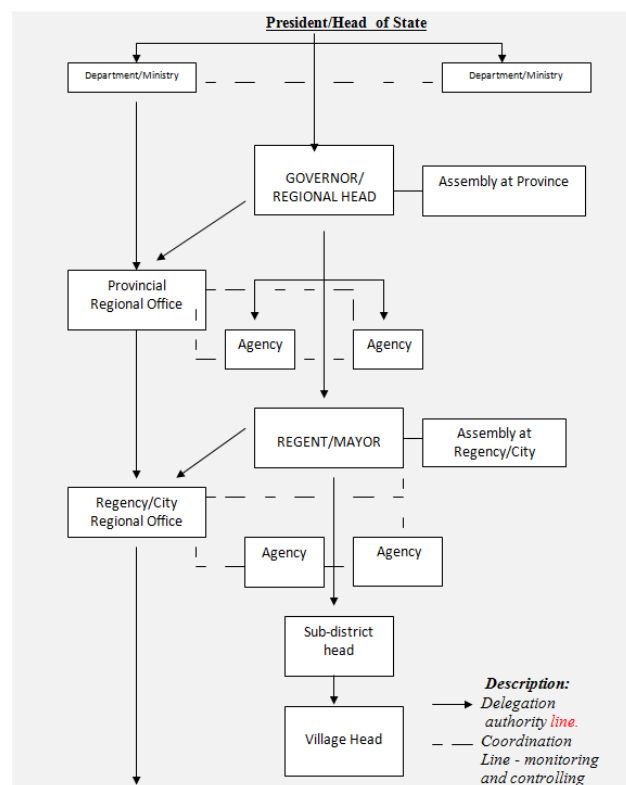


Figure 3.5. Organizational Chart Government of Indonesia.

National integrated planning system consists of strategic planning, planning program and budget planning. In terms of time are of long, medium (e.g. five year development plan), short. In terms of scope are of national, departmental, directorate general, zoning/region. In essence, strategic planning is the result of planning that focuses on the factors determining the intention, and therefore has the effect of sequential extensive and decisive in terms of long-term, intermediate-term and short-term strategic plan.

iii). Examples of development planning at once input to Controlling and Curb.

For example, set goals for development and economic growth of 5% of GDP. With the amount of ICOR (4.0) how much additional capital necessary to add one unit of output:

Formula $g = I / ICOR - p$

In this case :

g = growth;

I = investment;

ICOR = incremental capital to output ratio;

p = population growth.

Can be calculated from this formula will need funds for development which derived such sources of development funding (amount and foreign exchange), government savings, policies, mobilization of public funds, assistance / foreign loans, direct investment.

2) Control (POACE matrix, rows of C).

Related substance is CP, CO, CA, CC, CE.

Control is a derived from the details of substances:

- The approach is done by leaders of all levels in the organization for the implementation of the activities of (sub) organization.
- Mechanisms is done continuously, which consist of the following activities: determining the success of labor standards and sanctions; monitoring, and corrective action.
- Purpose: that other management functions (planning, organizing, designing, implementation, mobilization) may take place as well as possible.
- Objective: to enable an organization to carry out their duties successfully.
- Details: setting standards in employment success and sanctions, supervision, corrective action.
- Level control: strategic planning, management control, operational control.
- Control and curb system there are 3 forms: strategic guidance (policy), managerial control (resource optimization), operational control so precise, smooth, steady, orderly and coordinated. Control and curb system contains factors: norms (values), effect agent (drive: motivation, coordination and communication, training, law enforcement, discipline and organization rule), and surveillance (monitoring/sensors/detectors, benchmarking, rectification) (Figure 3.6).
- Control system component

- The main step control (inherent control): designate responsible activity, giving instructions, monitor the progress of activities, assess the results of activities.
- Some categories of control such as blocking (deterrent): inhibitory control, prevention (preventive) as a control/correction coercion; discovered (detective) incident discovery control, reporting: control incident reporting findings, correction (correction): control of discovery errors; repair (recovery): control of the repair.
- The structure of the management control system that includes organizational structure, autonomy delegated to officials (structure of authority), the design centers of responsibility (liability structure), the relationship between the centers of responsibility (communication structure), measure and reward of performance (work) (assessment structure), information flow system (organization of information).

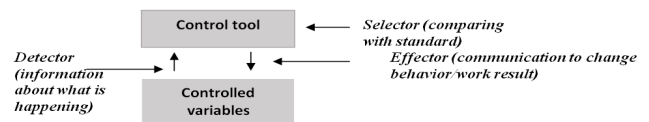


Figure 3.6. The needs of detector, selector and effect agent in the control tool and the controlled variable do loop.

- The main step control (inherent control) in terms of pointing responsible activity, giving instructions, monitor the progress of activities, assess the results of activities.
 - Some of the categories of control in blocking (deterrent): inhibitory control, prevention (preventive), control/coercion correction, find (detective): discovery control events, reporting: control incident reporting findings, correction (correction): control of fault finding, repair (recovery): control the fix.
- ## 3) Supervision (POACE matrix, C column or POACE of C).

Substance may include PC, OC, AC, CC, EC.

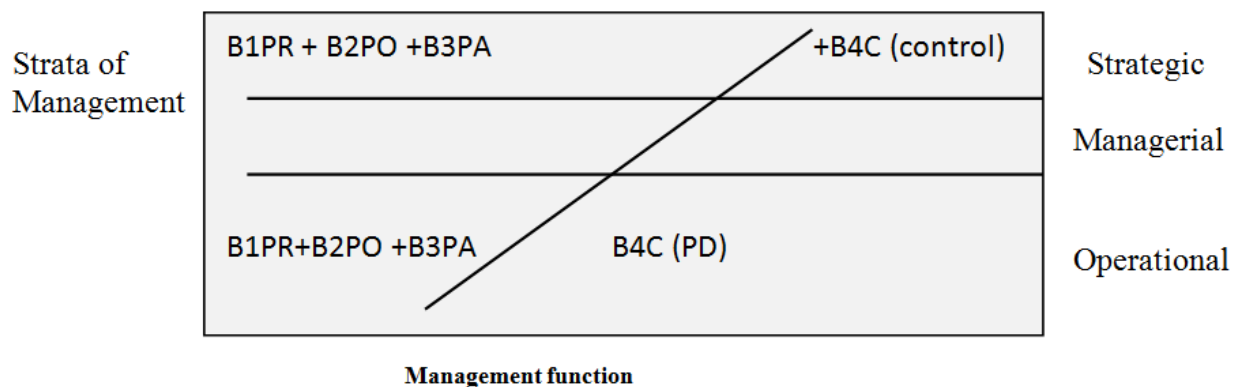
Supervision includes matters:

- The approach is done by leaders from all levels of the organization (internal control) and or officials outside the organization (external control) are concerned with the activities carried out by elements of the organization.
- Mechanism conducted continuously through monitoring, observation, inspection and measurement results of the work, using the rules, and if there is a negative event immediately give warning and investigation.
- Purpose: to encourage all the elements in a disciplined organization in carrying out its duties.
- Objectives: to enable the organization in its efforts to achieve the goal of free inhibiting influence.

- Development of monitoring system includes about
 - i). Cycle monitoring to measure the actual situation, comparing the actual situation with the desired and analyze the differences are striking, and formulate corrective action to address the causes and consequences of: lack of legality, the lack of regularity, waste, lack of efficiency, lack of effectiveness.
 - ii). Weights of monitoring on each strata management (Figure 3.7).
 - iii). Gant charts (matrices of activity, time schedule, leader, budget and clarification of sub-activities) for monitoring.
- Monitoring process: monitoring of immediate supervision, functional monitoring, attached monitoring.
- Environmental monitoring: enabling leadership, mentoring/coaching, performance appraisal.

3.4. Evaluation/Assessment

- The approach is done by leaders at all levels within the organization and or officials in the outside of organization concerned with the activities undertaken by the organization.
- Mechanism through discussion forums are held periodically and according to the needs (ad hoc) to examine and assess the effects and impact of the implementation of treatment on an order, by comparing it to the situation that occurs, if there is no special treatment and provides a description of the existence relationship of the reasoning follow causal processes, conflict; and the tendency; relating to the effects and impact, taking into account the assumptions that have been made regarding the situation of the business environment changes, both positive and negative.



B = weight ; PR = Planning; PO = Organizing; PA = Guidance
PD = Controlling (include monitoring)

Figure 3.7. Portion of management function on the strata of management.

- Purpose: to ensure that all parties with an interest in the work they do can know about the position and the ability of the organization.
- Objectives: in order to blame groups according to their role and their respective authorities can determine the attitude in planning and formulating special treatment follow-up, either by extending the working range of the business or to conduct similar activities in the new place or another.
- Assessment system/evaluation and targeted based on the rule of law which may include administrative order, orderly political, social order.
- Audit (examination of the activities and the implementation of the budget) with the following criteria such as regulated, legal, economical (saving), efficient, effective.

3.5. Cases

3.5.1. In General

- a) Political force more powerful than the power of controlling and curb.

Few examples are as follows:

- Agency for Logistic Matters-gate: the use of the state budget for the provision of community logistics, but also used for the benefit of certain political forces.
- Collusion and nepotism gate: the role of the ruling family of incumbent which much master of the national assets in business.
- Political parties gate, where their cadres are spread into key positions in overall the sectors of the government as incumbent and they actively collect funds to the party respectively. Of course, this phenomenon what so called as corruption would erode the development budget of the people.

These conditions came up due to the less and weak of national management system of control and curb.

- b) Inherent control as arguably not running.

- Regional Autonomy - gate: the process of regional autonomy are not fluent in the period 1975 to 1998 (pre-reform) because of the paradox or conflict of interest within the authority concerned with not smooth or there is not yet the flow of funds to the

regions. And also beyond reform era, after 1998 up to the present, the regional autonomy still creates the economic divergence between regions (provinces) rather than convergence.

- Mutation-promotion-gate: mutation and career promotion and rank still on the orientation of the family relationship is not entirely on the merit system.
- Officials more glamorous than their income level: the presence of the consumer conditions, then the officials did not look glamorous by the revenue official.
- The findings do not clearly follow-up. National Agency for Financial Supervision (BPK) and National Agency for Development Financial Supervision (BPKP) had found out many negative findings on financial management audit, however, were not followed-up by the clear and clean solution.

- Monitoring and controlling as ritual action (routines). Findings report of monitoring and controlling are only as a ritual for only just as archives reports.

3.5.2. The Case of Mineral Development

- Management of mineral resources in the permitting process.

It is tried to improve the management of mining permits based on the spirit of the new law of the new mineral and coal mining Law No. 4 of 2009 both in the central and regional government sides, as follows (Figures 3.8 up to 3.14). In, general, it is clarified the standard operational procedure of the mining permit application of the enterpriser to the government at the central government from the level of President and Parliament down to the internal Ministry of Energy and Mineral Resources and the Agency for Capital Investment Coordination.

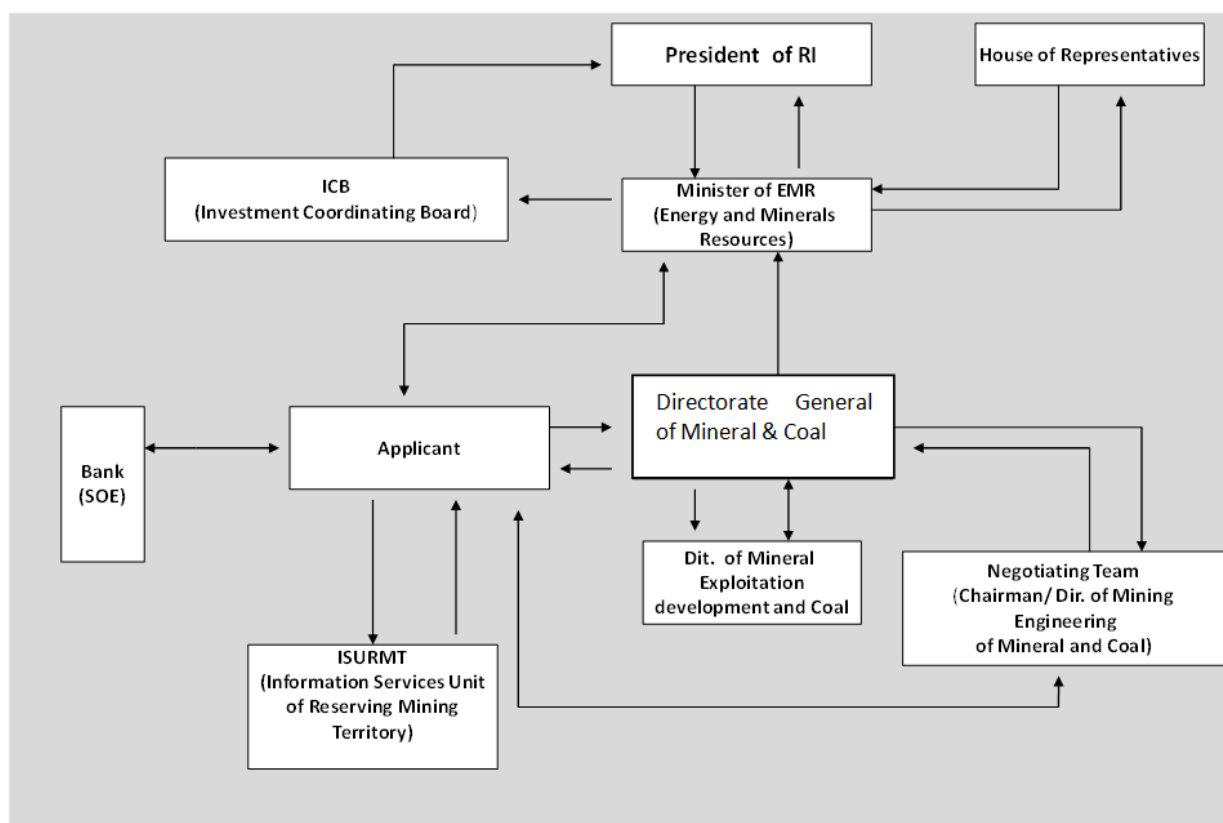


Figure 3.8. The circulation of management control in the central government in (coal and mineral) mining permit process.

Also in the case of coal potential management could be seen Figure 3.8, where coal mining permit application carried out by the enterpriser should follow the SOP what so called Agreement of Coal Mining Enterprising Cooperation (or PKP2B or may be called as Coal COW/CCOW).

In the case of the regional autonomy application, the intensive cooperation between the central government and the Parliament and regional government consisting of the Regency and City including the regional Parliament should follow the procedure in the decision of Mining Zone (MZ)

that consisted of Mining Enterprise Area (MA or WUP), national (state) reserve area (SRA or WPN), and small scale mining area or artisanal (people) mining regional (SSMA or WPR). In this case, the central government could delegate the authority to the Governor. In term of MA or WUP the central government should take coordination with the local government and the reporting to the Parliament. In the case of SRA or WPN, the government should obtain consideration from the Parliament. And in term of SSMA or WPR, the Regency/City just take coordination with the local or regional

parliament (Figure 3.9).

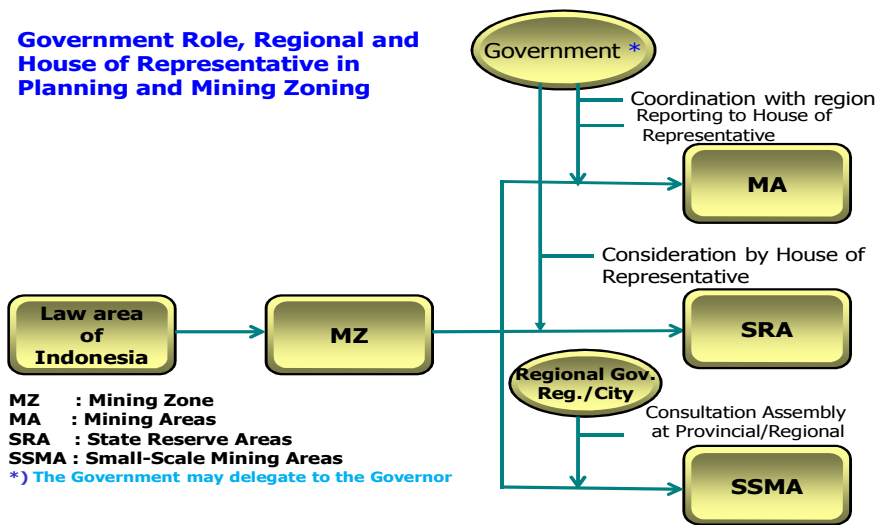


Figure 3.9. Chart of the government role, regional and House of Representative in planning of mining zone.

In the case of enterprising in SRA (WPN), based on the region of special mining enterprising permit decided by the Minister through coordination with the local government, the Minister would release the permit (Special Mining Enterprise

Permit or IUPK) with the priority for the State-owned and or Local Government-owned Company prior to the private company through tender (auction) system and mechanism that carried out by the Minister (Figure 3.9).

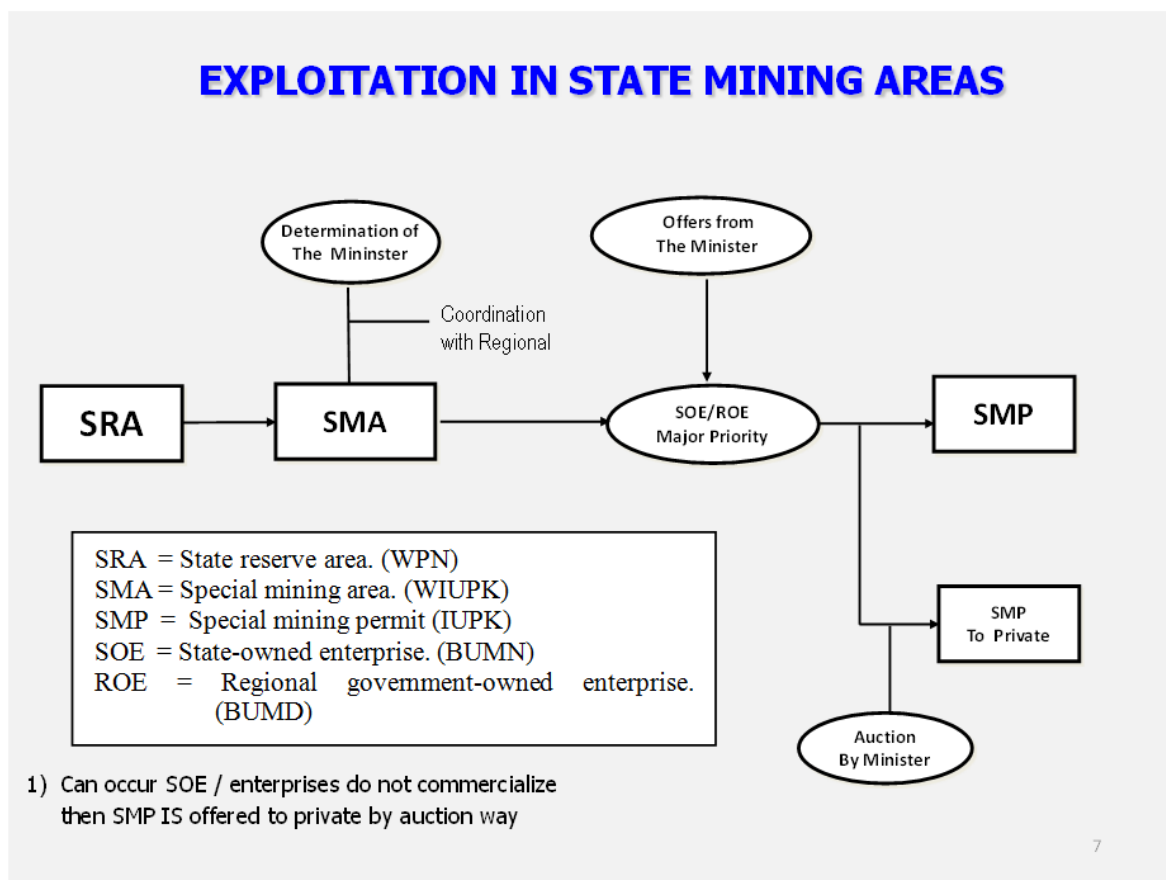


Figure 3.10. The process of exploitation in State mining area.

In term of mining enterprise permit or WIUP, several implications come up, where WIUP should be carried

through tender system and mechanism.(Figure 3.10). If the location of the mining would be in certain one regency region

then the permit could be released by the Regency/City. If it is located across regency then the permit would be released by

the Governor, and if it is located across provinces, the permit would be released by the Minister.

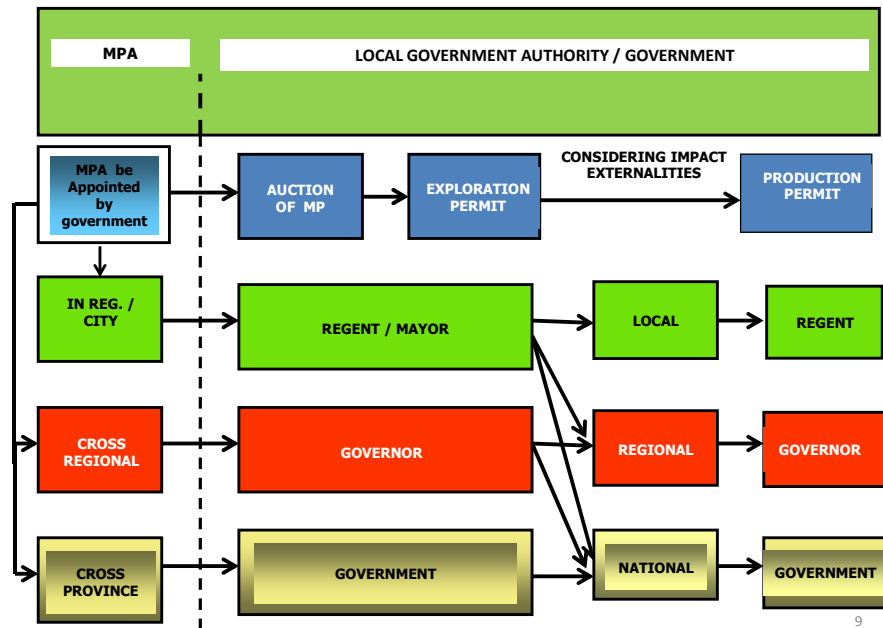


Figure 3.11. Responsibility impact of mining permit (MP) management in metallic minerals and coal.

In term of mineral COW and coal contract of work (CCOW/CPK2B) that located in the regency area, then the applicant (both domestic and or foreign investor) should apply for the permit to the Regent in cooperation with the

Local Parliament that then proceeded by the local Office of Capital Investment and reported to the Ministry and Province. (Figures 3.11 and 3.12)

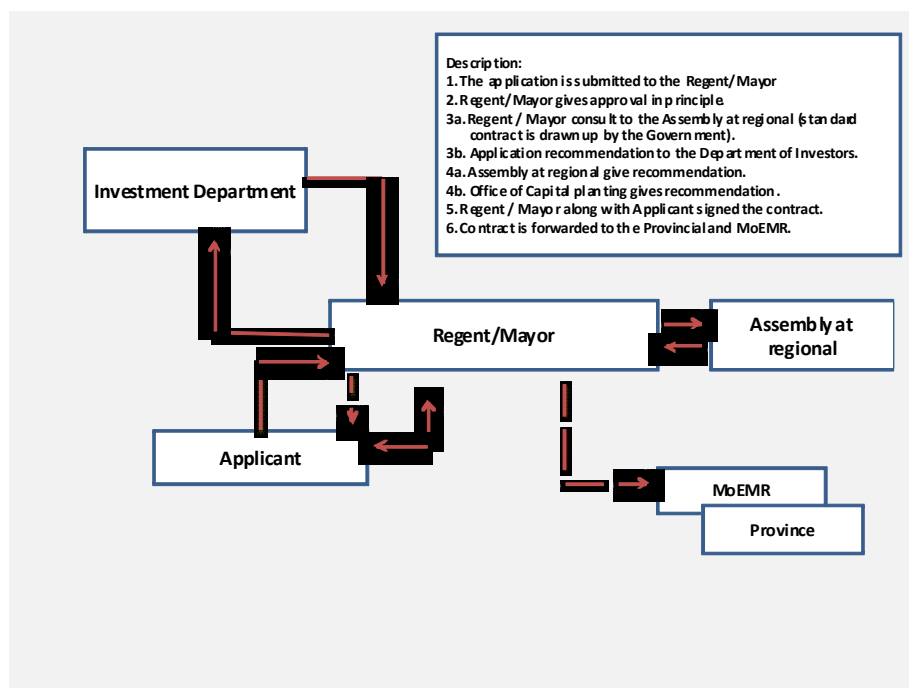


Figure 3.12. Application procedure of mineral and or coal contract of work within the region

And at the level of province, then the procedure could be seen at Figure 3.13, where it should also reported to the Ministry.

In the case of mining enterprise permit (IUP) where the location located within the certain region then the application should be directed to the Regency/Mayor, and reported to the

Ministry (Figure 3.14).

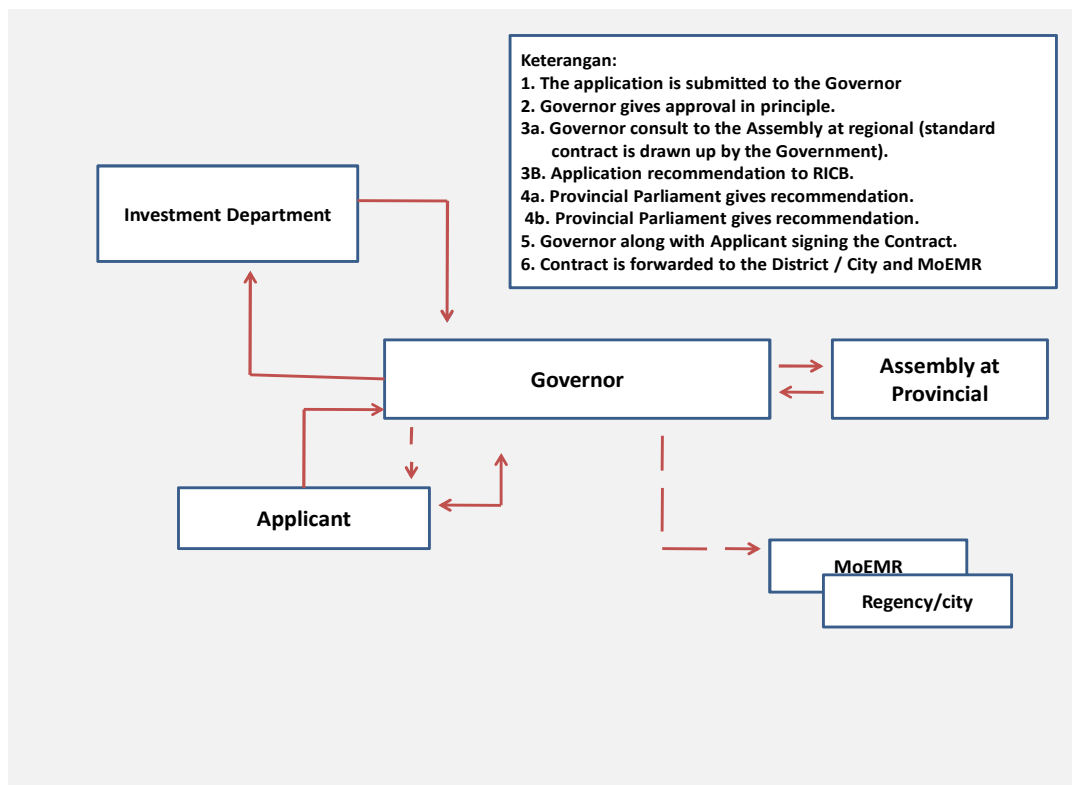


Figure 3.13. Application procedure of mineral and or coal contract of work at the region.

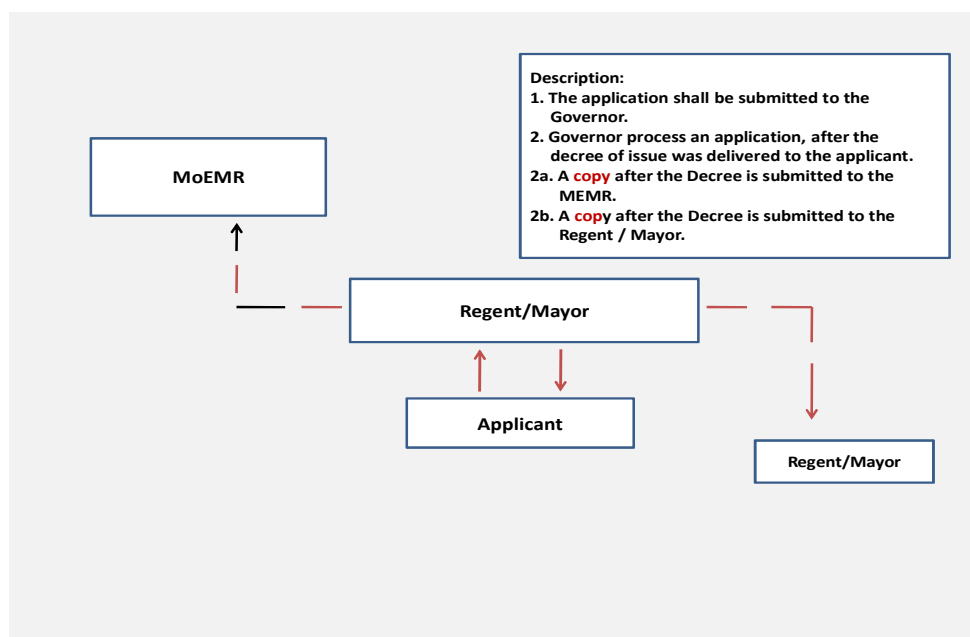


Figure 3.14. Application procedure of mining permit within governor/regent/mayor authority.

- Added Value (12, 13, 14, 15, 16, 18]

In fact, the government has been aware that the exported mineral as raw material should initially be restricted then should be improved its added value domestically to increase the national income. Then the government released the Decree of Minister of Energy and Mineral Resources No. 7 of 2012 updated to be No. 1 of 2014 then uplifted into Government

Regulation No. 1 of 2014 that it is also supported by the Decree of Minister of Trade No. 39 of 2014.

Basically it is based on the mindset on Figure 2.2 that may introduce the philosophy of added value related to the application of high technology in the production function in the era of globalization toward competitive advantage in the fields of the produced goods (end used commodity) and

services domestically in the purpose of how to increase and improve the national income (Figure 3.15).

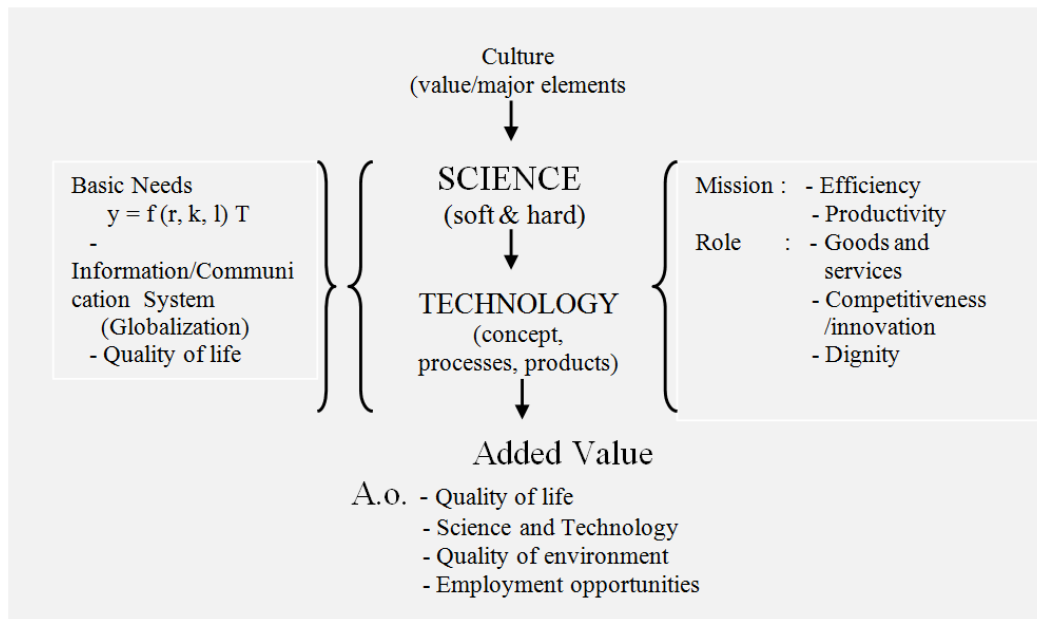


Figure 3.15. Basic concept of Government regulation No. 1 of 2014 on mineral added value anticipation.

- Improvement of mineral policy [19]

Somehow, in the 8th generation of the foreign investment scheme in Indonesia since 1967 (Generation 1) within the last 17 years since 1997/98 there was not any foreign investment in the mining sector coming into Indonesia due to the need of mineral policy improvement (Figure 3.16). The graph indicates that Indonesia is resourceful in mineral potential but poor in policy. In fact the renewal of foreign

investment attraction is required such as in terms of deregulation such as revalidation of tax holidays and to minimize royalty, and de-bureaucracy such as improvement of the attitude of the regional government and regulation in the sphere of regional autonomy, solid and comprehensive/coordination between central and local/regional governments to eliminate obstacles and restraints in the field of such as permit application.

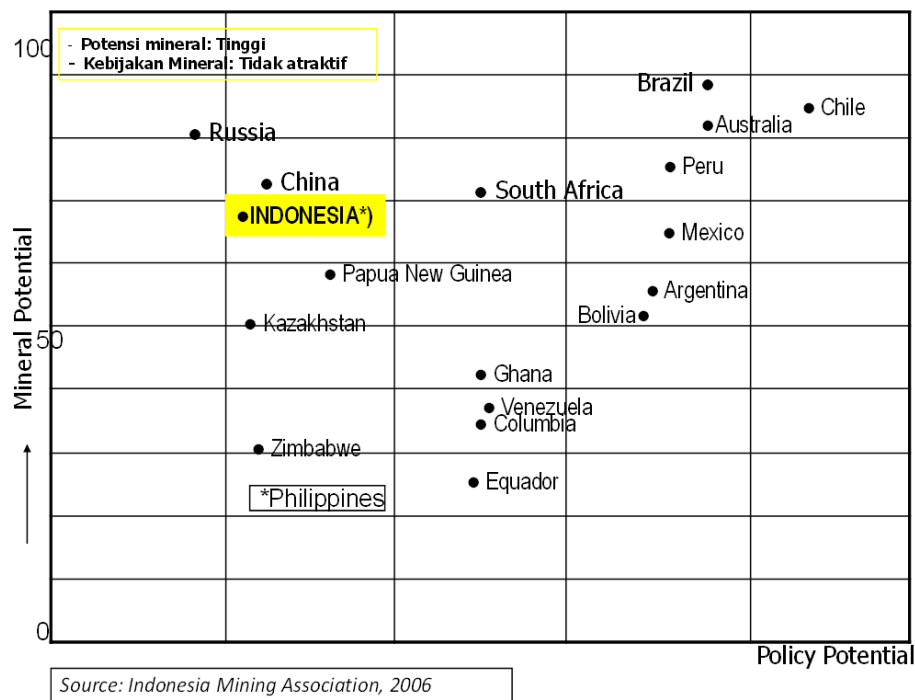


Figure 3.16. Mineral potential versus policy.

- Challenges in the future [20,21]

Several challenging matters faced by Indonesian mining

- Tax regulations that the mining permit owner has to oblige paying tax to the state based on the prevailing law or what so called nailed down when it signs the contract.

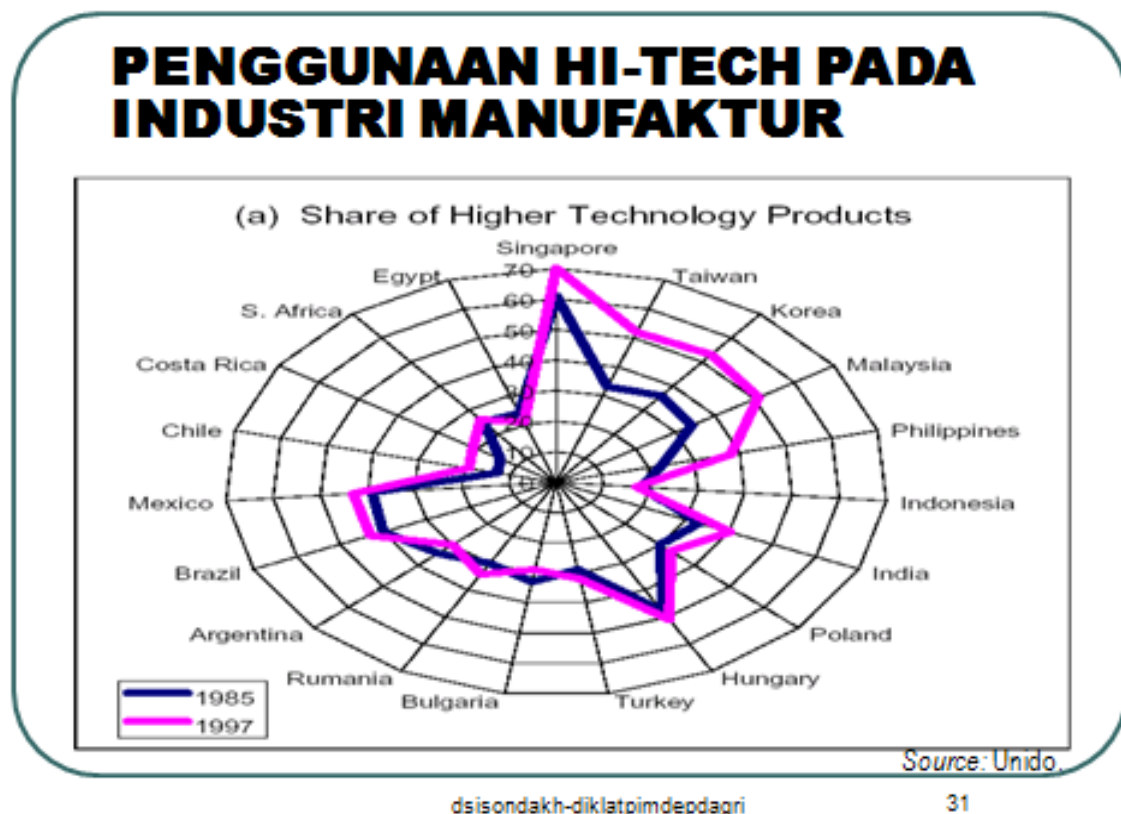
When the reform of national management system in terms of firmer controlling and curb and the reform of the mining law and regulation and its implementation in particular it is expected that the contribution of the general mining sector would increase significantly within the coming years. Down to earth action is that the government regulation, the Minister of Energy and Mineral Resources decree and Ministerial of Trade one had been released in 2014 to enforce the utilization of mineral commodity as raw material to the domestic manufacturing industry sector through limitation of mineral for export in the purpose of increasing its added value domestically. In principle, the prevailing Law No 4 of 2009 on Mineral and coal Mining, enforce the role of the state-owned mining enterprises would be greater and greater from now and on, even though the government still invites the foreign direct investment in the mining sector as well as supporting agent of economic development. The current contribution of the foreign mining company to the national income were 55% of their revenue in hard mineral and of 60% of their revenue in coal business. The prevailing strategy and policy would expect the jump of the mining sector added value then it would be greater than that as their contribution to the national income from now and on. Besides, their contribution in the form of non-economic benefit such as

physical regional development such infrastructure, physical environment rehabilitation, spatial development, and also non-physical benefit such as community development mainly the local people who live within the surrounding the mine site, and also including the entrepreneurship, social and cultural civilization support for the local people.

When the reform of national management system in terms of controlling and curb and the reform of the mining law and regulation and its implementation in particular it is expected that the contribution of the general mining sector would increase significantly within the coming years. Down to earth action is that the government regulation and the Minister of Energy and Mineral Resources decree had been released in 2014 to enforce the utilization of mineral commodity as raw material to the domestic manufacturing industry sector through limitation of mineral for export in the purpose of increasing its added value domestically.

- Policy and management of technology application

In fact, that since Indonesia facing low profile in term of absorbing high technology in the manufacturing industry (Figure 3.15), then it achieves low productivity almost in every sector. In the future, it is challenged that Indonesia should improve the application of high technology in the certain fields of sector say in the maritime industry, heavy industry, automotive industry, mining etc. combined with the application of appropriate technology of creating mass employment to response mass employment creation.

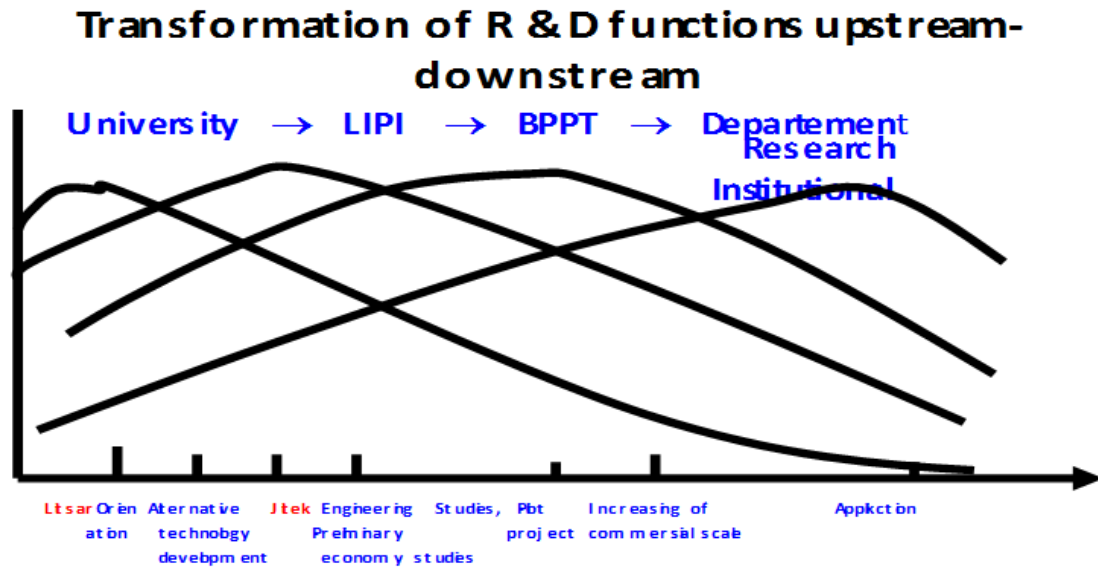


dsisondakh-diklatpimdepdagri

31

Figure 3.18. The progress of share of higher technology products between countries, 1985-1997.

Synergism between government (from upstream to downstream sides) and private research institutions is required toward solving the faced problem in the industry (Figure 3.19).



LIPI= Agency for Indonesia Science; BPPT = Agency for Investigation an Application of Tecnology

Figure 3.19. Transformation chart of upstream-downstream R&D function in Indonesia.

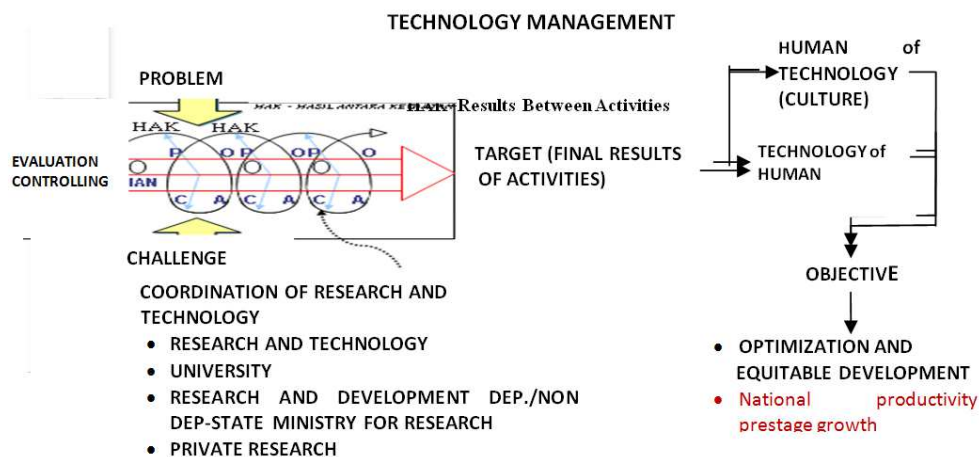


Figure 3.20. Management of technology toward achieving the target of national productivity growth.

All in all, the management of technology is required to create possibility of productivity jump in the industry to achieve optimal equity of development and national productivity achievement prestige (Figure 3.20).

4. Conclusion

Monitoring and controlling is basically required in securing the success of development and public governance, which is integrally-regional centers necessary coordination, integration and synchronization. Monitoring and controlling need to be expanded across the country sub-regional and regional and international by their global development and require familiarization as well as exemplary in this respect human resources

Monitoring and controlling necessary for the success of the

application of national management system as supporting elements in decision making. In the case of mineral development management, the intensive cooperation between government, private and community is necessarily required toward achieving its added value as high as possible supporting the national income through appropriate technology application to meet the welfare of the people at the utmost in lieu with the message of the constitution. Especially, the tough controlling and curb in the internal administration in terms of releasing mining permit standard and procedure up to supervision of the mining operation and mining reclamation and mining closure in line with the prevailing law and regulation. It could be figured out from the points of view of new laws and regulations on mineral and coal mining.

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