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CHAPTER 1

Introduction

BACKGROUND

Land Act 2007, Mines and Mineral Management Act 1995 and Forest and Nature Conservation Act 1995 provide for leasing of land for the purposes as specified in the respective acts. Leasing of all categories of land is subject to approval from the Land Commission of Bhutan. Leasing of land is also subject to environmental clearance from the Environment Commission for most of the activities. The relevant legislations and Rules and Regulations governing the lease of Government land are as tabulated below:

Table 1

Sl. no	Relevant Acts	Corresponding Rules and Regulations	Agency
1.	Land Act of Bhutan 2007 (As an umbrella act on land matters provides legal mandate for all types of lease of Government land).	Rules and Regulations for Lease of Government Reserved Forest Land and Government Land	National Land Commission
2.	Mines and Mineral Management Act 1995 (Governs and regulates management of mines and mineral of country and leasing of mines)	Mines and Minerals Management Regulations 2002	Ministry of Economic Affairs
3.	Forest and Nature Conservation Act 1995 (Amongst other matters, provides mandate for lease of GRF land and prescribing terms and conditions of lease)	Forest and Nature Conservation Amendment Rules, 2008; Interim Guideline on lease of GRF Land for Commercial Agriculture 2011 as required by the Land Act of Bhutan 2007	Ministry of Agriculture and Forests

Substantial area of Government land is leased out to individuals, institutions and others for various purposes. Land leased prior to enactment of Land Act 2007 were not adequately documented. As of 31.12.2012, records for the lease of 13,944.90 acres of government land only were made available *(Excludes townships and hutments in some municipal areas and forest land occupied for which documentations were not made available)*. These include forest land, municipal land and agricultural land which are leased out for mining and other development works such as educational, residential, commercial and agricultural activities. The pie chart indicates the area of land leased for various purposes based on the lease records documented after enactment of Land Act 2007.

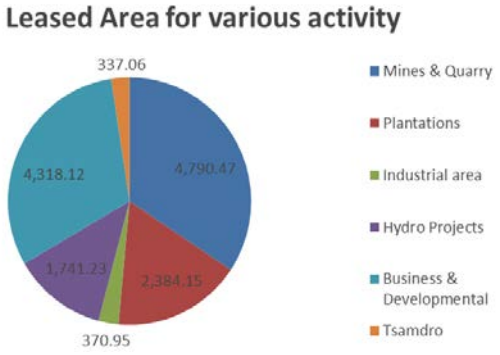


Table 2 showing Dzongkhag-wise details of leased land after enactment of Land Act 2007

Table 2

Sl. No.	Name of theDzongkhags	Total land Leased (Acres)
1	Bumthang	64.90
2	Chukha	1,321.63
3	Dagana	189.44
4	Gasa	0.30
5	Haa	3.04
6	Lhuentse	16.81
7	Mongar	270.49
8	Paro	205.03
9	Pemagatshel	881.77
10	Punakha	21.30
11	SamdrupJongkhar	1,945.39
12	Samtse	4,498.87
13	Sarpang	369.43
14	Thimphu	1,780.11
15	Trashigang	28.31
16	TrashiYangtsi	0.43
17	Tsirang	95.39
18	Trongsa	352.69
19	Wangdue	1,798.50
20	Zhemgang	101.07
	Total	**13,944.90**

Leasing of Government land is an important mechanism whereby Government provides access to the land for a specified period of time to facilitate and accelerate socio-economic development activities in the country.

Leasing of land has been also an important source of revenue to the Government. Records of DGM showed auction proceeds of coal, gypsum and dolomite mines alone had contributed to Nu. **1,324.50** million for a fifteen year lease term. Besides royalty, lease rent, dividend, taxes and other income and generating employment, activities carried out in the leased land contribute significantly in the acceleration of the socio economic development.

Leasing is spread over most parts of the country. Purposes for which leased land acquired are varying and legality involved as well as longer duration of lease period at times make leasing operations very cumbersome and complicated. Leased land may be subject to abuses and legal rights or risks and rewards associated with the Lease may change hand informally many times over the lease period which may be detrimental to the very objective of leasing. Lack of adequate documentations of leasing transactions and completion of requisite legal formalities or in extreme situations, inadequacies of

appropriate policy, legal and institutional framework for leasing may give rise to legal complications with the passage of time due to longer lease period involved.

Leasing operations had always come under criticism and scrutiny of media, public as well as that of oversight bodies. There had been cases of misuses, abuses and disrespect to policies and legal requirements by both the lessors and lessees. Inadequate monitoring and enforcement actions had provided opportunities for such abuses. Adverse social and environmental impact and unsustainable use of mineral resources are seen as main reasons for supporting arguments against allowing mining operations in certain areas.

> There had been cases of misuses, abuses and disrespect to policies and legal requirements by both the lessors and lessees.

Considering the importance of leasing of Government land in the socio economic development of the country and the possible risks arising from rights given to extract non-renewable mining resources and adverse environmental and social impact the leasing operations have, it is imperative that leasing of Government land is properly regulated, managed and monitored. It is also necessary to ensure that leased land is used for the specified purposes in compliance with laws, rules and regulations. Moreover, it is also important that excessive leasing or use of land do not in any way undermine the requirement of maintaining intergenerational equity and preserving minimum forest cover of 60% as enshrined in the Constitution.

The Royal Audit Authority had accordingly recognizing the importance of leasing activities in the socio-economic development of the country and possible risks of abuses and non-compliances and consequential threats to people, environment and society as a whole, and as required under the Constitution of the Kingdom of Bhutan and Audit Act of Bhutan 2006, carried out the performance audit of leasing of Government land for mining and other developmental activities, with a view to ascertain that:

- *Whether adequate legal, policy and institutional framework exist in governing the leasing of government land;*
- *Whether government land leased is within such framework, lease transactions are legally executed, controlled and monitored;*
- *Land leased are used for the purposes specified in the legal agreement in accordance with approved plans & methodologies without posing threats to people, environment & property;*

- *Leasing obligations including fees and royalties are paid in correct amounts as per the rates and time frame prescribed and that restoration works are carried out as required;*
- *Whether the government exercises effective control on leasing operations and maintains reliable central database of leased land; and*
- *Whether illegal occupation and use of government land is identified and dealt with appropriately by respective regulatory bodies.*

CHAPTER 2

FINDINGS

Leasing of government land in many ways has been an important initiative of the Royal Government of Bhutan in driving its socio-economic development. Leasing of land had provided avenues for augmenting commercial, industrial and other socio-economic developmental ventures which contribute to national exchequer in the form of taxes, royalty, mineral rent and dividend besides generating employment and export earnings.

Since the start of leasing of mines and quarries by the Government, a large number of mineral based companies have been established which have provided needed stimulus to the industrialisation and socio-economic development of the country. Leasing system has also provided avenue for small scale commercial farming for rural community.

Besides above, there were numerous progressive developments in the recent past in the form of legislation and institutionalization which included:

- Enactment of Land Act of Bhutan 2007 providing clear mandate on leasing of Government and GRF land;
- Segregation of responsibilities amongst key sectors viz., Ministry of Agriculture for GRF land, MoEA and DGM for leasing of mines and quarries and Thromdes for municipal land;
- Mines and Mineral Management Act, 1995 regulating mining operations;
- Issuance of Leasing Guidelines and Rules and Regulations; and
- Enactment of Environmental Act.

Notwithstanding appropriate legislations, rules and regulations, guidelines and administrative machineries in place, the Royal Audit Authority observed several short-comings and flaws in leasing operations which may impede effective and sustainable use of Government Reserve Forest Land, Government land and scarce mineral resources of the country. Despite pointing out the lapses and short comings of serious nature concerning mining operations through the **Performance Audit Report on 'Mining Operations in Bhutan'** in 2008, there have been minimal improvements in the management of mines. Rather most deficient practices continue to persist.

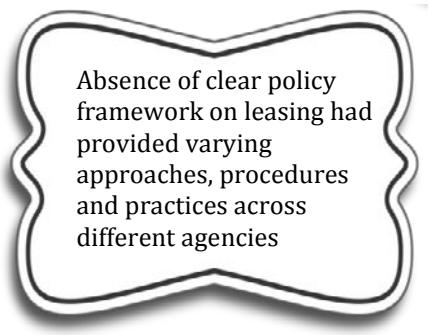
Despite the RAA's previous recommendations of 2008, Mining Operation in the country had hardly improved; rather the irregularities were found repeated.

It transpired that in terms of legal mandate, laws, rules and regulations as well as infrastructure and administrative arrangements, mining leases are better managed vis-à-vis

leasing of lands for development and other purposes. However, effective supervision, monitoring and enforcement actions were lacking in all types of lease of Government land.

The key findings are as summarized below:

- There are inadequacies and inconsistencies in legal and institutional frame work besides absence of a clear policy framework on leasing of land. These provided scope for varying approaches, procedures and practices in leasing of land across different ministries and agencies. Other than mining lease, there are no stipulations in the laws on the manner of compensation for cost of permanent structures and other development costs incurred by the lessee in the event of termination or expiry of lease term.



- Supervising, monitoring and enforcement actions were severely lacking which facilitated abuses of leased land and non-compliances, including unauthorised uses of leased land and extraction of mineral resources.
- Government agencies do not have complete and accurate inventory of Government and GRF land leased, and land currently being occupied and used without lease. There is also no reliable information on the available Government and GRF land which may appropriately be developed and used. This impeded effective monitoring, control and decision making over the management and uses of land.
- Many leased land are only partially used or not at all developed and used. There were cases of transfer of lease many times without uses.
- Permanent structures were found constructed on land leased on short term which is not allowed as per extant laws.
- Existing law of not imposing any ceiling on the leasing of land is not supported by appropriate mechanism to ensure that the size of land requested for leasing by the proponents are commensurate with the actual requirement for proposed economic activity. In absence of proper process in place to determine the land size actually required for the activities proposed, either excessive land or for similar activities varying land sizes are granted on lease.

- In many cases several acres of leased land have remained unused for years indicating that the proponents did not intend to carry out economic or development activities. This would also mean that land is unproductively held and there may be huge opportunity or deprival cost on such land.
- In many places hutments were constructed and townships were established in the Government and GRF land without approval or lease. Permanent structures have been established in such townships which will inevitably create legal implications in future.
- Restoration works were either not carried out at all or not carried out as per EMP in most mines. There were visible adverse environmental and social impacts of mining and other operations.
- Lack of transparency in allocation of land for various purposes and adequate public awareness on leasing policy impeded fair and rationale allocation of Government land amongst prospective, interested and enterprising Bhutanese citizens.
- Environmental impact assessments are not carried out as a result the extent of actual impact of mining and development activities on the environment and the society is not determined.
- The process of community consultation and clearance is not properly defined and remain unsatisfactory and it also lacked effective community participation giving rise to public dissatisfaction and controversies.
- Agencies responsible failed to monitor unauthorised uses of leased land, sub-letting of land and irregular mining activities.
- Corporate social responsibility is not practiced and contribution to local community is very minimal and insignificant compared to scale of operations and adverse impacts of mining operations on local community and environment. The proponents have been benefitting most from scarce natural resources at the cost of local community, environment and the society at large.
- There are anomalies in fixation of lease rents in different parts of the country which appeared to lack a rational approach giving rise to public dissatisfaction and criticism.

From the above findings it may be construed that the state of management and control of leasing of Government and GRF land, usage of leased land and mineral resources and compliance with environmental and social aspects is not satisfactory.

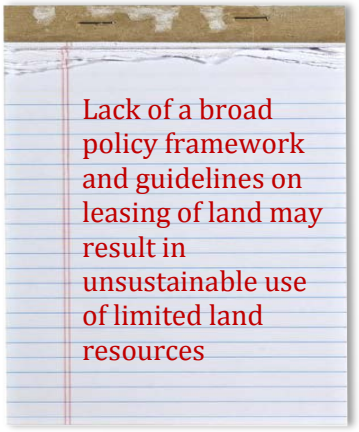
Structure of this Report

For better clarity this report has been divided into two parts, **Part-A** and **Part-B**, dealing with land leased for developmental purposes and mining purposes respectively. Issues of propriety nature, though briefly mentioned in this report, have been detailed in a separate report with accountability for such lapses appropriately established in the report.

PART A: Leasing of Land for Business, Developmental and Thromde Activities

1. Inadequacies in legal and policy framework and regulations on leasing of government land

Section 184 of the Land Act of Bhutan 2007 empowers the Ministry of Agriculture to prescribe the rules on leasing any Government Reserved Forests land and Section 186 of the Land Act of Bhutan 2007 empowers the Local Authority to prescribe the rules on leasing the Government Land as well as approve leasing subject to confirmation by the National Land Commission. Local Authority, as defined in Section 319 (45) of the Land Act means, *'committees constituted in the Gewog, Dungkhag, Thromde and Dzongkhag'.*



Review of the relevant Acts vis-à-vis enforcement of relevant Rules & Regulations on leasing of Government land revealed following inadequacies and inconsistencies:

1.1. Lack of appropriate policy framework on leasing of Government land

a) There is a lack of broad and clear policy framework defining overarching principles and policy objectives of leasing government land that would render development of appropriate Guidelines and Rules and Regulations to govern the management and administration of leasing.

b) In absence of adequate policy framework, there is no clarity on the nature, type and extent of activities that would be allowed to be undertaken on the leased land.

The allotment of land that may essentially be driven by sectoral goals which may not be in congruence and consistent with the overall national goals and objectives.

c) The RAA felt that, except for mining leases, the extant practices followed also fail to recognize the consequences upon expiry of lease either due to suspension or otherwise particularly dealing with compensation for expenditure incurred by lessees on infrastructure and development works or even for opportunity cost foregone.

d) A clear policy framework would render basis for formulation of relevant rules and guidelines for effective administration and management of land leases. Besides, it would also ensure optimizing use of land resources through leasing of government land only for purposes that are assigned priority as per policy objectives.

e) Lack of such a vital policy framework and guidelines may result in unsustainable use of limited land resources besides rendering inconsistent practices, possible legal, social and economic consequences in future.

f) In their responses, both the Ministry of Economic Affairs and Ministry of Agriculture and Forests have agreed and felt the need to have a clear framework and Rules and Regulations for leasing Government and GRF Land across all sectors in the country. The NLCS while accepting the fact that there is no policy framework for leasing of Government and GRF Land, is optimistic that concerns raised by the RAA ***would be addressed once the National Land Policy is approved by the Cabinet***.

1.2. Lack of clarity in Land Act and Rules and Regulations

There were varying leasing procedures and practices across Ministries, Agencies and Local Authorities as indicated below:

a) Section 186 of the Land Act 2007 requires Local Authority to develop their own Rules and Regulations for leasing Government Land.

b) However, the Thromdes and Dzongkhags have not developed their own Rules and Regulations on leasing. The administration of leases by these Local Authorities are governed by the Rules and Regulation developed by the NLCS which was not consistent with Section 186 of the Land Act 2007.

c) In the absence of a broad policy framework in place, the rules and regulations developed by various agencies could give rise to inconsistencies, disparities and

varying practices amongst Ministries, Thromdes, Dzongkhags and Geogs. It may also be impracticable for the National Land Commission to ensure consistency in the Rules and Regulations developed and applied by multiple Local Authorities in the country.

d) For instance, many Thromdes, were not certain regarding the procedures of leasing and applicable rates. Four class A Thromdes had applied varying lease rates resulting in short collection of lease rent amounting to Nu. 58.67 million. ***The issue is also being pursued separately for recovery with the relevant agencies.***

e) The NLCS, MoEA and MoFA in their responses, have agreed that there is lack of clarity in the Land Act 2007 and its corresponding Rules and Regulations.

The NLCS stated that the reason for such inconsistencies is due to the fact that the Land Act of Bhutan 2007 was drafted before the National Land Commission was established. The NLCS further indicated that due to lack of capacity in the Local Governments and to have uniformity, the NLCS formulated Land Lease Rules and Regulations, 2009 involving all stakeholders.

The MoAF have stated that they have reviewed the Land Act of Bhutan 2007 and have proposed for amendments to the Parliament.

1.3. Absence of land ceiling for lease of government and GRF land

a) Section 306 of the Land Act 2007 states that *'there shall be no ceiling for Government land and GRF land on lease for the purpose of economic activity'* and clause 11(b) of RRLGRF &GL 2009 stipulates as '*there shall be no ceiling for GRF land on lease so long as the requirement of land for an economic activity is deemed appropriate by the NLC'*.

The intention of not having any ceiling is, however, not to lease out GRF land beyond what is reasonably required.

b) These provisions seek to ensure that the Government shall make available GRF land on lease for an economic activity as may be required for such activity. The intention of not prescribing any ceiling is, however, not to lease out GRF land beyond what is reasonably required.

c) However, there are no stipulations in the Land Act requiring the Ministries, Local Authorities and Agencies responsible to properly scrutinize and determine the size of land actually required for the proposed economic activity.

d) Absence of land ceiling without specific stipulations on the need for determining required land size would lead to granting excessive land on lease and provide scope for abuses.

> Absence of land ceiling in leasing would lead to granting excessive land on lease and provide scope for abuses

e) MoEA responded that there is a need for a ceiling to the number of GRF land that an enterprise/company could obtain so as to ensure opportunity for all. However, NLCS and MoFA contended that the size of lease land is determined by the type and nature of activity proposed.

f) While the contention of NLCS and MoFA that there exist the system of determining size of land required based on type and nature of activity proposed, objective assessments were supposedly not been carried out in view of numerous instances noted by the RAA where only a small portion of allotted area were used for intended purposes. The substantial portions of allotted area were found used for purposes other than intended ones, the practice which may become endemic to the system.

1.4. Impact of lease duration and land ceiling

a) Section 308 states that *'the duration of lease of the Government or GRF land shall not exceed 30 years and any terms or conditions in the lease deed to the contrary shall have no effect'.* Section 310 states that '*the Government may upon expiry of lease renew the lease of the Government or GRF land including Tsamdro and Sokshing'.*

b) Section 306 and Section 310 allows a proponent to apply for any acreage of land initially for a maximum period of 30 years and thereafter renewable for further period.

c) In absence of detailed stipulations on the manner of determining the requisite size of land and uses of land as well as anti-avoidance provisions against abuse of lease land, the RAA observed following cases of excessive allotment of land and uses of land for purposes other than the specified ones:

- Allotment of over 200 acres of land for mining purposes to mining companies and some individuals.
- Allotment of over 300 acres of land for plantation purposes to companies and individuals.
- Allotment of more than required land for business and developmental activities and portion thereof used for specified purposes with remaining portion either lying unused or developed for other purposes;
- Allotment of varied size of land for activities of similar nature. The details are discussed under audit finding number 3.8 of this report.
- In a few cases leased land were not at all developed or used. The details are discussed under audit finding number 3.3 of the report.

d) Above cases indicated that in many cases the requirement for land size was not determined by relevant authorities while approving the lease. It appeared that as long as one is able to pay the lease rents, any acres of land can be applied for and used for any time period.

e) Such open-ended provision and the existence of uncontrolled allotment practice would render scope for acquiring unlimited acreage of land and provide undue advantage to few by allotting excessive acreage of Government & GRF Land beyond what is actually required.

f) Thus, the Government and GRF land may be leased out in excessive acreage for a very long period may lead to:

- Use of land for unauthorised purposes;
- Partial use just to comply with the requirement to develop land within two years;
- Sub-letting of leased land; and
- Speculative holding for future benefits.

g) The NLCS responded that the area and the lease term for leasing of Government Land and Government Reserve Forest Land are determined by the nature of the

proposed activity as evaluated by the competent government agency. While the MoEA do not support the idea of fixing upper limit as it may not be practicable, it stressed on the need for a strong monitoring system.

1.5. Lack of clarity on the authority and uses of land in respect of short term and long term leases

a) Section 346 of the Land Rules and Regulation 2007, prescribes as '*in case of Government land, the Gyalyong Thromde shall prescribe rules on leasing focusing on both short and long term lease and propose the lease for approval by the Land Commission'*. The Rules and Regulations for Lease of GRF and Government Land (RRLGRF&GL) 2009 issued by the National Land Commission had differentiated the long term and short term lease.

Lack of specific stipulations in the Land Act 2007 on authority to approve lease, type of structures allowed, purpose of short term and long term lease and qualification of activities had rendered inconsistencies in enforcement of rules.

b) Gyalyong Thromde has not developed and issued such Rules and Regulations as yet. The Thromdes and other agencies follow the Land Rules and Regulations 2009 issued by the NLC.

c) Even in the RRLGRF&GL 2009, the differentiation of long term and short term lease is made only on the basis of duration vide section 93 of the RRLGRF&GL 2009 as indicated below:

Kelki School in Thimphu on long term lease

(i) Temporary lease shall be processed for a maximum of 6 months;

(ii) Short term lease shall be processed for a maximum of 3 years and not renewable. (*the Dzongkhag may process but has no authority to approve*); and

(iii) Long term lease shall be processed for a maximum of 30 years.

d) The Land Act 2007 and RRLGRF & GL 2009 lack specific stipulations as regards the authority to approve such lease, the purpose of short term and long term lease, type of

structures allowed, qualification of activities that would determine eligibility for either short term or long term leases.

e) As a result the enforcement of rules was rendered difficult and numerous inconsistent practices were observed as indicated below:

(i) Some Dzongkhags have approved the short-term lease (i.e. up to three years) but as per RRLGRF&GL 2009, the local authority can only approve the temporary lease up to a period of 6 months.

(ii) The short term lease has been explicitly considered as non-renewable, but the nature of activities undertaken was similar to that of activities undertaken for long term leases. For instance, many permanent structures have already been constructed though the rule clearly specifies that no permanent structures are permissible.

(iii) It is not clear as to whether the short term lessees will be compensated for permanent structures and the course of actions to be taken by the Dzongkhags concerned on expiry of three years.

Temporary lease at Yadi, Monggar with permanent structure.

(iv) Similarly, the Rule is silent on whether the permanent structures are permissible in the long term lease. It was noted that most of the lessees have constructed permanent structures on the leased land. In the event if lease is terminated before expiry of the term, the Government may not only find difficulty in paying the compensations as huge and complicated structures are being constructed but also be faced with other legal complications that might arise in future.

(v) The land Act 2007 and Land Rules and Regulations and RRLGRF&GL 2009 do not contain provisions on termination of lease in the event leased land is not brought to use.

(vi) However, Section 8.3(e) of the Forest and Nature Conservation Amendment Rules (FCNR), 2008 stipulate such provision for GRF land if not used within 2 years of entering into the lease agreement.

f) The NLCS have stated that they will incorporate the rules prescribed by the Galyong Thromdes in the revised Land Lease Rules and Regulations, specifying the purpose and duration of the proposed lease activity. The NLCS also confirmed non-permissibility of construction of permanent structures on short-term leased land.

While the MoEA stated that the Land Lease Rules and Regulations pertaining to them is well laid down and clear, the Ministry of Agriculture and Forests stated that the NLCS should specify clearly the authorities and responsibilities of the agencies concerned through proper consultation with relevant stakeholders.

1.6. Anomaly in the lease rent rates

Lease rents are prescribed under RRLGRF&GL 2009 and rates charged vary depending on geographical location of the land and purposes of the lease i.e., residential, commercial, social and industrial. Rent is charged per sq. ft. per annum. RAA's analysis of the rent rates structure indicated the following anomalies:

> Within the same municipal boundaries for similar business activities, different lease rates were applied resulting in not only in the variation of lease rent but also created a sense of unfairness amongst the lessees.

a) The terms *'industrial'* and *'commercial'* are loosely defined in the RRLGRF&GL 2009 and offers no clear distinction between the two. As per the RRLGRF&GL 2009, the definition of '*Industrial*' means warehouses/open dump yard and '*commercial*' means business oriented activities. The standard definition of industrial activities includes manufacturing, construction and processing activities which may be business oriented activities.

b) For instance, private schools have been categorized under social activities by using generic definition of schools even though private schools are operated primarily with profit motive. The current explanation provided in Annexure (1)-ULR of the leasing rules and regulations may not be understood by all in the same meaning. A case in point could be a private school, though is a social institution by definition, the intent of its establishment is primarily driven by profit motive;

therefore, the question remains whether to categorize such institutions as 'social' or commercial.

c) The different rates are applied for "industrial" and "commercial" activities carried out on the leased land. The highest rate charged for commercial activity is Nu. 42.00 per sqft per annum as against Nu. 5.00 per sqft per annum charged for industrial use.

d) Many places within the municipal boundaries have been categorized as industrial area such as at Changzamtog (Thimphu), Kabreytaar and Lower Market (Phuntsholing) and S/Jongkhar irrespective of the purpose for which the land are being used.

e) The RAA's visit to various industrial and commercial sites indicated that within the same municipal boundaries different rates were applied for similar activities which had resulted in not only in the variation of lease rent but also created a sense of unfairness amongst the lessees.

f) The current system of implementation of rent schedule based on loosely defined *categories of use does not seem to provide a reasonable basis for fixing different* rates. It may not be seen objective and may render uncertainty and inconsistencies in the application of rates by different Agencies and Local Authorities.

g) Had the Government charged commercial rents for industries located in the above four places in Thimphu, Phuentsholing and S/jongkhar within the municipal boundaries including the one at Phuentsholing located in core municipal area, the Government would have realized additional revenue of Nu. 200.02 million as shown in the Annexure-A1 ***(computation up to 31st Dec 2012).***

h) Moreover, it may not be appropriate to encourage industrial activities within municipal areas particularly in the core areas as it may create congestion, noise, pollution, inconvenience etc. Contrary to the present system, it would rather seem justified to levy higher rents for land leased for industries activities within the municipal boundaries.

i) The responses of the MoEA and NLCS were reiteration of the process of fixing lease rate as prescribed in the RRLGRF &GL 2009 and the Ministry did not comment on the basis of different rates applied as raised by the RAA.

2. Inadequacies in administration, coordination and monitoring arrangements

With agricultural commercial activities gaining considerable priority and focus besides other industrial, commercial and infrastructural development activities, it is likely that leasing of GRF and Government land will be a primary source of gaining access to required land. Further, inflow of FDI is also likely to provide added impetus to the use of lease land. It is, therefore, imperative that Ministries, Agencies and Local Authorities have adequate institutional arrangements and capabilities for enforcement and implementation as well as promoting effective use of land available for the purpose. RAA's review of existing institutional arrangements, coordination and monitoring mechanism revealed the following inadequacies:

2.1. Inadequacies in institutional arrangements

a) While the RRLGRF&GL 2009 of NLC prescribes institutional arrangements in the Ministries and Dzongkhags on leasing activities, the scope as defined in the said Rules and Regulations are inadequate and not comprehensive to ensure effective and sustainable management of leasing operations. Following are some of the responsibilities which are not included in the scope of the existing institutional arrangements:

- Identification of focal agency to play a more focused role in promoting coordinated and effective uses of government land on lease;
- Public advocacy and awareness on the availability of government land on lease, government priorities, leasing procedures and uses of Government land;
- Centralized documentations to keeping track of activities undertaken and extent of contribution made through leasing in the achievements of sectoral goals;
- Inventory of potential Government and GRF land available for leasing; and
- Providing overall coordination amongst Ministries, local authorities, NLC on leasing and sustainable use of Government and GRF land.

b) Inadequate institutional arrangements may impede effective coordination essential to drive sectoral goals towards national objectives imbibing holistic policies and approaches. Coordinated approach delineates clear responsibility to the agencies and provides harmonized and systemic approach to realization of national goals and objectives.

c) The NLCS accepted that some of the responsibilities in the land lease management are missing in the RRLGRF & GL 2009 and these shall be addressed by the revised Rules and Regulations in future. However, the MoEA responded that proper monitoring is rendered difficult in view of shortage of manpower and also expressed the view that monitoring and administering may be effectively carried out by respective Dzongkhags in view of their close proximity to the locations of leased land.

2.2. Lack of clarity on the roles and responsibilities in field monitoring system

The current system *(except for mining operations)* allows the processing of leases for:

- development activities by the Department of Forest and Park Services from GRF land;
- business and industrial activities by the Department of Trade from both GRF and Government land; and
- various development purposes by the Municipal Offices and the Local Authority from Government and GRF Land.

The final approval for executing the lease is accorded by the National Land Commission in accordance with Clause 10 of the RRLGRF&GL issued in 2009. The lease rents are collected by the Regional Trade & Industry Offices for all the activities except for the lease land in the municipal boundary, which are collected by the respective Thromdes and municipal offices. Further review of the roles played by these agencies revealed following inadequacies:

a) The RRLGRF&GL2009 clause 44 stipulates that the monitoring of GRF land leased for *Tsamdro, Sokshing,* commercial agriculture farms and development activities shall be carried out by relevant agencies authorized according to the monitoring guidelines developed by the MoAF. However, there are no such guidelines developed for the monitoring of the GRF land leased so far.

b) In the absence of such guidelines, there is no laid down roles and responsibilities of relevant agencies. The roles and responsibilities assumed may be arbitrary and it is more likely that relevant authorities work in isolation rendering limited scope for coordinated approach.

c) The lease rents were found collected and lease renewed by the Regional Trade Offices. As there is no established system of sharing information on lease rent collections, renewal of leases, execution of new lease agreements, payment details and other relevant documents with the relevant authorities involved in the process of leasing, it transpired that the relevant Dzongkhag officials were not even aware of the existence of leases within their Dzongkhag.

There is no system established for sharing information on lease rent collection, renewal and execution of new lease agreement, payment details and other relevant documents among relevant agencies

d) There were instances of GRF land being occupied, used and earmarked for some individuals for which lease records were not available. Literally, the monitoring of such leases assumed no relevance without even the basic information being maintained by the authorities.

e) In the absence of coordinated approach by the relevant agencies in the enforcement of leases, monitoring becomes almost impracticable. It may give rise to the risk of omissions and provide scope for abuses that would thwart very objective of effective and efficient use of land.

f) The NLCS accepted that some of the responsibilities in the lease management are missing in the RRLGRF & GL 2009 and these shall be addressed by the revised Rules and Regulations. MoEA insisted that the roles and responsibilities are quite clear in the RRLGRF & GL 2009, however, administration and monitoring of all GRF Land must be entrusted to respective Dzongkhag to solve the problems.

2.3. Disparity in fixation of lease rates:

a) The RAA noticed that there was a disparity in fixation of Commercial and Industrial lease rates for four Class A Thromdes by the NLC.

There was disparity in fixation of commercial and Industrial lease rates for four Class A Thromdes by the NLC

b) The commercial lease rates for Gelephu, Phuentsholing and SamdrupJongkhar were fixed at Nu. 42.00 per sq. ft. per annum whereas for Thimphu, it was Nu.20.00 per sq. ft. Similarly, the industrial lease rates for Gelephu and

SamdrupJongkhar was Nu. 3 and for Thimphu and Phuentsholing was Nu. 4.00 and Nu. 5.00 per sq ft respectively.

c) While the differences of rates for industrial activities for different Thromdes was minimal (Nu. 3 to Nu.5), the difference in rates for commercial activities between Thimphu and the rest of the Thromdes are as high as Nu. 22 per sq. ft. per annum. The reasons thereof for such significant disparity in lease rates could not be understood.

d) Fixing of lease rate for Thromdes may be one of the tools for the government to foster balanced regional development within the country. However, it is paradoxical to note that lease rates for bigger Thromdes like Thimphu are fixed at lower rates than for relatively smaller Thromdes like Samdrupjongkhar, Gelephu and Phuntsholing. Such practice may have potential to discourage entrepreneurs into pioneering economic ventures and bringing development in these lesser developed regions. Thus, the practice does not seem to augur well with the national policy of balanced regional development but rather seen to aggravate problems of migration and congestion in capital city.

e) MoEA responded that the disparity had occurred due to different types of land leased. It stated that the rates are fixed in line with the policy of developing fledgling private sector particularly in manufacturing and production activities and to encourage establishment of business in the interior areas to bring about balanced regional development. While NLCS has not commented on this issue, MoAF responded that the rates are applied as per RRLGRF&GL issued by the NLC.

f) While the intent of the MoEA seems to subscribe to the national policy of fostering private sector development as well as supporting regional balanced development, the practice of fixing higher lease rates in relatively under developed regions may not bring about intended outcomes.

2.4. Lack of wider advocacy

a) Leasing is one of the means of providing access to land to a Bhutanese or any juristic person for the use that shall be governed by the lease deeds executed between the Government and the lessees.

Most of the rural communities are unaware of leasing system and have not benefited from the land leasing system.

b) However, most of the rural community members are unaware of existence of leasing system. Due to this gap, there was not many beneficiaries in rural communities, which otherwise could have provided opportunities for establishing small-scale rural projects such as dairy farms, fishery, poultry and many other activities. This would not only encourage economic activities in the rural communities and improve poverty but also bring about balanced regional development in the country.

c) A few of the individuals who were aware of leasing system could avail the opportunity by way of establishing their residential, business and other commercial activities.

d) Apparently, there had not been wider advocacy for dissemination of information and facilitating people in the rural communities to venture into economic activities through availing leasing facilities from the government.

e) Lack of advocacy and awareness on the existence of such facilities among the people in the rural communities would inhibit enterprising individuals in undertaking economic ventures and exploitation of their entrepreneurial skills, which is essential in driving our national economy in the wake of globalization.

f) NLCS responded that several workshops with stakeholders as well as dealing officials from 20 Dzongkhags and Thromdes were organized to educate on leasing issues. MoEA and MoAF have not responded on the issue.

3. Implementation and enforcements issues

The RAA observed various inconsistencies and deficiencies in the implementation and enforcement of lease. These had ensued apparently from inadequacies in legal and institutional framework which had rendered faltering monitoring and coordination mechanism in the administration and management of leases. These included:

3.1. Unauthorized occupation and usage of Government & GRF land

a) The RAA noted 38 cases where Government and GRF land measuring 50.10 acres were occupied and being used by individuals, corporations and companies without any authority and approval. These lands were neither leased out to the

There were 38 cases where Government and GRF land measuring 50.10 acres were used by individuals, corporations and companies without any authority and approval.

occupants nor their occupation approved by the government. The details of such cases are given in **Annexure-A2**. Thus, it has rendered undue privileges to few individuals without being obliged even to pay the rents for using the government land.

b) In some cases, the proponents have applied for lease recently, whereas the lands were being used for many years without approval. Some of the cases of use of land without approval are briefly highlighted below:

- NRDCL has been using government land at various locations as timber depots and nurseries. The aggregate area of these lands measuring 11.84 acres were occupied and used without any approval.
- Bhutan Engineering Company has been using 5 acres of Government land at Zimzorong, Gyelpozhing since the start of the Nanglam Gyelpozhing highway project. The lease applied in 2011 is yet to get the approval.
- Lhaki Cement had used 14 acres government land adjacent to cement factory as stockyard, parking, residential purposes, etc. for many years prior to obtaining approval in 2012.

Unauthorized use of GRF Land by BECPL

- Damchen Private Ltd. has been using 1.2 acres government land as Sawmill at Chamgang. The land is neither included in Geog Thram nor leased out.
- SD Ferro Silicon has been using 1.13 acres Government land at Matanga, S/Jongkhar as stockyard without lease.

c) The existing system fails to identify and ascertain the exact extent of irregular use of government land by individuals and institutions and thus, rendering difficulty in initiating appropriate actions.

d) These practices indicated that there was a lack of monitoring and the relevant agencies have remained oblivious to the unauthorized usage of government land by various individuals.

e) In the absence of proper delineation of responsibility and authority to check on such unlawful activities, there is a risk of such apathetic monitoring becoming endemic in the system. Development of such trend will only encourage people to resort to such practices which is not only transgressing the laws but also seen to provide undue privileges to few at the cost of people and the government.

f) The NLCS responded that Local Governments are responsible to oversee such activities and that the NLCS takes action if reported. MoEA justified that all cases pertained to period prior to 2009 when lease of land for business activities were handled by other agencies. However, with regard to S.D Ferro Silicon at Motanga, it stated that the company used the land on a temporary basis as stockyard and the management was asked to lift their stocked materials.

3.2. Encroachment and occupation of more than registered leased areas

a) As per the terms and conditions of the lease agreement '*The lessee shall confine its activities within the area allotted. Any encroachment beyond the specified boundary shall be treated as an offence and may result in termination of lease at the discretion of the lessor'.*

There were 37 cases of lease land measuring 30.93 acres were encroached which constituted offence warranting termination of lease.

b) The RAA along with the DGM's survey team measured the leased land using total station, wherever feasible. For those sites which were technically not feasible for measurement, the measurements were taken on the basis of ocular estimates. It was observed that in ***37 cases*** of lease, there were encroachments of **30.93 acres** of government land. The offence warranted termination of the lease as per terms and conditions of lease agreements. The details are shown in **Annexure-A3**.

c) However, in deviation to the terms and conditions of the lease agreements, the leases were not found terminated on ground of encroachment. Instead, it was found that the lessees continued to enjoy the undue benefits of occupying land beyond the specified boundaries.

d) This has happened mainly because of the failure of the monitoring agencies to strictly enforce the terms and conditions of the leases. The inaction on the part of implementing agencies has rendered undue benefits to some. Such practice may not

be seen fair and objective as no action against the defaulter were seen to have been initiated.

e) If such trend remains unchecked and appropriate responsibilities are not delineated for strict enforcement, such problem shall continue to persist.

*Encroached land used for constructing staff colony by SD Ferrosilicon*at Matanga

f) The NLCS indicated that the responsibility of demarcation and monitoring rests with the local governments and there seemed to be deficiency in executing this task. NLCS also mentioned that since 2011 all leased lands are mapped and demarcated using National Cadastre System. MoEA agreed the existence of unauthorized use and encroachment of Government and GRF Land.

Further, the NLCS have stated that they have proposed to appoint full time 'Land Inspectors' in every Dzongkhag in the 11th Five Year Plans to monitor such cases.

3.3. Non-usage of leased land till date

a) Section 8.3(e) of the Forest and Nature Conservation Amendment Rules (FCNR), 2008 stipulates that '*the lessee shall develop the GRF land immediately after entering into the lease agreement. In the event of failure to develop within two years, the lease shall be cancelled'.*

Lease land left without development for more than 2 years by CharuTshongdrel

Section 40 of the Mines and Minerals Management Regulations 2002 also stipulates that '*when a lessee has not commenced mining operation within a period of two years from the date of grant of the lease or discontinue mining operation for a period exceeding two years, the lease shall lapse automatically'.*

b) However, such provision was not found in the Land Act 2007, Land Rules and Regulations and RRLGRF&GL for the non-usage of Government land.

c) Despite clear stipulations of actions on deferring of development activities on leased land and commencement of mining operations beyond certain time, the RAA noted instances where clauses of the relevant Rules and Regulations were not invoked for violation of the same.

- In ***18 cases,*** lease land measuring ***42.01 acres*** (details shown in **Annexure-A4**), both GRF land and Government land, were found unused for period exceeding two years.
- As per extant rules, the lease should have been cancelled. However, authorities concerned have not taken any actions as of the date of audit.

d) Thus, there was a lack of monitoring and enforcements on the part of agencies concerned for violation of the rules.

e) It also appeared that the Government and GRF land were leased out to institutions and individuals without reviewing and assessing project proposals supposedly a standard practice to assess the legality and viability of any proposed projects as well as capability of the proponents to execute proposed activities.

f) This has not only resulted in the blockage of land by some individuals but has also deprived the opportunity of using the land by prospective lessees.

g) Both NLCS and MoEA have stated that there is no provision in the lease agreement that requires definite time frame for business activities to commence. However, both have agreed that such provision is important and would incorporate in all lease agreements in future.

MoFA and NECS did not provide any responses.

3.4. Unauthorized subletting of leased area

a) Sections 6.3(d) & 6.4(c) of the Forest and Nature Conservation Amendment Rules (FNCR) 2008 stipulates that *'the GRF land on lease shall not be allowed to be sold, sub-leased, mortgaged, etc.'* The terms and conditions of the lease agreement also disallowed the lessee to sublet the premises leased either in whole or in part.

b) In contravention to the terms and conditions of the lease agreement, ***19 lessees*** had sublet the leased area mostly for the construction of semi-permanent canteen and residence. These were sub-leased to the private parties at the monthly rents ranging from Nu. 2,000.00 to Nu. 38,650.00. The details of unauthorized sub-letting of leased areas are given in **Annexure-A5.** A few pictorial evidences of such cases are provided below by way of illustration:

Residence subleased at Karten oil mill at P/ling

Canteen subleased at Natsho Fabrication P/ling

c) This indicated lack of proper monitoring and enforcement of lease terms on the part of implementing agencies which facilitated lessees to engage in unauthorized sub-leasing for financial gains.

d) The practice creates informal layers and intermediaries, leaving no options to the actual users other than to be at the mercy of these intermediaries who exploit and derive the benefit by illegally trading public goods such as land. If not monitored properly, such a system will not be seen more than the ones which tacitly values exploitative and unscrupulous practices such as these.

e) The MoEA stated that unauthorised subletting of leased area occurred mainly due to lack of effective monitoring and enforcement system. NLCS and MoAF did not respond.

3.5. Leased land not used for the intended purpose

a) Section 83 of the RRLGRF&GL states that '*the leased land shall be solely used for the purpose applied for'* and the lease agreement states that '*the lessee shall not, except with the permission of the Lessor in writing first had and obtained, use of GRF Land for any other purpose other than the ones approved by the National Land Commission Secretariat'*.

20 cases of lease land measuring 20.51 acres were used for purposes other than the ones specified in the lease agreement.

b) In deviation to the above stipulations, in ***20 cases,*** the lease land measuring ***20.51 acres*** were used for purposes other than the ones specified in the lease agreement as detailed in **Annexure - A6**.

c) This indicated lack of monitoring over the usage of leased land on the part of agencies concerned besides apparent act of defiance and disrespect of law of the country by the lessees.

d) It also transpired that the officials concerned were not aware of such cases and that due to unclear roles and responsibilities of various agencies, the use of land could not be monitored effectively.

Crusher site used as residence at Gaselo

e) Such non compliances undermine the very requirement of lease agreement besides, posing threat to realizing the national objectives of giving access to land for specified activities.

f) The MoEA stated that unauthorised subletting of leased area occurred mainly due to lack of effective monitoring and enforcement system. NLCS and MoAF did not respond.

3.6. Flawed system of demarcation

a) As per section 33(b) of the RRLGRF&G 2009 "*upon executing the lease agreement, the concerned Ministry with the assistance of the Dzongkhag Land Record officer, demarcate the boundaries of land to be leased as specified in the location map and the acreage approved by the NLC*".

b) The verification of sites revealed that most of the leased lands other than industrial estate, telecom towers and mines & quarries were not at all demarcated. Standing trees, rocks and roads along the boundaries wherever existed were supposedly taken as demarcation.

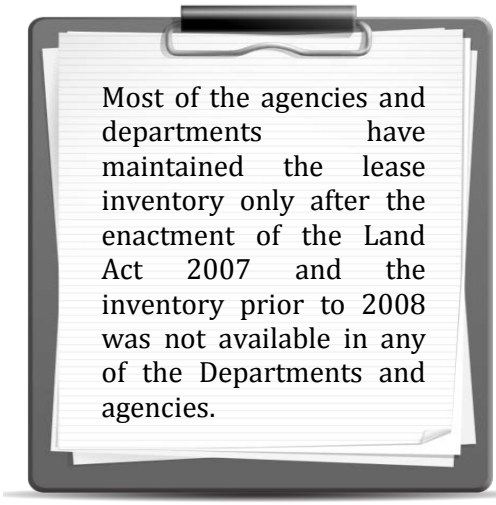
c) The absence of clear demarcation renders scope for extending its occupation beyond the specified boundaries. Besides, it may prove too costly to reverse the encroachment without proper demarcations.

d) NLCS agreed that the lease lands allotted prior to September 2011 could have discrepancies since the system of cadastral surveying and mandatory demarcation started only after September 2011.

3.7. Non-existence of inventory of land leased prior to 2008

a) Section 187 of the Land Act 2007 clearly stipulates that *'the records on leased land shall be maintained by the Ministry for the GRF land and Municipal Authority for the Government Land".*

b) Further, Section 188 of the Act states that *'the ministry and the municipal authority shall submit the lease records to the Commission Secretariat who shall maintain lease records of the GRF and Government land'.*



c) The leases were found processed and lease agreements executed by many agencies such as Department of Trade, Department of Geology and Mines, Department of Forest & Park Services, Municipal and Local Authorities.

d) Most of the agencies and departments have maintained the lease inventory only after the enactment of the Land Act 2007. The Departments, other relevant authorities and NLC have not maintained inventory of leases approved prior to 2008 except for records pertaining to mines and quarries maintained by the DGM. As such, the number of lessees and the acreage of land leased prior to 2008 could not be ascertained.

e) In absence of such vital records of approved leases, it is difficult to exercise effective monitoring and control over such land. The possibility of land abuses and even change of ownership of such land which were leased prior to 2008 cannot be ruled out. As evident, the Government agencies neither have requisite information nor effective control on country's limited land resources.

f) The NLCS and MoEA agreed that there are no records of land that were leased out prior to 2008. NLCS stated that records are only updated if/when leaseholders approach NLCS for renewal or endorsement and ruled out possibility of privatising the leased land as conversion of leasehold land to freehold was not possible.

3.8. Leasing of varying land size for similar activity

a) The existing laws and Rules and Regulations do not prescribe ceilings on size of land to be leased out for various economic and development activities. The leasing process which goes through layers of reviews and approval processes does not seem to be adequate.

b) In absence of standard or ceiling on land size required as well as proper assessment of the requirement of land, the RAA observed many cases where varying sizes of land were leased for the similar activities. Some were allotted more than the required size, whereas in some cases land leased was barely enough for the proposed activity.

c) As a case in point, for mineral Water Production, the area of land leased varied from 1 acre to 10 acre, for mobile towers 0.10 acre to as high as 2.19 acres, for automobile workshops 0.12 acre to 1.50 acre and for stone crushers 0.85 acre to26.80 acre.

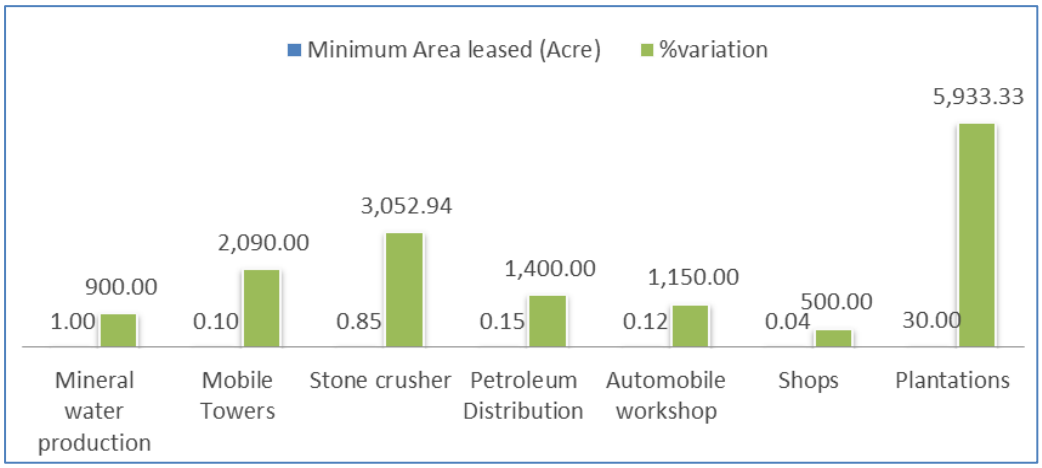
d) The comparison of varying land size allotted for the same activity and variation percentage thereof is as shown below:

Table 3 showing allotment of varying land size for similar activities

Table 3

Activity	Minimum Area leased (Acre)	Variation in Area leased (Acres)	Maximum Area leased
Mineral water production	1.00	10.00	10.00
Mobile Towers	0.10	0.55, 0.82, 2.19	2.19
Stone crusher	0.85	2.00, 3.00, 6.00, 26.80	26.80
Petroleum Distribution	0.15	0.20, 0.50, 0.87, 2.25	2.25
Automobile workshop	0.12	0.20, 0.50, 1.00, 1.50	1.50
Shops	0.04	0.10, 0.17, 0.20, 0.24,	0.24
Plantations	30.00	130,300, 600, 1,810	1,810.00

Graphic representation of variation in allotment of land size in percentage



e) While the land requirement depends on the size of projects, some standard norm may be necessary for activity of similar size and nature to ensure that land allotted is used optimally.

f) It also appeared that size of land acquired on lease also depended on capacity to pay lease rent rather than the size actually required for an economic activity or the project. The fact that in many instances only small proportion of leased land was developed and rest were either kept unused or used for purposes other than specified ones prove to show that the actual requirement of land was not assessed objectively.

g) The present system of allotment of land without considering the nature and scope of activities may not be seen objective. While allotment of undersized land would not allow the users to use the land more advantageously, the allotment of excessive acreage may not be economical and justified on the part of government.

h) The NLCS responded that the GRFL&GLR 2009 do not stipulate the standard size to be allotted, they are being guided by other government agencies in approving the plot size based on their technical feasibility study. MoEA indicated that size is determined based on business proposals.

3.9. Inconsistency in leasing of Tsamdro

a) With respect to leasing of Tsamdro, Sections 235, 236, 238 and 239 of the Land Act of Bhutan 2007, provide for deletion of rights, reverting as government land, payment of compensation to owners and leasing of reverted Tsamdros.

b) As per the above provisions of the Land Act all *Tsamdros* should have been reverted as Government and GRF land or converted to leaseholds after enactment of the Land Act in 2007 and the leasing of *Tsamdros* should start only from 2017 onwards. Further, the compensation should have also been paid to the thram-holders based the Land Act 1979. As per the records maintained by the NLC, there are 4,582 numbers of *Tsamdros* holders with the total

Leased tsamdros at Sengor, Mongar

coverage of 1,335,075.33 acres. RAA's review of the implementation of the above provisions of the Act revealed the following irregularities and non-compliances:

(i) *Tsamdros measuring 337.06 acres (Annexure-F)* were already leased in three Dzongkhags to 28 Thramholders which was not consistent with the provision of the Land Act 2007 as leasing of Tsamdro can commence only from 2017 i.e., after 10 years from the date of enactment of Land Act in 2007;

Tsamdros measuring 337.06 acres were already leased in three Dzongkahgs to 28 thram-hoders which was not consistent with the provision of the Land Act 2007.

(ii) All the above *Tsamdro* measuring 1,335,075.33 acre were not found reverted as Government and GRF land as of now and still lying in the private ownerships of the same Thram-holders;

(iii) Compensation for the *Tsamdro* have not been finalized and paid as yet; and

(iv) All *Tsamdro* land, except 337.06 acres which were already leased are still being used as *Tsamdro* without payment of lease rent or tax.

c) Thus, the authorities concerned have failed to enforce above provisions of the Land Act 2007. The leasing of 337.06 acres of Tsamdros was seen unfair and not as per the Land Act 2007. Out of the total of over 1.33 million acres of Tsamdros, only these lessees are required to pay lease rent and others have been using the *Tsamdro* without having to pay any charges.

d) The NLCS' response refuted all four observations on *Tsamdro* as follows:

- The leasing of Tsamdro with effect from 2017 is only relevant if the lessee is from another Dzongkhag.
- All Tsamdros have been deleted from the Thram.
- The compensation list was finalized and submitted to the government for release of fund.
- As Land Act 2007 is not fully implemented, former owners of *tsamdro* will continue to use them since they are not being paid.

e) However, Section 239 of the Land Act 2007 seemed to have been misinterpreted which states, "*After 10 years from the date of enactment of this Act, Tsamdro shall be*

leased only to a lessee who is a resident of the Dzongkahg where the Tsamdro is situated". Moreover, leasing of 337.06 acres of Tsamdros only while others are being allowed to use Tsamdros free of any charges does not seem to be fair.

3.10. Non-renewal of lease and lack of documentation

a) Land measuring 0.66 acres located at Tshokor, Gyalpoishing, Monggar was granted on lease by the Municipal Authority to M/S Druk Genen Incense Unit for a lease term of 10 years commencing from 5th March 2002 at an annual lease rent of Nu. 1,437.45. The lease had expired on 4th March 2012.

Land leased to M/s DrukGenen Incense Unit at Gyelposhing

However, the same has not been renewed nor the land was found surrendered. The lease rent was paid only up to 5th March 2004.

The authorities concerned have not collected the lease rent, which works out to Nu. 11,499.60. Neither the authorities were aware of the lease nor related records of lease were produced.

Leased land of Kezang Tshultrim temporarily used by a contractor at Gyelposhing

The RAA was able to confirm the existence of the lease during site visit and obtained the payment details from the lessee upon repeated requests.

b) Similarly, the RAA team during physical verification noticed a parcel of land located adjacent to the land leased to M/s Druk Genen Incense Unit where construction materials were found stocked.

On enquiry, it was stated that the said GRF land was leased to Kezang Tshultrim during the same time as M/s Druk Genen Incense Unit and a local contractor had obtained permission from the lessee to temporarily stock the construction materials.

However, the Dzongkhag Authorities failed to trace and furnish related records of lease of the said land to Kezang Tshultrim.

c) In light of above, the RAA could not rule out the possibility of similar cases occurring in other Dzongkhags. Due to lack of documentations and information, the RAA could not ascertain such other cases, if any.

d) Proper documentation is a key to effective administration and management of land. Without proper documentation capturing essential information of land, literally there is no basis for exercising monitoring and management of leases. This indicated that the Government agencies neither have requisite information nor effective control on country's limited land resources.

> The RAA could not rule out the possibility of cases where Government and GRF Land could be occupied by individuals without the knowledge of the government authorities.

3.11. Short-levy of lease rent

Review and comparison of the lease rates schedule prescribed by the National Land Commission (NLC) for different activities in each Dzongkhag under Annexure (1)-ULR of the RRLGRF&GL 2009 against the actual collection made by various agencies revealed short levy of lease rent amounting to Nu. 58.70 million.

This observation has been incorporated in a separate Propriety Audit Report along with accountability for the lapses.

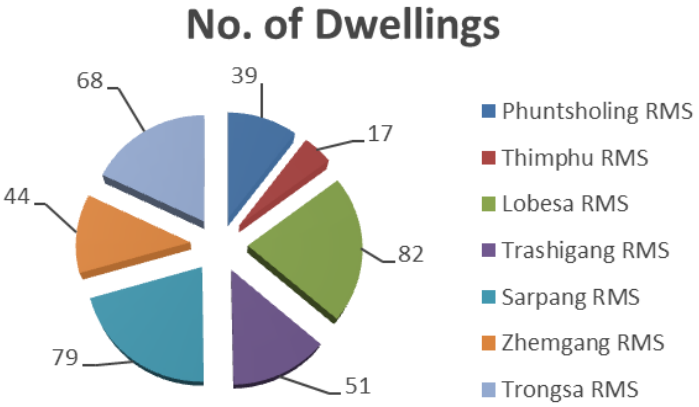
The NLCS maintained that lease rent rates as prescribed under RRLGRF&GL 2009 by NLCS and for the earlier period rates prescribed by relevant government agencies or in absence thereof the rates stated in the lease agreements should be applied which is consistent with the approach adopted by the RAA in calculating the above amount of short levy of lease rent.

4. Observations on occupation of Government& GRF land by various other agencies and institutions

In addition to mining, agricultural, educational and other economic development purposes, Government land and Government Forest land are used by different other institutions for varying purposes. Review of records and site visits showed many lapses or deficiencies as detailed below:

4.1. National Workforce Dwellings

a) The Department of Roads has constructed many National Workforce dwellings along the national highways. While some of the land had been registered in the name of DoR, many others were constructed on the leased land.



b) However, ***380*** dwelling units constructed on Government or GRF land under various Road Maintenance Services as summarised in the pie chart were neither registered in the name of DOR nor acquired on lease.

c) Thus, there was a lack of monitoring of the land nearby highways used for dwellings purposes. This had allowed unauthorized construction on such land.

4.2. Erection of telecommunication and Transmission towers

144.93 acres of Government and GRF land were occupied by BPC for construction of transmission towers without lease

a) For the construction of telecommunication towers throughout the country by both the Bhutan Telecom and Tashi Cell, land measuring 10 decimals was found to have been leased for each tower. Similarly, the BPC transmission towers of various sizes were also found erected throughout the country on the Government and GRF land. The total land occupied by these towers worked out to ***144.93 acres.***

Transmission tower erected on Govt. land without lease

b) However, it was noted that none of these lands were registered or obtained on lease. Written permission of the Government obtained, if any, for authorizing the use was not made available to the RAA. Hence, no charges for the use of such land were applicable as the use of land was not authorized.

c) The use of government land without appropriate approval tantamount to unauthorized use. This had apparently resulted due to inadequate monitoring by the relevant agencies. If such practice persists, the government not only foregoes the revenue but also provides unreasonable privileges to the users for extended period of time at the cost of people at large.

d) NLCS has accepted the observation of the RAA and indicated that initiatives are underway to lease out the area occupied by telecommunication towers and transmission towers and also the corridor of land that fall within the transmission lines.

4.3. Townships

a) Some of the townships were established in government land for years. The table 4 shows some of the townships established on the government land in various Dzongkhags.

Table 4

Sl. No.	Name of the township
1	PemaGatshel town
2	Bangtaar town
3	Lhuentse town
4	Autsho (below the road)
5	Sibsoo town
6	Zhemgang (13 households)
7	Dagana town
8	Bumthang (6 households on lease)
9	Sarpang town
10	Khaling (two household registered)
11	Tsimasham town
12	Dagapela town

b) However, neither the related records of approval of the government authorizing establishment of such towns were on record nor the usage of land was under lease arrangements. These townships were used mainly for business activities and residential purposes.

c) The authorities concerned do not have information on the size of land, details of occupants, dates of occupancy and usage of land. Hence, no charges were applicable for the use of such land.

d) In some cases permanent structures were constructed on the land without legal ownership. Apparently, it is the failure on the part of government agencies to

Bumthang township where few houses are on lease

monitor the usage of Government land which resulted in unauthorised use of government land and loss of revenue.

e) As the town planning are in process in many of the Dzongkhags, the structures already built may distort the implementation of the town planning in these places. Further, it may also give rise to complications when compensations are claimed by the owners.

f) NLCS has accepted the observation pointed out by RAA and expressed the need to lease all such land which are occupied without obtaining approval of the government.

4.4. Non maintenance of inventory land occupied by Projects

a) The construction and maintenance of national highways such as Phuentsholing-Thimphu, Chhuzom-Haa and SamdrupJongkhar-Trashigang have seen many camps and permanent settlements created on government land at various locations along these highways to house the project officials and labourers. Some of the permanent settlements were established long before the leasing system was introduced. However, few labour camps established after the 2008 were found to have been established on land obtained through lease.

Dantak establishment at Chapcha

b) It is only logical for the government to provide land for the above agencies as they have been contributing to our country's socio-economic development. However, the inventory of the exact area approved and the date of occupation by these agencies were not on record.

c) Further, as these establishments and camps constructed are mostly of semi-permanent nature and clustered in one particular area, it not only has affected the aesthetic value but was also in deviation from the building norms.

d) Inadequate information of land occupied by these projects will not only hinder effective monitoring of government leaseholds but will also impair decision making for developments on these lands.

e) NLCS responded that project has been instructed to take land on lease for residential dwellings and office structures by routing the application with the assistance of their counterpart, the Department of Roads.

4.5. Hutments in municipal boundaries

a) On verification of lease land in the Thromdes and municipal areas, it was noticed that many illegal hutments, as indicated in the table 5 below, were constructed on the government land.

Table 5

Name	Total area	Purposes
Phuntsholing Thromde	0.048	Shed for Thromde's staff
Wangdue Municipal Office	0.10	Stores and Garage for the office
Khuru Municipal Office	0.30	Sheds for labourers
Thimphu Thromde	5.00	Sheds for labourers at Kalabaazar, India House, Chubachu and below Hotel Riverview

b) All these hutments were used for residential purpose specifically for the Thromde and municipal labourers. On inquiry, the officials stated that these hutments had to be used for residential purposes for the labourers as more than 100 labourers are employed by them and due to lack of budget proper camps could not be constructed.

Illegal Hutments at Kalabaazar, under ThimphuThromde

c) Since such hutments affected the aesthetic value of the locations and the cities, allowing such illegal constructions is not proper.

d) NLCS responded that it has cautioned the Thromdes of the possible effects of allowing hutments within the Thromdes.

4.6. Leasing of Government and GRF land for hotels and private schools

a) There are some cases of hotels and private schools constructed on the Government and GRF land. Such structures and facilities have occupied the Government or GRF land either wholly or partially. Such cases are given in **Annexure – A8.**

b) Existing policy of allowing lease on Government and GRF land for such purposes will contribute significantly towards sectoral growth such as tourism and education. However, such leasing facilities are not extensively availed and there are not many hotels and private schools constructed in leased land. Thus the impact of such a policy is very minimal.

Permanent structure at land leased to Namgay Heritage in Thimphu

c) This may perhaps again be attributable to lack of adequate public awareness.

d) NLCS responded that in improving the quality of education, it has been considerate in permitting lease of GL & GRFL to educational institutions especially when such institutions are spatially located adjacent to the vacant GL & GRFL to provide space for setting up of sporting amenities and horizontal and vertical expansion.

PART B: Mines and Quarries

Bhutan is rich in mineral resources such as dolomite, limestone, gypsum, slate, and coal. It also has small deposits of marble, quartzite, granite, talc, iron ore, and pink shale. However, the country has further potential of discovery of many more minerals as only about 33 percent of the country has been geologically mapped and prospected thus far.

Mining in Bhutan started in the early 1970s and it was mostly carried out by the government enterprises. Gradually, with the policy of privatization, mining sector operations were privatized. Mining activities are now solely carried out by private agencies. Currently, there are 81 mines and quarries in operation and 36 have been closed over the years.

Minerals are non-renewable and limited, and thus should be extracted considering the government's development policy of inter-generational equity that is also mandated by the Constitution of the Kingdom of Bhutan. Minerals constitute vital raw materials for the mineral based manufacturing industries and are a major resource for economic development of a country. Therefore, it is important that the extraction of minerals is integrated with the strategic economic development policy of the country.

Bhutan, as a country that follows the development philosophy of Gross National Happiness of which environmental conservation is recognized as one of the pillars, should be even more mindful of how we manage our mining industry. While an efficiently managed mining has the potential to bring about economic gains, it also brings about adverse social and environmental impacts if not managed properly.

Therefore, it is in this context that the RAA initiated the performance audit of mines and minerals. A similar study was also conducted by the RAA in the year 2006-07 and issues were discussed by the first Parliament.

Audit Findings

Mining operations have come into public scrutiny not only for social and environmental issues, but also the manner in which mining rights are allocated to private proponents who seem to benefit most out of scarce natural resources. The RAA observed that mining rights are still allocated mostly on 'first come first serve' basis without competitive process which lacked transparency,

> Mining rights are still allocated mostly on 'first come first serve' basis without competitive process which lacked transparency, fairness and wider participation

fairness and wider participation entailing also possible loss of substantial revenue to the exchequer and risk of undermining intergenerational equity.

The Royal Audit Authority had through similar study highlighted many areas of concerns of serious nature in its "*Performance Audit Report of Mining Operations in Bhutan*" issued in February 2008. The Report had attracted parliamentary debate and scrutiny in the First Session of First Parliament of Bhutan after adoption of Constitutional Democratic System of Government.

It is quite discouraging that the compliance of mining regulations has remained still unsatisfactory. The feasibility studies were conducted at superficial level and thus reports are found to be inaccurate concerning projected deposit of minerals. Further, environmental aspects were also not properly studied and reflected in the environmental management plans. Repeated failure to comply with environmental restoration works were observed with adverse environmental and social impacts.

The audit findings are detailed here under:

5. Inadequacies in Administration and Management of mines

Mining operations are governed and regulated under the Mines and Mineral Management Act 1995 and Mines and Mineral Management Regulations 2002. The Department of Geology and Mines (DGM) under the Ministry of Economic Affairs is entrusted with the overall responsibility to manage the mines and mineral resources of the country. Comparatively, mining operations are better managed and regulated in many respects particularly in terms having clearly laid down system in place backed by planning and monitoring capabilities within the Department.

However, despite having reasonably adequate legal framework and administrative capabilities, it severely lacked effective monitoring and enforcement actions in the field as detailed below:

5.1. Non-auction of mines and quarries

a) According to Section 15 of the Mines and Mineral Management Regulations (MMMR) 2002, *'In case the government decides to lease a pre-identified mineral deposit for commercial exploitation, it shall be done through public notification and sealed/open tendering process'.* In cases where the mineral deposit is explored

It was not proper for DGM to directly allot pre-identified mineral deposits to individuals or companies on 'first come first serve' basis.

by individuals or companies, proponents' applications will be processed on 'first come first serve' basis.

b) However, the DGM had leased out most of the mines and quarries on 'first come first serve' basis instead of leasing through public auction by tendering. As per records, most of these individually leased mines and quarries had been commercially mapped and explored by the DGM and the Geological Survey of India, then.

c) Thus, it was not proper to directly allot pre-identified mineral deposits to individuals or companies on 'first come first serve' basis. The instances of leasing out of mines and quarries directly to individuals and companies which were already explored and mapped by the DGM and GSI are indicated in **Annexure - B1.**

d) Besides non-compliance of extant laws, the existing system of directly awarding mines to proponents would impede transparency, fairness and competitiveness in the mining operations. The practice may also provide opportunities for indulgence in corrupt practices, favouritism and nepotism including disclosure of sensitive information on selective basis.

e) In the response by MoEA, it indicated that that the Ministry and the Department have only limited knowledge of existence of mineral reserves in the country and hence had left it to the private entrepreneurs to explore the mining activities on their own.

f) The RAA would like to reiterate that given the size and exhaustible nature of minerals, the government should have comprehensive information of 'quantity and quality' of mineral reserves in the country. This would enable the Ministry to plan and strategize the allocation of mineral rights in a manner that is both equitable and sustainable. The current system could have adverse impact on the scientific methods of mining as the mining operators would extract minerals which are beneficial to them leaving out huge tracts of minerals leading to wastages and inefficiencies, compromising the concept of zero waste mining and sustainability.

5.2. Revenue forgone due to direct leasing out of mines

a) The DGM had so far auctioned three mines and fetched substantial revenue for the government as shown below:

Table 6

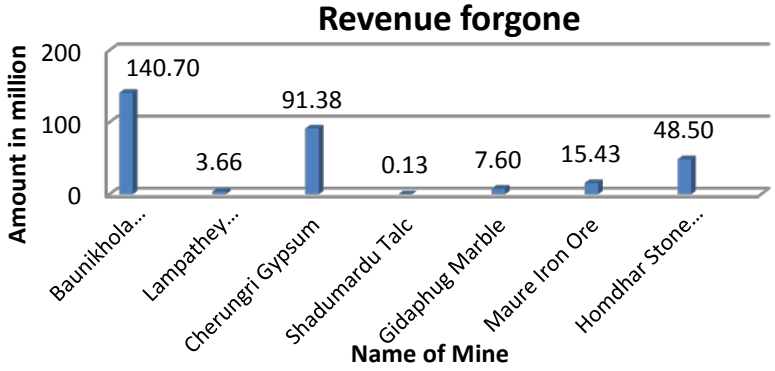
Sl. No	Name of Proprietor	Minerals	Locations/Dzongkhag	Auction Value (Million)
1	Goop Sonam Dukpa	Coal	Samrang, Borila, Deothang and Bhangtar/S/Jongkhar	521.00
2	Druk Satair Corp. Ltd	Gypsum	Khothakpa/Pemagatshel	413.50
3	Bhutan Steel Industry	Dolomite	Sunargoan and Chunaikhola/Samtse	390.00

b) In an attempt to ascertain the likely benefit that shall be accrued through increased revenue if mineral extraction rights are allotted through public auctions, the RAA carried out analysis of possible amount of revenue foregone in the past. The possible revenue forgone in respect of major minerals in the country such as; limestone, quartzite, gypsum, talc, marble, iron ore and stone quarries have been derived taking one site each for these mineral as an example using the following bases and assumptions:

> While computing for just seven major minerals at seven sites, the notional amount of revenue forgone by government works out to Nu. 307.00 million

- The averages of all auction values of the three auctioned mines in the past is used as representative figure after factoring in the cost of production and mineral value of each mineral.
- The projected reserve is retrieved from the FMFS
- The selling price of each mineral represent the prevailing market rate
- The cost of production of each mine consists of all mineral rents plus the cost of production figure retrieved from the FMFS.

c) Even in these seven cases, the notional amount of revenue forgone amounts to Nu. 307.00 million as worked out on a basis of conservative estimation as depicted in figure below and details provided in **Annexure-B2**.



d) As can be seen from the figure above, had the DGM auctioned just six mines as above

and a stone quarry, the government would have realized additional revenue of Nu.307 million approximately.

e) MoEA agreed that there are discrepancies and flaws in the current system of entertaining mines and quarries on "first come first serve basis" and indicated that this criterion will be changed upon approval of Mineral Development Policy (MDP) and amending the Mines and Minerals Management Act, 1995. As explained MoEA has proposed to lease mines on best proposal to value add basis.

f) The RAA appreciates the positive initiative of the Ministry of Economic Affairs as envisaged in the draft Mineral Development Policy (MDP) particularly the policy of 'value addition' as indicated in the response. However, allocation of mineral rights on the 'best proposal to value add' basis alone as envisaged in the MDP may not address adequately the issue of transparency, fairness and competitiveness. While the proposal of value addition is definitely a positive change, the RAA, is of the view that the public auction could still be a viable option while maintaining the policy of "best proposal of value add" as one of the key criteria, by incorporating in the bid documents.

5.3. Missing Geo- feasibility reports and possible misuse thereof

a) As per Section 14 and 15 of MMMA 1995 the DGM should execute or supervise the undertaking of all systematic geo-scientific investigation and exploration in the Kingdom or through others under its authority and supervision and prepare and publish maps and reports documenting such research and exploration.

b) The RAA's review of records maintained by the DGM indicated that explorations of different mines and minerals throughout the country were carried and over 314 reports were archived in the Library. The RAA found that 95 such reports were taken by the officials of the DGM at various points of time, some as far back as 1998, but ***46 reports*** were not returned to the library as on date of audit as provided in **Annexure-B3**.

c) This indicated lack of proper control and custody over such important documents. Out of 46 missing reports 22 mines pertaining to these missing reports were found operated by private parties.

d) Thus the possibility of misuse of these reports and passing of information and /or reports selectively to the private parties through collusive practices cannot be ruled out.

e) MoEA responded that the reports are to be in public domain and could be only used as a general guideline for their intended study. Hence, there is no question of misusing it. It further maintained that no mine was leased based on the missing documents.

f) Unless the reports are in the public domain and the system is fully transparent, there could be risk of making the reports available selectively.

5.4. Questionable practices in the transfer of mining leases

a) Section 27 of Mines and Minerals Management Act (MMMA) 1995 allows for transfer of mining rights and obligation to a third party following the approval from Head of the Mining Division. The Act stipulates that a minimum of three months' notice has to be served to the Head of Mining Division of such intention to transfer the lease.

> Some mines and quarries were transferred as many as three times to three different parties creating layers of lessees and one quarry was transferred within 6 days after signing the lease agreement with the DGM

b) The Royal Audit Authority came across eight cases wherein the lessee had transferred the mining rights and obligations to a third party. Some mines and quarries were transferred as many as three times to three different parties creating layers of lessees. The details of transfer of mines are given in **Annexure - B4**.

c) The RAA found that Paga Ketolungpa stone quarry was transferred within 6 days of the original lease agreement while a quarry in Tsirang (Kuchikhola Stone Quarry) was transferred to three individuals successively. Moreover, even after lapse of over five years, hardly any work was initiated at site as can be seen in the photograph.

Kuchikhola Stone Quarry in Tsirang

d) Although the transfer of mines is allowed by the MMMA 1995, following lapses were observed:

- The Act stipulates that a minimum of three months' notice has to be served to the Head of Mining Division of such intention to transfer the lease. However, in the

above case of Paga Ketolungpa Stone Quarry, transfer was permitted just within six days of executing the lease agreement which was against the MMMA 1995, and

- The MMMA 1995 appears to allow transfer of lease once only as it does not mention about successive transfers. Thus, the legality of transfer of lease more than once as in the case of Kuchi Khola Stone Quarry, Tsirang and Langukha Stone Quarry, Paro was not clear.

e) Moreover, RAA's interaction with the local community and representatives of some of the lessees indicated that existing practices may not be consistent with the objective of leasing of mines to promote the growth of a healthy mine and mineral based industry in the kingdom. Some lessees seemed to have acquired the lease only for speculative motive primarily for selling the rights for financial gains. Successive transfers of lease without much progress in mineral extraction activities also support this fact. As it emerged from the interactions at the field, following possibilities could not be ruled out:

- Acquiring of mining lease for speculative motive for immediate or future financial gain without actual intention to carry out mining,
- The original lessees possibly selling the leased quarries in disguise of transfer and making windfall profits;
- Sub-letting of Mines and Quarries on commission basis or lump payment system by officially appointing the sub-lessee as mines manager or its official representative there by promoting the practice of 'Fronting'; and
- Lack of competency of sub-lessee or transferee since DGM do not apply the similar vigour in scrutinizing the competency and qualification of the subsequent lessees.

f) Neither the MMMA 1995 nor the lease agreements executed between the DGM and lessees is clear whether the original lessees have the right to sell, sublet or allow operation on commission. The Forest and Nature Conservation Amendment Rules (FNCR) 2008, section 6.3(d), stipulates that *'the GRF Land on lease shall not be allowed to be sold, mortgaged, sub-lease, cultivated, and for construction of permanent houses'*.

g) In view of the foregoing, existence of questionable and unhealthy practices in the transfer of mining lease can't be ruled out.

h) The MoEA acknowledged the observation and the unhealthy practice likely to develop from the transfer of mines and have stated that a notification was already served in 2012 which requires at least five years of operation prior to entertaining any transfer request.

5.5. Closure of mines/quarries due to poor quality of deposits

a) As per Section 23 of the MMMR 2002, a technical committee consisting of at least *two mining engineers and a geologist* should scrutinize the prospective mines in context of its size and extent and amount of deposits. This provision seeks to establish the quality and quantity of mineral deposits before leasing of mines or actual commercial extraction of minerals.

Eleven numbers of mines and quarries around the country were closed or suspended due to poor quality of deposits

b) However, physical verification of mining sites and review of records revealed that eleven numbers of mines and quarries around the country were closed or suspended due to poor quality of deposits as detailed in **Annexure-B5**.

c) The premature closure of mines indicated inadequacies and inaccuracies in exploration works and feasibility studies which not only impeded economy in the use of resources but also proved to be expensive to the lessees as they would have invested substantial amount of money in procuring mining machineries & equipment, construction of roads, hiring of mining personnel and establishments of temporary camps.

d) The MoEA did not attribute poor quality of deposits as being the reason for closure of mines and quarries. However, specific reasons for closure of each mine/quarry have not been provided.

5.6. Non-revision of Royalty and Mineral Rent

a) Article 42 of the MMMA 1995 stipulates that *'A lessee shall pay royalty and mineral rent to the Government for any mineral mined from the mining area at the rates prescribed by the Government and officially notified from time to time'.*

b) The review of records pertaining to royalty and mineral rent indicated that the same are neither reviewed nor revised on a timely basis or the revisions appeared very minimal as discussed below:

There is no proper basis for fixation of royalties and rents. The interval for the revisions of the rates is also not prescribed.

- The latest revision of royalty and mineral rent was done on October 1 2006 that is after 4 years of the implementation of rates as per annexure 5 of the MMMR 2002.
- The DGM had revised the royalty and mineral rent for minerals such as *dolomite, limestone, marble, quartzite, iron ore and talc*; but had not done so for *coal, gypsum, construction materials, clay, slate and granite*. Therefore, the royalty and mineral rent for these minerals have been left constant for around 10 years.
- Those minerals for which the royalty and mineral rent were revised in 2006, a period of more than six years had already elapsed.
- The Royalty and Mineral Rent revised by the DGM were minimal. For instance, the royalty for dolomite was increased from Nu. 34 to Nu.40 (17.6%) and mineral rent from Nu.8.5 to Nu.10 per metric ton. The highest revision was for quartzite (of export quality) from Nu. 34 to Nu. 100 (194%).
- The surface rent of the mining area was fixed by the NLC at Nu 640 per acre per annum as promulgated in the Rules and Regulations for Lease of Government Reserved Forest Land & Government Land 2009. The lease rate per square feet per annum works out to Nu. 0.01 which is the least rate in leasing besides Tsamdro and Sokshing. Mining business is like any other profit making commercial venture and therefore, the surface rent which is only a token of payment may not be rational.
- There is no proper basis for fixation of royalties and rents. The interval for the revisions of the rates is also not prescribed.

c) The practices followed in the revision of royalty and mineral rent thus lacked proper basis and rational approach. The current practice does not seem to recognize the true worth of the mineral resources. As a consequence Government may lose substantial amount of revenue. Moreover, considering that the mineral resources are extracted and marketed by private individuals and companies, levying lower royalty and mineral rent may only benefit them most at the cost of citizenry at large.

d) The MoEA accepted that Royalty and Mineral Rent need to be revised at the earliest. The Ministry stated that the Department of Revenue and Customs in 2008 had initiated the revision of Royalties and Mineral Rents in consultation with DGM and DOI; however, there were no concrete decisions and the rates have remained the same till now.

6. Environmental and social issues

a) There is no strategic policy framework for mining sector in Bhutan emphasizing, inter-alia, the environmental and social responsibility of mining operations. As a result, mining industries in the country had not taken serious consideration of social and environmental issues.

Mining industries in the country had not taken serious consideration of social and environmental issues.

b) While there are positive signs of shift on the part of some mining operators towards recognizing these issues and some efforts have been made by them, there are still several instances of disregard of environmental laws and social responsibilities.

c) Existing mining practices fail to recognize larger aspects of ecological and societal values and do not seem to place greater emphasis and accountability towards such values. This is not in consonance with our noble development philosophy of Gross National Happiness.

d) The audit findings included repeated disrespect to mining restoration requirement, lack of proper public participation in the decision making process and public clearances, non-compliances to mine plans and methods and consequential environmental degradation and damages to farms, health and safety of people, mining operations allowed in areas close to human settlement, farm land and adjacent to highways, etc. as detailed below:

6.1. Anomaly in obtaining public clearance

a) Prior to leasing a GRF Land for mining activities, the lessee has to obtain a public clearance from the local communities who would be affected by the prospective mining. Although, a public clearance is made obligatory for all mining leases currently, the

Clearances were issued without proper consultation with the local community

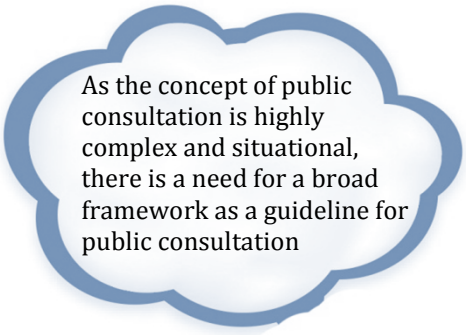
MMMA 1995 and MMMR 2002 do not stipulate such requirement.

b) However, as per Article 16 of the Environmental Assessment (EA) Act 2000, and Section 31 of the Regulation for the Environmental Clearance of Projects 2002, Public Consultation is mandatory. As a part of Environmental Clearance, the EA Act requires that the proponent should submit evidence of public consultation with record of the meetings and attach a list of names of the affected people with clear details of concerns raised by the public and resolutions of concerns, if any. The Act and the regulation nevertheless do not require public clearance per se, but the consultation process which is an integral part of Environmental Clearance recognizes public concerns and resolutions made on such issues.

c) Further, the Local Government Act, 2007, Article 113, states that, '*Local Governments shall make every effort to ensure public participation in the development of various plans and programmes'.*

d) The RAA on review of documents and site visits observed many inconsistencies and anomalies in obtaining public clearance which are briefly discussed below:

- As discussed above, there is no consistency in the mining and environmental acts and regulations. Mining act is silent on the public consultation while environmental act requires public consultation.
- There is lack of clarity on the role of local government during public consultation especially at the Geog level.
- There are no clearly laid down procedures for conducting public consultation. Also, what it means by 'affected' people is not very clear. Although, it may be difficult to define precisely what it means by affected people, as the concept of public consultation is highly complex and situational, there is absence of a broad and generic framework as a guideline for public consultation.



- Due to absence of such norms, practices and approaches adopted for public consultation varied and even proving at times unsatisfactory particularly when the responsibility to obtain the public clearance often resting with the proponents.

- ❖ There were instances wherein, the local authorities through DYT, have allowed mining merely by convening a meeting within themselves and had issued clearance without informing the local communities.
- ❖ Yet there were other instances where, the proponents have deployed unscrupulous tactics of getting consent of the public by door-to-door visit of households instead of conducting mass public consultation as required by EA Act 2000. The communities complained that the mining operators assured developmental activities and other assistance in return for public clearance, but they were hardly fulfilled in absence of written and legally binding commitments.
- ❖ Of late, the local communities have become increasingly aware of the negative impacts of mining activities and have shown resistance in issuing public clearances, especially, for renewing of lease for mining and quarries.

e) International best practice reveals that, mining companies besides obtaining license to operate mines also obtain social license based on open dealings, consultation, trust and a long-term commitment to community development, which is found missing.

f) The lack of clear procedures for obtaining public clearance would render scope for unscrupulous practices which may undermine the social interests of the communities.

g) The MoEA maintained that the Dzongkhag Authorities should be responsible for obtaining public clearance (in the form of Dzongkhag clearance) as provided in the MMMA and MMMR. However, the concept of public consultation (public clearance) may be far broader than the Dzongkhag Clearance.

h) The NEC has, however, accepted the audit finding and expressed the need to have a guideline detailing on the public consultation process.

6.2. Mining operations close to human settlement and agricultural land

a) Environmental and social aspects become even more important when mines are approved close to the human settlement or agricultural land as mining operations directly or indirectly impacts agricultural productivity, health, safety and livelihood of affected community.

b) There were cases of mining operations allowed in areas close to human settlement and agricultural land. In a few cases, the private land and houses were found inside the

Owners left with no choice but to accept the compensation for their damaged lands.

mining area, such as in Chunaikhola Dolomite Mine in Samtse, Haurikhola Limestone Mine in Samtse and Kilikhar Stone Quarry in Mongar.

c) Furthermore, there were cases such as SD Eastern Bhutan Coal Company in Deothang, TintaleQuartizite Mine, Titi Limestone Mine in Samtse where the landowners were later compensated for damage of their private lands triggered by mining activities. The land owners on interview stated that they were left with no other choice than to accept the compensation for their damaged lands.

d) The lists of mines that were located close to human settlement and have major impacts are shown in the **Annexure –B6**. The study revealed the following:

- There were no proper consultations with the owners of these private land and houses during the feasibility stage or during the time of demarcation of the area.
- In many cases, their land had been physically damaged i.e. causing land slide or land subsidence etc. by mining activities.
- Affected farmers seemed to have been left with no option but to accept the compensation which they do not consider to be a fair practice.
- Many affected farmers claimed that farm production has reduced significantly over the years. There are, however, no scientific studies conducted to prove their claim.
- The impact of dust emission, noise pollution, soil erosion and physical damages on the landscape was apparent and noticeable as transpired during the site visits.
- It may also be the case that the extent of possible impacts of mining activities may not be properly understood by the farmers during the time of consultations due to lack of knowledge. The adverse impacts usually become visible and apparent as the mining operation progresses.

e) Apparently there was lack of adequate studies being conducted by those responsible on the possible impacts of mining operations within and around human settlement area besides non-compliances of mining procedures and methodologies which led to damages to the environment, agricultural farms as well as posing threat to health and safety of local community.

f) Not involving local people during consultations is serious concern. Even if they are involved, local people may be gullible to be swayed easily into giving their consent not realizing what is in store for them. People might fail to comprehend due to lack of

knowledge but the government must assume responsibility of acting on their behalf and educating them on the potential impacts of mining within their communities.

Irresponsible dumping of overburdens at Cherungri Gypsum Mine

SD Eastern Bhutan Coal mine operationin close vicinity of villages

g) The current practice of allowing mining operations without assessing its potential impacts on the local community may not be socially justified. The process of consultation seems to be mere a formality without being mindful of consequences that might result in the lives of local people.

h) The MoEA in their response cited the Constitution and clause of the lease agreement that provides the land owners the right to compensation for their affected lands. However, long term impact of mining and quarrying activities on the environment and the society including threat to human settlement, their lives, agricultural productivity etc may be far more than short term commercial gain. Therefore, there may be a need for revisiting the existing policy and practice of allowing mining and quarry activities close to human settlement.

6.3. Stone quarries allowed adjacent or close to highway

a) The RAA observed that 17 stone quarries were located too close or just adjacent to highways causing major hindrances to traffic and risks to travellers besides damaging the highways. The details of such mines and quarries are provided in **Annexure- B7** and photographic evidences as presented below:

Gathrak stone quarry in Bumthang

Gewchu Stone quarry in Wangdue

b) It was reported that one person was killed and two critically injured in May 2010 by flying boulders from the quarry site in Gewachu while travelling in a public transport from Gelephu to Thimphu. Other similar incidences if any may have remained unreported due to lack of adequate awareness.

c) Some mines, though far from the roadside in terms of vertical distance, the landscape were too steep and posed potential risks to humans, animals, property and environment.

d) The MMMA 1995 do not prescribe whether leasing is allowed on areas that affects the public property such as the national highway. Not even the Road Act of the Kingdom of Bhutan has any provision dealing with such issues, except for the Roads Right of Way of 50 feet on either side of the road.

e) The existing practice of allowing mining and quarrying operations too close to highways is a matter of grave concern and certainly not conducive to road safety and convenience of travellers.

f) The MoEA agreed to the audit finding. As stated in the response, the MoEA in consultation with DoR and NEC agreed not to lease any quarries and mines nearby highways.

The NEC has also accepted the audit finding.

6.4. Non-restoration of closed mines

On the requirement of carrying out restoration work at the mines, Section 72 of the MMMR 2002 clearly stipulates as *'the lessee shall ensure that, at the end of the lease period or at the end of mine life, restoration*

Out of the 42 closed mines and quarries, 23 sites have not been restored at all as required under the lease agreement and FMFS.

work is carried out according to the Mine Restoration Plan in the approved FMFS to the satisfaction of the Director'. Accordingly, the lessees, in all FMFS and Environmental Management Plan (EMP) report have outlined in detail as to 'how and when' the mined area will be restored to its original or near original form. However, actual scenario of mine restoration works in the field was rather not satisfactory as explained below:

a) Out of the 42 closed mines and quarries, 23 sites have not been restored at all as required under the lease agreement and FMFS. The details of mines and quarries not restored are given in **Annexure B-8.**

b) Even in other mines where restoration works were carried out, same were not strictly in conformity with the mining regulation. For instance, the restored sites were not found fenced and attended by a caretaker as required under the lease agreement. Photographic evidences of some of the un-restored mines are shown below:

Upper sukreti talc mine (closed) in SamtseDzongkhag

Wangchena stone quarry (closed) in WangdueDzongkhag

c) As can be seen from the photographs, the mined areas are left as open scars or remnants of some massive landslides. The re-vegetation in the mined area was found to be left purely to the forces of nature after having greatly distorted the natural vegetation in the area.

d) As prescribed in the FMFS and EMP, the mining operators are required to carry out progressive restoration of the closed benches. This entails that, as the extraction of minerals exhausts on the top benches, it has to be restored concurrently with mining activities. However, most of the operators have not followed the progressive mining, and have consequently left it un-restored even after the closure of mines.

e) As prescribed in Section 171 to 173 of the MMMR 2002, the mine operators are required to store and use the top soil of the mined area for restoration purpose. However, as verified during the physical verification, none of the mines have stored the top soil for restoration works. In fact, the top soils were found dumped together with overburdens. Restoration works as of now is mainly focused on construction of check dams and plantation, the survival rate of which are alarmingly low.

Kharipakha talc mine in Samtse

f) This clearly indicates that the restoration work was never the priority of the mine operators from the inception of the mining works.

g) The mining operators have regarded the payment of Environmental Restoration Bond (ERB) as a substitute for restoration. In fact ERB as stipulated in MMMR 2002 is only a security for mine reclamation and should not be treated as substitute for reclamation.

h) Despite the RAA's observations through the previous audit conducted during 2006-07 and the DGM's own commitment in response to the RAA's observation to abide by the regulations, the restoration of closed mines have not been carried out as required under the mining regulations.

i) It is to reiterate that non-restoration of mines, whether on a progressive manner or at the end of mine life indicates not only disrespect of national law on the part of the mining companies and individuals but also laxity and failure of the DGM to enforce the existing law.

j) The reclamation works are carried out to mitigate the environmental effects of mining. If authorities do not strictly enforce the requirement to carry out the reclamation and restoration works, the environmental challenges such as soil erosions, loss of vegetations, pollutions, disturbed biodiversity etc. shall persist and affect the lives of people in the communities.

k) The MoEA explained that some closed mines had merely touched the main deposits requiring no restoration works, in one case the restoration work carried out was eroded during rainy season and some mines were closed down due to ACC investigation. The Ministry has cited 'complex issues' as factors hindering smooth restoration of closed mines and quarries. However, the Ministry has assured that restoration works will be given top priority as they are currently drafting inspection manuals, Mines leasing manuals and FMFS evaluation manuals which will all guide the inspectors to monitor the restoration works, amongst others.

6.5. Mining and developmental works not as per FMFS and EMP

Mining and development works are required to be carried out in accordance with the MMMA 1995 (Article 28), MMMR 2002 and the FMFS and the EMP as approved by the DGM. Comparison of some of the important parameters of FMFS and EMP on the basis of the physical inspection of mining sites revealed that the actual mining and development works were not carried out as per the FMFS and EMP as detailed below:

6.5.1 Waste and overburden management

The FMFS and EMP clearly specify about 'where to dump and how to manage the overburdens'. However, except for some captive mines, waste and overburden management in most of the mines and quarries were not carried out as per the FMFS and EMP.

> Except for some captive mines, waste and overburden management in most of the mines and quarries were not carried out as per the FMFS and EMP

a) The overburdens or the wastes were found overflowing or had spilled downhill breaking the arrest barriers/check dams. The arrest barriers provided in plans are usually stonewalls or gabion walls, which were not found effective. This is evident from the fact that most of these barriers were washed away, some within a year, creating spillage of overburdens beyond the arrest barriers. The spilled overburdens, often has impacts on environment especially destroying the natural vegetation and forming siltation on the water bodies. Photographs provided below illustrate the fact.

Overburdens dumped downhill in Tshelingkhor stone quarry

Overburdens left by Lam mining in Samtse

b) The arrest barriers were usually found constructed following the disposal of the overburdens instead of constructing before the disposal of overburdens. As a result, such barriers were not able to contain the overburdens.

c) As per the FMFS and EMP, the overburdens are supposed to be dumped in the designated area with proper terracing and plantation done and area should be restored to the closest original state. However, instead some mines and quarries had dumped the overburdens in undesignated sites. Picture (closed lam mining), shows a heap of overburdens dumped right beside the river caring least to restore the mined area.

The MoEA has agreed to the audit findings.

6.5.2 Non-maintenance of height and width of Mine Benches

a) All mining in Bhutan is an open cast type of mining. Open cast mining entails mining of mineral deposits from the ground surface and downward. Consequently, pit slopes are formed as the ore is being extracted. The pit slopes must thus be inclined to certain angle to prevent falling of rock or soil mass, for safety of mine workers and prevention of environmental damage.

Taksha stone quarry in WangdueDzongkhag forming huge pit

b) Accordingly Section 145.1 of the MMMR 2002 provides that *'the sides shall be sloped at an angle not exceeding 45 degrees from the horizontal, unless the Director permits another angle by order in writing'* and Section 145.2 specifies

that *'the sides shall be kept benched; the height of any bench may not exceed 1.5 m and the breadth may not be less than the height'.*

c) The RAA, on physical verification of mining sites observed that many mining companies have followed open cast mining forming benches as per the MMR 2002 and FMFS. However, there were deviations in observing the requirements as explained below:

> Most mines have not maintained the benches at all, creating pit-like land formation, steep landscape and overhanging which is totally against the mining standards.

- The bench height and width in most of the mines have not been maintained strictly as per the FMFS and MMMR 2002. The mining operators explained the impracticability of strictly implementing as required in regulation and FMFS.
- Most mines have not maintained the benches at all, creating pit- like land formation, steep landscape and overhanging which is totally against the mining standards.

Design without benches at Lumjasam Stone Quarry

The MoEA have agreed to the audit finding and indicated that regulations are being tightened and mining inspectors trained to strengthen their technical capabilities.

6.6. Environmental Restoration Bond

Section 56 to 61 of the MMMR 2002, stipulates on the payment of Environmental Restoration Bond (ERB) by the lessee to the Government. Section 56 states as *'The lessee*

shall deposit an environmental bond to the Government as security for mine reclamation and environmental restoration in the mine and for ensuring that the negative impacts on the surrounding environment are minimized'. Subsequent sections, amongst others, stipulate about how and when the amount of Bond should be paid by the lessee and conditions of refund thereof based on the reclamation works of the closed mines.

The RAA observed following lapses and shortfalls with respect to the ERB:

6.6.1. Ambiguity in fixation of ERB

a) The MMMR 2002 provides that *'the environmental bond shall be payable proportionate to the amount specified in the approved FMFS in the first month of each lease year during the first half of the lease period and its extensions, if any'.*

There is no proper basis and rationale on the calculation of ERB and collection thereof from the lessees as of now.

b) There is no consistency in the calculation of ERB in FMFS reports. For some, the consultant had calculated on the basis of degradable mine area whereas for others it was based on the projected mineral extraction. Thus, there is a lack of proper basis and rationale for calculation of ERB and collection thereof from the lessees.

c) In the absence of rational basis for calculation of ERB, it is not clear whether the amount collected would be sufficient to cover the cost of carrying out the restoration works or exorbitant in which case it may not be fair to the lessees.

d) Specific response to the issues raised has not been provided.

6.6.2. Outstanding amount of ERB of Nu. 60.444million

a) The RAA noted that substantial amount of ERB of Nu. 60,443,777.93 had remained outstanding as on 31.12.2012, as summarized below:

Table 7

Sl. No	Region	Total ERB to be collected (III)	ERB collected as on 31.12.2012 (IV)	Outstanding ERB (V)	Remarks
1.	Samtse	13,693,239.00	8,889,183.00	5,006,680.00	(III) minus (IV) will not result in (V) since the lessees still have time to pay as per MMMR 2002.
2	Gomtu	87,810,750.15	78,387,024.95	2,004,500.00	
3	S/Jongkhar	32,603,818.00	28,603,818.00	615,384.60	
4	Wangdue	21,720,530.00	3,014,616.00	7,827,396.00	
5	P/ling	20,929,218.00	12,013,299.00	9,815,920.00	
6	Thimphu	45,115,989.00	13,411,159.17	31,704,829.33	
7	Gelephu	15,391,150.00	4,109,689.00	3,429,068.00	
Total		237,264,694.15	148,428,789.12	60,443,777.93	

b) The ERB is a vital component in the overall scheme of environmental management in the mining sector as this fund would be utilized for restoration of mines in the event lessees fail to do so.

c) The fact that ERB of 60 million outstanding from 60 lessees across the country and non-carrying out of restoration works is a clear indication that neither the DGM nor the lessees paid adequate attention to the environmental conservation in the country.

d) Poor compliances to the requirement of ERB by the lessees and inadequate enforcement by the authorities would lead to undermining importance of conserving environment.

e) Specific response to the issues raised has not been provided.

6.7. Corporate Social Responsibility

a) International best practices indicate that mining companies besides obtaining license to operate mines obtain social license based on open dealings, consultation, trust and a long-term commitment to community development as a part of their Corporate Social responsibility (CSR). In Bhutan the concept of CSR is yet to be internalized and put into full practice. While some initiatives are being made towards promoting the concept of CSR, it is yet to assimilate into our culture on a full scale and thus, the practice has remained virtually insignificant.

> The concept of CSR is yet to be internalized and put into full practice and the current practice is ad-hoc and virtually insignificant

b) The two companies, DrukSatair Corporation Limited and S.D Eastern Bhutan Coal Company Limited are required to issue 30% shares to the people of the various Dzongkhags of the region. This appeared to have been a clear intent of sharing the benefit of natural resources amongst larger group of people. However, such policy is not extended to other companies.

c) The draft Mineral Development Policy proposes to addresses this issue by introducing a contribution of Nu 3 and Nu.5 for every metric ton supplied by listed and non-listed companies respectively towards the Community Welfare Fund.

d) However, the practice of Corporate Social Responsibility by corporate sectors is yet to be internalized for the cause of the community and broader stakeholders. The review of current practices showed the following: :

- In mining operations having huge social and environmental impacts, there are, however, only some sporadic benefits that accrue to the society. These benefits to the society come in the form of seasonal and wage-based employment as manual labourers in most of the mines.
- There is no legally binding obligation for the mining companies to employ local workers, due to which many migrant workers were found employed by mining companies.
- Social and environmental cost that is being borne by the society and the nation as a whole are not recognized and internalized by the companies. The contributions they make to the local community is very minimal and insignificant compared to the adverse impacts the mining operations will have on the environment and society and also the volume of business and profit generated by these companies.
- While some of the bigger mining companies such as DrukSatair, SD Eastern Bhutan Coal Company, PCAL, Lhaki, BFAL and BCCL have been contributing to the society in the form of cash and kind contributions including providing school buses, ambulances, CGI sheets, donations etc., there is lack of clear strategy and policy of Corporate Social Responsibilities and CSR reporting.
- Records provided by the DrukSatair Corporation Ltd (Gypsum mine in Pemagatshel) and the SD Eastern Bhutan Coal Company Ltd (Coal mine at Deothang) showed they had contributed Nu.10 million and 13.5 million respectively towards society (as CSR) over a period of 7 years.

  The sales turnover for the last three years, i.e, 2009, 2010 and 2011 amounts to Nu. 1,052,819,267 and Nu.1,468,897,624 for M/s SD Eastern Bhutan Coal Company and DrukSaTair Corporation Ltd respectively. The average annual percentage of contribution towards the CSR against their turnover works out to meagre 0.398

Corporate Social Responsibility (CSR) against their turnover works out to a meagre 0.398 and 0.387 per cent amounting to Nu.1.4 million and 1.9 million annually for SD Eastern Bhutan Coal Co. and DrukSatair Corporation Ltd

and 0.387 per cent amounting to Nu.1.4 million and 1.9 million respectively. Such meagre contributions may not be significant considering the nature and scale of operations and environmental and social consequences of the mining operations and the extent of benefits accruing to the proponents.

e) In absence of a clear policy framework on environmental and social aspects of mining and since the concept of Corporate Social Responsibility is yet to be understood and practiced fully, there is no social justice done as local community who are most affected by mining activities hardly get fair share of benefits accruing from mining operations.

f) The MoEA has generally agreed to the audit finding and stated that the proposal is incorporated in the draft MDP.

6.8. Occupational Health and Safety

MMMA 1995 and MMMR 2002 specify Occupational Health and Safety Standards to ensure that all mining companies and private individuals comply with the health and safety requirements. Review of records and physical verification of mining sites revealed non-compliances of the following requirements:

6.8.1. Safety and Protective Gears:

In accordance with MMMR 2002,all the FMFS and EMP had laid down that the following Personal Protective Equipment (PPE) be provided and worn at site by the mine employees, viz.; helmets, protective footwear, gloves, goggles, ear plugs, dust respirators etc. However as observed during the visits of mining sites:

The PPE provided by the mining companies were limited to helmets at most sites and dusk masks in a few.

a) The PPE provided by the mining companies were limited to helmets at most sites and dusk masks in a few.

b) The compliance level was higher in bigger mines (captive) compared to the smaller mines. The DGM attributed this to better financial position of captive mine operators and long years of experience in mining industries as against those of smaller players in the industry.

c) Furthermore, the workers at mine sites had minimal or no awareness on occupational health and safety issues which indicate that the mine operators had no concern for the safety of the workers.

d) The mine operators explained that they provide PPE only to the permanent workers as temporary workers only work for a few months or days and do not return the equipment which has financial implication on the company. However, the acts and rules do not distinguish between permanent and temporary workers with regard to the safety. Non-providing of PPE to temporary workers poses significant risks to the health and safety of such workers. Any instances of harm caused to the unprotected workers remain unreported.

e) The MoEA has accepted the audit finding.

6.8.2. Water and Sanitation Facilities

Section 37 (ii) of the MMMA 1995 and section 158 of MMMR 2002 specify the requirement of providing basic water and sanitation facilities by stipulating as *'the lessee shall provide and maintain adequate numbers of clean latrines and a sufficient supply of cool and wholesome drinking water for all persons at the site'.* Site visits, however, revealed that:

a) With the exceptions of a few mines, there were no provisions of proper water within the mine sites. The employees and workers were found to be managing their need from nearby natural streams and rivers and others carrying their water from home.

b) Furthermore, there were no proper latrines provided in the sites and the workers had to resort to open defecation. Although, some of the mines have provided pit type latrines.

c) The MoEA have accepted the audit finding.

6.8.3. Dust Emissions

a) Section 159 of the MMMR 2002 states as *'the lessee shall take such all measures to control dust emissions at any work place and to suppress dust by spraying water or by other measures to ensure that workers are not exposed to harmful concentration of airborne respirable dust'.*

On the way to mine site in Bjemina

b) The mining regulation also stipulates the standards of dust emissions and

concentration level which is dangerous for humans to live and work in dust borne air.

> With the exception of a few bigger mines, there are no measures in place to contain the emission of dust

c) A wide range of mining activities generate dust in mine sites such as blasting, truck loading, transportation, crushing and conveying activities, vehicle movements in unsealed roads and exposure to wind in excavated areas.

d) The RAA observed that with the exception of a few bigger mines, there are no measures in place to contain the emission of dust fugitives from these sources. Some mines such as SD Eastern Bhutan Coal Company, Jigme Dolomite Mining, Druk Satair Gypsum mines and a few other captive mines had used the water spraying technique to suppress the dust. However, the local communities complained that water spraying was not done on regular basis.

e) Lack of adequate measures to contain dust emission at the mining sites had major impacts on the following:

❖ **Impacts on society**

As discussed above under heading 6.2 there are mines and quarries which are located very close to human settlements. Brief interaction with the local communities revealed that the dust emission is one of the biggest nuisances to their daily living. Many complained that the dust emissions also have major impacts on the aesthetic value of locality and surroundings especially during windy time of the day or the season.

❖ **Impacts on Health**

Research has revealed that there is strong correlation between elevated PM_{10} concentrations and higher than normal level of hospital admissions, respiratory illness, asthma attacks, as well as premature mortality in susceptible sub populations.

Jigme Dolomite Mine Site (Gomtu)

❖ **Impacts on vegetation**

Dust emission has direct physical impacts on local vegetation as the dust settles on and damages the stomata consequently limiting the photosynthesis process and ultimately destroying the local vegetation. The impact to local crops is similar to the impacts on other vegetation.

However, there is no comprehensive study done by any of the agencies including the National Environment Commission to ascertain the impacts of dust emissions from mining activities.

f) The MoEA has accepted the audit finding.

6.9. Non-monitoring of environmental quality

a) Section 182 of the MMMR 2002, *'the lessee or the mine manager of a mine shall be required to get the environmental quality in and around the mine lease area monitored regularly for air, water, noise, vibration and slope stability as specified in the environmental clearance'.* The result of the monitoring should be submitted to the Regional Inspector (DGM) every three months.

b) However, none of the mines have conducted such environmental quality monitoring thus far and the DGM too have not enforced the clause indicating failure on the part of both the mining companies and the DGM to implement one of the vital components of environmental management in mining activities.

c) The MoEA have stated that the mandate to monitor environmental quality lies with the NEC. The NEC however, have stated that monitoring of environmental quality is a joint responsibility of the proponent, the MoEA (the Competent Authority) and the NEC as per the National Environment Protection Act 2007.

7. Other deficiencies and lapses

Besides audit findings on administration and management of mines and on environmental and social aspects, the RAA also observed other deficiencies and lapses which included unauthorised mining of talc, surface collection actually operated as quarry and mining land in excess of leased area which were serious in nature as detailed below:

7.1. Unauthorized talc mining at Sukreti, Samtse

a) The Ministry of Education approved the construction of private Higher Secondary School at a closed talc mine site at Sukreti, Samtse following necessary verification by the Dzongkhag Education Officer, Samtse on 13th January 2010.

b) In February 2011 the Anti-Corruption Commission (ACC) received an anonymous complaint informing that the proponent was illegally mining talc in the disguise of school construction, and that the proponent was *'digging more than 100 meters into the earth deploying 4 to 5 Excavators and 12 tippers daily'* besides other allegations.

c) The joint team constituted to verify the complaints as directed by the ACC comprising officials from the Ministry of Education, the Department of Geology and Mines and Samtse Dzongkhag concluded that the proponent had deviated from the original construction proposal and was engaged in talc mining.

d) The team pointed out that the proponent had only built 1250 meters long river protection wall and another 600 meters river diversion wall. Based on the joint team's findings, the Ministry of Education immediately terminated the contract and the DGM was asked to levy the penalty as per the mining rules and regulations.

e) Accordingly, the DGM levied a penalty of Nu. 270,000.00. The RAA, on verification observed the following irregularities:

- As mentioned in the joint report, the proponent had only submitted a hand written sketch of the drawings and designs without proper scale and details of infrastructure.
- On site verification by the RAA, the site was not found feasible for establishment of a school as there was only limited space.
- Furthermore, the site was located across Sukreti River, which makes the site inaccessible during monsoon.
- As the proposed site was a prior talc mine site, the soil strata was unstable. Moreover, a small seasonal stream flowing straight to the construction site rendered the site more unsuitable.

f) As per the MMMA 1995, the fine required to be levied was on 8,500 MT talc representing total quantity dispatched rather than on stocked quantity of 90 MT only. Amount of fine to be levied was thus Nu. 25,000,000.00 i.e., twice the value of produce as against Nu. 270,000.00 levied with resultant short levy of fine of Nu. 25,230,000.00.

g) As of now, no restoration works have been carried out. Instead a huge land slide had occurred due to excessive digging for extraction of talc and a huge amount of overburden was found dumped at the site. Both the mining operation and the school construction works stand terminated. Photographic images as shown below depict the site conditions:

Bird eye view of the proposed school location

Talc extraction site left unrestored

7.2. Excess land in mining areas (35.78 acres)

a) The RAA, with the assistance of a survey engineer and surveyors from the DGM had measured nine mines and quarries across the country, on a random sample basis, considering the technical feasibility and time factor, using the latest surveying equipment, the total station.

Nine sites had excess land, the highest being 9 acres and lowest being 0.18 acre measuring to total of 35.78 acres was found in excess of what was initially leased

b) All nine sites that were measured had excess land, the highest being nine acres excess and lowest being 0.18 acre. In total, land measuring 35.78 acres was found in excess of what was initially leased. The details of excess land are provided in **Annexure B-9**.

c) Since all the 9 mines measured out of a total of 117 existing mines and quarries on a random sample basis had excess land, it is highly possible that remaining 108 mines and quarries will also have excess land. On average, each of the nine mines had an

excess land of 3.98 acres. Applying the average excess land of 3.98 acres, there could be total excess land of 465 acres.

d) This means that the individuals are mining in the excess land without paying the surface rents and Environmental Restoration Bond.

e) While the disparity of smaller area could be attributed to difference in use of surveying technology at the time of leasing and now, the same cannot be true for areas which have huge disparity. There is a need for conducting comprehensive survey of the entire mines and quarries of the country and updating the inventory accordingly.

f) The MoEA have accepted the audit finding and have stated that a resurvey exercise would be carried out and update the records accordingly.

7.3. Preparation of FMFS and EMP exclusively by Kalachakra Consultancy

a) As required under Section 22 of the MMMA 2002 a FMFS should be conducted by the proponent and approved by the DGM prior to granting any mine lease. The FMFS study would include a Mine Plan, Environmental Management Plan and a Mine Restoration Plan including other miscellaneous details on the proposed mining.

b) Except some captive mines such as Jigme Dolomite, PCAL, BFAL and a few others, all the FMFS have been found conducted by a single national consultancy firm named Kalachakra Consultancy, based in Thimphu. Based on the number of mines leased annually, during the years 2004 to 2011 i.e. in 96 months a total of 90 FMFS and EMP were prepared by the said consultancy firm, i.e. almost one report in each month. The number of such reports prepared ranged between 5 to as high as 15 per annum.

It appeared to the RAA that FMFS and EMPs were prepared only to fulfil the requirements in the mining Act without much value addition in mining management in the country

c) Since, FMFS and EMP are important documents providing vital information and plans of mining, socio-economic studies and environmental studies, it is imperative that comprehensive study of mining site and other aspects of mining is conducted prior to preparation of such reports.

d) Considering the number of reports generated, it would have been practically not feasible to carry out comprehensive study of site conditions and all other aspects of

mining. It appeared to the RAA that FMFS and EMPs were prepared only to fulfil the requirements in the mining Act without much value addition in mining management in the country.

e) As such the quality and accuracy of the reports prepared were questionable as may be transpired from the following:

- Many mining operators, on interview admitted that the mine plan and EMP has significant disconnect with the field realities and hence not able to abide by the requirements in the FMFS. This was corroborated from the fact that the consultant had overlooked many important components, especially consultation with local communities, designating waste dump site in gorges and near the water bodies and had included private lands within the mine plan map. This has resulted in public grievances and expressed disappointment for not consulting them.
- 8 out of 11 closed quarries due to either poor quality or premature exhaustion of minerals (discussed under 1.5) were prepared by Kalachakra Consultancy.

Haurikhola limestone mine

- Some of the FMFS and EMP prepared by the consultant had factually incorrect information, for instance, the EMP for Haurikhola on page 7 stated that *'there are no houses seen close by'* while discussing the impacts of mines on social environment. However, site verification of the mine site revealed that there are around six households located immediately above the mine site and some of their land had been severely impacted by the mining as shown in the photograph. This transpired that the study was not based on field visit.
- The EMP for Shadu-Mardu Talc Mine in Chukha Dzongkhag on page 7 stated that *'there are few houses about 500 meters away from the mine site'*. While the report is partially true, the report failed to acknowledge the existence of a house located immediately on the boundary of the mine site which is now severely impacted. The joint visit of site revealed that the villager had lost almost 0.50

acres of his land due to landslides directly triggered by mining activities, but had not been compensated till the date of physical verification.

- ☞ Similarly, the EMP for Paga-Ketolungpa Stone Quarry simply stated that the population will be shifted from the current location which was hardly 50 meters away from the quarry site. The study should have rather mentioned in full the complete details and process of relocation of the community. Further, there is no indication in the report that the members of the communities were fully involved while finalizing the report.
- ☞ The EMP of the Tshelingkhor stone quarry on page 9 stated that *'Quarry operation will take place in a remote location and as such will not be visible from the road.'*

  However, the stone quarry is located immediately above the Samdrupjongkhar-PemaGatshel Highway and is a major nuisance to the road users. The quarry site is highly visible from the highway that also impacted the aesthetic value.
- ☞ Designation of overburdens dump site indicated in FMFS and EMP in some of the mine site were either not permissible as per some other relevant legislations or practically not suitable. For instance, the designated overburdens dump site for Damchulum stone quarry, Thimphu was in the middle of the Damchulum stream that required diversion of the stream to accommodate dumping of overburdens. Dumping of overburdens on water body not only affects the aquatic flora and fauna, but also could have potential danger of causing floods and damaging the infrastructure downstream, the Thimphu Phuentsholing Highway, in this case.

  This is not permitted as per Section 10 (iv) of the Forest and Nature Conservation Act of Bhutan, 1995.

f) Finally, since Kalachakra consultancy is the only existing national firm with such competency, there is a danger of creating vacuum, should the firm close, for whatever reasons in future.

g) The MoEA have accepted the audit finding but have expressed that there is

Designated overburdens site blocking the natural waterways of the stream at Damchulum stone quarry

little solutions at the moment, since there are no other qualified national consultant to take up such studies.

7.4. Absence of Strategic Human Resource Planning

a) Human resource is central to any organization to achieve its objectives effectively. The management of scarce mineral resources in the country requires competent and dedicated pool of human resource as it involves social, environmental and economic issues. Furthermore, the scarce non-renewable natural resources have to be managed in a sustainable manner for inter-generational equity.

> Human Resource Management in the DGM lacked strategic focus and planning with resultant inadequacies and mismatch in skill, competence and strength.

Therefore, the DGM, more pertinently, the Mining Division requires adequate and qualified human resources to manage the sector more efficiently and scientifically. Equally, human resource also has to be enhanced in the private sector, they being the ones in implementing the mining regulations and policies at site.

b) However, human resource management in the DGM lacked strategic focus and planning with resultant inadequacies and mismatch in skill, competence and strength.

- ☞ Currently, except in the cases of a few captive mines, there are no qualified people at site who have the technical know-how to conduct scientific mining, despite the requirement in the mining regulation.
- ☞ The mining division under the DGM currently has seven graduate mining engineers and seventy seven mining inspectors, posted across the country. The DGM often attributed inadequate human resources; both at the head quarter and field level, as the primary reason for not being able to enforce the mining rules and regulations.
- ☞ The current mining inspectors are mostly class 8 to 10 passed candidates, except for the recent recruits of 14 who are class 12 qualified. These inspectors are provided a training course of one year duration by the department prior to their posting in various locations.

- ☞ The RAA noticed that most of the mine inspectors had difficulty in interpreting mine plans, environmental management plans and restoration plans, despite continual mentoring from the head quarter. Nonetheless, most have enhanced their trade through experience over the years.
- ☞ In contrast to the backdrop, the MMMR 2002, Section 101 provides that the regional and national inspectors should *'hold a degree in either mining engineering or geological sciences from an educational institution recognized by the government'*.
- ☞ In terms of Section 102 of the MMMR 2002, the current groups of inspectors are only qualified to be 'Dispatch Inspectors'.
- ☞ The mining regulations do not prescribe as what is an ideal ratio of inspectors and mining engineers to the number of mines in the country. It was observed that currently there is *one inspector for every three mines* and *one mining engineer for every thirty mines*, considering 209 existing mine sites and strength of 77 inspectors and 7 mining engineers.

c) In the absence of standards, it is difficult to state whether the existing strength and ratio is adequate, but it appears that the there is a gap (in numbers) of mining engineers to cater to the different responsibilities in the Division. However, the issue with the inspectors seems more with the quality than number, since one inspector for every three mine sites seem adequate, while comparing one site engineer to ten sites in the Dzongkhags.

d) The DGM should have proper strategic human resource planning and mobilize the scarce resources in a manner that would help achieve their objective in most effective and efficient way.

e) The MoEA have accepted the audit finding and have stated that efforts are continually being made to train people from both the Ministry and the mining companies so as to enhance scientific mining in the country.

7.5. Irregularities in highway widening

a) The various Field Divisions, Department of Roads (DoR) had awarded highway widening activities in four Dzongkhags to the following parties as shown below:

Table 8

Sl. No	Dzongkhag	Location/chainage	Awarded to
1	Bumthang	Km 264.03 along Jakar-Ura Highway	M/s Bangpa Construction
		Km 266.70 along Jakar-Ura Highway	M/s Ugyen
2	Tsirang	Above chachey along Wangdue-Tsirang Highway	DoR
3	Trongsa	Tshangkha along Trongsa-wangdue highway	NRDCL
		Dzongkolum along Trongsa- Zhemgang highway	NRDCL
		Thomangdra along Tronsa-wangdue highway	DoR/NRDCL
4	Wangdue	Km 455-456 along Tekizampa- Trongsa highway	Mr.KuenleyGyeltshen
		Km 442-452 along Tekizampa-Trongsa highway	DashoKezangWangchuk
		Km 463-4630.40 along Tekizampa-Trongsa highway	Mr.RinchenDorji
		Km 439-440 along Tekizampa-Trongsa highway	MrsDawaDema

b) The intention of awarding the works to third parties for highway widening was to salvage the construction materials rather than dumping downhill. Despite such noble intention, the RAA on site visits observed the following inconsistencies:

- The highway widening was not based on the overall plan of the Field Road Maintenance Division. It was observed that, the DoR had permitted widening even on stretches where it was wide enough and not necessary. In one of the stretches on Tekizampa-Trongsa highway, the widening works were carried out, where the widening was already done by the DoR only recently. In fact, the contractor was found widening the road wherever there was good deposit of stones.
- The contractors have not maintained the distance of Roads Right of Way (RRoW) of 50 feet as verified at site and shown in the photograph.
- The widening had gone deep into the landscape wherever

Tekizampa- Trongsa highway

there were abundant deposits and the road was left narrow if there were no deposit of good stones.

- One of the clauses in the Agreement states that, *'the applicant shall adopt Environmental Friendly Road Construction (EFRC) method and shall be in line with the Environment Code of Practice while carrying out widening works'.*

c) Contrary to the above requirement under the agreement, the contractor had dumped the overburdens below the road causing major damages to the environment especially, the vegetation and water bodies as shown in the photographs:

Thomangdra(Trongsa-Wangdue highway)

Thomangdra (Trongsa-Wangdue highway) affecting the stream

- The widening works have caused major inconveniences and risks to the road users as there were no proper signage and temporary gates, except at one stretch on Tekizampa-Trongsa highway. In the absence of signage on timing of road opening or closure, it has caused confusion and inconveniences among the travellers; having to wait for long hours on the road for passage.
- Further, the contractors have left loose and hanging rocks posing major risks to the road users. Besides the risks of falling boulders, there is a risk of major road block, especially during monsoon season.

d) The lapses clearly indicate that the Field Divisions of the DoR have not enforced the contract agreement and have failed to monitor the works despite having major impacts on road users and environment.

e) The MoEA have accepted the audit finding and have stated that a decision was made in the joint meeting with DoR that road widening permits would not be issued to the applicants who intends to extract stones on commercial basis

7.6. Surface collection operated as quarry- Dhur, Bumthang

a) The Dzongkhag Forest Office, Bumthang had sanctioned a site (approximately 1 acre) in Dhur, Bumthang for surface collection of stone for construction purpose. As specified in the guidelines for surface collection of stone and sand, *'surface collection means the collection of loose boulders, stone and gravels from riverbed and land surface without involving excavation machinery and use of explosive'*.

b) However, it was found that the contractor was excavating the sub-surface to collect the construction materials by deploying an excavator irregularly. In fact, the site was operated as any other stone quarry in the country, creating benches from the top as shown in the pictures below:

Surface collection in Dhur operated as stone quarry

c) The site was located just above Dhur farm road that had caused inconvenience to the road users due to soil spillage on the road surface. It also poses environmental risks, especially during summer, as Chamkharchhu that flows below the road could scour and damage the road due to soil erosion.

d) It was also learnt that NRDCL had earlier requested the same site for stone quarry, but the local communities had objected to it and was not allowed.

e) As explained, the Dzongkhag Forest Officer was not aware of the situation. This indicates that the officials had not monitored the activity as required under the regulation and allowed excavation of sub-surface instead as against the license issued for only surface collection.

f) The MoEA have stated that the site in question has been closed and no stone extraction allowed.

CHAPTER 3

Recommendations

Based on the audit findings and the interactions of the Audit Team with the relevant officials and members of the local community, the RAA has come up with following recommendations. These are intended to improve the existing laws, rules and regulations as well as systems and practices for better and sustainable management of leasing of Government and GRF land for mining, economic and other developmental activities.

The recommendations provided by the RAA are not the 'must adopt', and exhaustive lists of recommendations. In the common national interests, all concerned should strive to explore creative solutions to be able to utilize the scarce resources in most effective manner that is socially equitable and economically beneficial for all the present and future citizens of the country. As the report is divided into part A and B, the recommendations are also presented in the same order.

PART A: Recommendations pertaining to leasing of Government and GRF land for development purpose

1. Land Act and other relevant acts should be reviewed and updated

The NLC should consider reviewing the adequacy and consistency of existing provisions contained in the Land Act 2007 vis-à-vis other acts governing leasing of Government and GRF land. Absence of ceiling on leasing of land, longer duration of lease and the nature of activities carried out had provided scope for abuses of leased land. Considering the fact that many individuals have acquired huge areas of land without much development activities carried out and that unauthorised subletting and other activities are being carried out in many leased land, it is imperative that existing laws are reviewed and updated with strong measures put in place against abuses. In particular, following aspects need proper review:

- Since there is no ceiling on leasing of land, there should be proper mechanism put in place to determine the land actually required for the proposed activity so as to ensure that excessive land is not approved.
- Types of structures allowed to be constructed in the leased land should be clearly specified.
- The mode and the extent of compensation, if any, in the event of early termination or closure of lease or operations should be specified.

® The act allows for transfer of lease, this has given rise to successive transfers of lease without any economic or development activities there by defeating the very objective of leasing. This provision needs to be reviewed and revised to include provisions to ensure that specific economic and development activities for which the land is leased are carried out within the specified time frame. There should also be restrictions or conditions placed on transfer of lease during the lease period including minimum period of retention by the original lessee and need and evidence of specified activities carried out.

® The Act allows local authorities to develop their own rules and regulations. Unless there are broad policies or framework developed, there will be varying and inconsistent practices which may not be appropriate. It may be appropriate to have uniform and consistent rules or at least broad guidelines providing basis for developing rules and regulations by local authorities.

2. There should be a clear Policy framework on leasing of land

Land and mineral resources being scarce natural resources, it is only prudent that these resources are used in a productive and sustainable manner. As such it is necessary that a clear policy framework is in place which amongst others specifies the policy objectives of leasing of land and mineral resources, areas of priority, need for identifying land suitable for leasing, intergenerational equity, fair and equitable distribution of country's natural resource amongst citizens, macro-economic considerations and other relevant issues. Since lease is granted for a specified period, it is necessary that obligations of lessor and lessees at the expiry of lease term are also appropriately recognized.

3. Inventory of leased land should be updated

The NLC as an apex body in the Land administration in the country should require the relevant agencies to maintain an updated inventory of the leased land in the country. A master document should then be compiled and maintained at the NLC which correctly corresponds to the ones at the fields so as to facilitate monitoring and supervision in the field, land management planning and land use policy.

The NLC should initiate an exercise to find out those lands that were leased long before but not recorded anywhere as these lands could be abused through unscrupulous means which are not permissible as per the Land Act 2007 of the Kingdom of Bhutan.

4. The NLC should rationalize the lease rents

The NLC should review and rationalize the existing lease rent structure considering the location, nature of activities, volume of business, market value of such land, government policy priority etc. The variation of rate in commercial activities, especially in Thimphu and rest of the Class A Thromdes are significantly huge. Also, the NLC should have better definition and clarity of different activities such as, industrial, commercial, social etc. so that rates are charged fairly and objectively.

There is also confusion on lease rents of private schools as these institutions are categorized as 'social' activities and rents fixed at Nu.1 per sqft per annum. Since private schools also have profit-motive the need for substantial subsidy in the form of reduced lease rent may need to be reviewed. Alternatively, lower lease rent should be subject to conditions that school fee structures will be kept reasonable and affordable particularly when many private schools may not be enjoying the benefit of leased land. The NLC should ensure parity in the benefits to the private schools.

The lease rate for the GRF land (business activities outside the Industrial area) is found to be too low ranging from Nu. 0.05 to a maximum of Nu. 0.20 per sq. ft per annum. Such a low rate coupled with no prescribed land ceiling and duration, is likely to put undue pressure on limited land resources without actual social or economic advancement but rather caused by speculative motive to acquire land on lease. Therefore, the NLC in consultation with other relevant agencies should study the issue and revise the lease rent to a more appropriate and rational level.

5. Coordination among the relevant agencies should be strengthened

There are multiple agencies involved in the process of leasing according to the purpose and location of lease. As outlined in the findings, there is lack of coordination among these agencies. For instance, the lease agreements have not reached the respective Dzongkhags from the RTIOs that had led to non-enforcement of many important clauses in the lease agreements. Absence of comprehensive and centralized inventory of lease land may also be attributable to lack adequate coordination amongst these agencies. There is, therefore, strong need for establishing an effective coordination mechanism amongst National Land Commission and other relevant ministries and agencies.

6. Monitoring and supervision of the leased lands should be strengthened

Non-compliance of lease rules and regulations in most of the leased lands such as encroachments, use of land for purposes other than those specified in the agreements,

sub-lease, non-development of the area within or even after two years and many more lapses indicate lack of monitoring over the uses of leased land by Government agencies.

The Ministries and agencies concerned should, therefore, strongly monitor the uses of leased land and take appropriate enforcement actions where necessary.

7. The NLC should rationalize size of land for leasing by activities and location

Currently, there are no appropriate benchmarks or basis used to determine the size of land required for lease. The sizes of land leased were varying even for similar activities. For instance, the land allotted for petroleum distribution varied from as low as 0.15 acre to 2.25 acres. Similarly, the variation in size of land allotment for establishing stone crusher unit was from 0.85 acre to 26.80 acres.

In view of above, the NLC may stipulate minimum and maximum land size for certain specified activities taking into considerations, amongst other factors, the location, size and nature of business.

8. Article 253 of the land Act 2007 on leasing of Tsamdros should be enforced uniformly

Currently, of the 1.33 million acres of Tsamdros in the country, only 337.06 acres have been leased and rents collected. As per the Land Act 2007, the Tsamdros are to be reverted to the GRF land and lease should commence from 2017 following payment of cash compensation to the tsamdro owners.

There was no uniformity in application of rules as some of the owners have already obtained their past tsamdros on lease whereas the majority is still using it without paying any lease rents. Those who have taken on lease also have not been compensated so far as mandated under the Act. The NLC should therefore ensure that all tsamdros are reverted to the GRF land and payment of compensation made to the owners of tsamdro.

9. Leased lands should be properly measured and demarcated

Most leased land other than mining leases have not been measured and demarcated properly. As required by the lease regulations, the agencies concerned should re-measure all the leased land area and set proper demarcation to avoid encroachment and other complications in the future. The NLC should institute appropriate accountability and reporting mechanism, so that agencies responsible are held accountable for non-enforcing the regulations and obligations under the lease agreement.

10. The encroached area should be dealt as per Article 299 (e) of the Land Act 2007

Article 299 (e) of the Land Act 2007 states that *'encroachment of a state owned and private registered land'* amounts to an offence of petty misdemeanour'. The NLC should carry out comprehensive survey of leased land and invoke the above article to deal with the cases of encroachment.

Furthermore, the NLC should also fix the accountability on the monitoring agencies for not enforcing the regulation.

11. The unauthorized use of government land should be reverted to the government

The unauthorized use of government land by individuals, corporations and companies is a flagrant violation of the rule of law of the country. The NLC should investigate the matter and take appropriate actions against cases of unauthorised uses of land revoking the lease.

Since the agencies responsible failed to identify and take appropriate actions on such cases indicating indifferent attitude in monitoring the uses of leased land, the NLC should establish proper accountability system to address such laxity.

12. NLC should take appropriate decisions on 380 NWF dwellings constructed on the Government and GRF land

While some dwellings were constructed on the DoR registered land and some on leased lands, 380 dwelling units constructed on Government and GRF land were neither leased nor DoR registered.

The NLC and the DoR, Ministry of Works and Human Settlement should review such cases and arrive at an appropriate decision to ensure that all such constructions on Government and GRF land are approved and regulated appropriately. This would also facilitate monitoring of activities and maintaining adequate inventory of leased land.

13. The ownership of land in the township must be established

The land currently occupied by 12 townships across the country is neither on lease nor privately owned. Historically, these settlements were allowed by the government to cater to the economic needs of the locality but the same have not been regularized.

The NLC in consultation with relevant agencies should take appropriate decision to regularize and regulate the leasing and establishment of township in Government and GRF land.

14. Land occupied by DANTAK, GREF and IMTRAT should be measured and inventoried

The NLC should compile the area of total land occupied by DANTAK, GREF and IMTRAT across the country and maintain proper inventory. Further, in order to maintain uniformity, it may be appropriate that all lands occupied by these projects are brought under proper lease and adequate inventory of land leased for such purposes maintained.

15. Greater awareness should be created on leasing policy, obligations and benefits of lease

There is apparently lack of wider advocacy and adequate awareness amongst Bhutanese citizens on the leasing policy, availability and uses of Government and GRF land on lease, benefits and obligations of lease etc. As such the potential benefits of leasing policy may not accrue to the society. The NLC and sectors responsible should therefore consider creating awareness amongst Bhutanese citizens on the leasing policy uses and benefits and obligations of leasing of Government and GRF land through wider advocacy. This would encourage entrepreneurship in the rural community that would go a long way in alleviating the rural poverty in the country and discourage people from migrating to the urban areas.

PART B: Recommendations pertaining to leasing of Government and GRF land for mining and quarry operations

16. DGM should auction mines and quarries based on proper study

Currently save a few mines, all other mines and quarries are leased out directly to proponents on first come first basis which impede economy, transparency, competitiveness, fairness and equity in the use of limited natural resources. Given the fact that the mines allotted through public auction resulted in huge financial gain to the government in terms of manifold increase in the lease royalty, the rationality and merit of existing system of allotting most mines on first come first serve basis needed to be thoroughly reviewed. Moreover, the MMMA 1995 also stipulates requirement of granting lease of mines and quarries through public auction though providing flexibility of leasing on 'first come first serve' basis. Since the system of direct leasing of mine and quarries is fraught with risk of misuses and abuses, favouritism and nepotism and therefore prone to public dissatisfaction and criticism, it is advisable that mines and quarries are leased

through a transparent and competitive process providing equal opportunities to all willing to participate.

The DGM and the Ministry of Economic Affairs may therefore undertake a comprehensive study considering all aspects including need for protection of smaller private entities, size and value of mineral deposits etc. It is also necessary that the DGM adequate study and exploration of the mineral deposits of the entire country is carried out and full information on the extent and size of the mineral deposits in the country is collected.

17. DGM should harmonize the Relevant Acts and Regulations

Currently there are inconsistencies in the Acts and Regulations of the DGM, the NEC and the local government. The roles and responsibilities of various agencies and units are not clearly defined and understood. The DGM as the lead agency in the mining industry should coordinate in harmonizing these acts and regulations which also facilitate delineation of responsibilities and accountability amongst various agencies thereby promoting greater sense of accountability and responsibility and ultimately enhancing service delivery system in the Department.

18. DGM should enforce the MMMA 1995 and MMMR 2002 in whole

As pointed out in the findings, many of the provisions in the Acts were either not found enforced at all or enforced with weak intent. The DGM should ensure that the Mining Act and its regulations are enforced in its true spirit. Any provisions in the act no longer relevant and practicable to implement should be reviewed and revised. There is therefore a need for establishing adequate systems and mechanism in place to monitor and enforce compliance of the Act and regulations.

19. DGM should develop better monitoring and supervision system of mining activities

As obvious from the number of observations on non-compliances of acts, regulations and lease obligations by the mining companies, the existing system of monitoring of mining and quarry operations by the DGM is not adequate. Therefore, the Department should have a system in place to ensure that mining inspector carry out monitoring of mining operations regularly and take appropriate actions against cases of violations of mining act and regulations. They should be held accountable for their failure to monitor the mining operations and taking actions against cases of violations and non-compliances.

20. DGM should review the practice of transfer of mines and quarries

The existing practice of allowing transfers of lease immediately or soon after entering into lease agreements encourages unfair and unhealthy practices. Although, the MMMA 1995 allows for transfer, there are no conditions or restrictions placed on such transfers.

- ® Since frequent transfer of mining lease without actual mining operations defeats the very purpose of allotting mines and quarries on lease, the Act should amended incorporating provisions against unjust and unfair transfers and also specify minimum period of retention of such mines and quarries by the original lessee;
- ® The DGM should also be vigilant, whether the mine is genuinely transferred, sold or operated through fronting;
- ® To counter Fronting in mining and quarry operations the DGM should monitor the accounts, mining activities in the field and movement of funds to and from the lessee's accounts; and
- ® DGM should also require the private individuals and companies carrying out mining and quarry operations on lease to submit periodic report on export earnings and *inflow and outflow of hard currency as well as of INR for controlling fronting in mining*.

21. Mining should be in accordance with the concept of 'Sustainable Development'

Most of the mines and quarries were leased without adequately analysing and considering the environmental and social impacts. Sustainable Development follows the triple bottom line, namely the economy, society and environment. The DGM should therefore be mindful of societal justice and environmental sensitivity besides the economic value accruing from mining operations. It is also imperative that intergenerational equity is maintained in extracting non-renewable natural resources.

22. Clear procedures should be framed for obtaining public clearance

Public clearance is a social license to operate the mine in a locality. Due to absence of clearly laid down process and steps in obtaining public clearance, there are confusions and dissatisfaction amongst the local communities. It would therefore be necessary that standard procedures and minimum requirements are specified for the public consultation and clearances. There is also a need for the DGM to coordinate and synchronize with other agencies such as the NEC so as to facilitate meaningful public consultation on

matters of environmental, public and societal concerns. The process should also ensure that undue pressure is not exerted on the local community for giving their consent.

23. Compliance of occupational health and safety standards should be strictly monitored

The occupational health and safety standards are usually not found strictly implemented exposing the workers to possible health and safety risks. The DGM should ensure that mining companies and workers in the mine sites adhere to the occupational health and safety standards as required under the MMMR 2002, FMFS and EMP. Besides infusing the sense of awareness, the DGM should strictly enforce the existing occupational health and safety standards by regular monitoring and levying penalties for failure of adherence.

24. Dust emission should be monitored and kept within the acceptable limit

Dust emission is not found properly controlled and brought to acceptable level thereby exposing workers and nearby community to health risk and damaging aesthetic of the area. Therefore, the DGM should ensure that all private individuals and companies engaged in mining and quarry operations maintain dust emission standards as a matter of concern and priority. ***The Government should also require larger mine operators to blacktop the roads in and around the settlement to ease and control the dust pollution***.

25. DGM should ensure that mining is strictly conducted as per Mine plan

As mentioned in the findings, many mining companies had not adhered to the mine plan, especially the formation of benches with resultant adverse environmental impacts. The DGM should ensure that the height and the width of the benches are maintained according to the FMFS and mining is strictly carried out as per the original mine plan. Since environmental restoration works of mines are either not carried out at all or not carried out properly in accordance with the EMP, prompt and strong actions should be taken against defaulters. It must also be made clear that ERB is not a substitute for actual Environmental Restoration of Mines and it is obligatory on the part of lessees to carry out restoration works as per the EMP.

26. DGM should resurvey and measure the area of existing mines and quarries

The joint measurement of some mining area carried out on a selective basis revealed excess area occupied as compared to leased area. Therefore, the DGM should consider a nationwide re-survey of the existing active mines and quarries as the joint team found that all those measured sites had excess land. Following the re-survey, the DGM should

allot only the leased area or in cases excess land are absolutely necessary, the levies such as surface rent and ERB should be revised accordingly upon due approval from the National Land Commission for leasing additional land.

27. Mines and quarries should not be leased too close to the highway

There were cases of leasing of mines and quarries that are found to be too close to the highway. Mining and quarry operations along the highway have been posing risks and causing inconveniences to the users of roads and those working in construction and maintenance of road. The DGM should not allow mines and quarries along the highway considering its risks and inconveniences to the road users and others alike. The Department of Road should also review their system of road clearance as these quarries adversely impact the road and pose potential risks to commuters.

28. Environmental Restoration Bond should be collected on time

The ERB were not found collected on a timely basis with resultant overdue amount of Nu. 60.00 million. The DGM, besides collecting the outstanding ERB of 60 million should ensure that henceforth it is collected and deposited on time. Non-collection of ERB could result in non-carrying out of environmental restorations of mines and quarries. As such, it should be ensured that the amount of ERB is collected without fail.

29. Environmental Restoration Bond should cover at least the cost of restoration works

The basis of calculating the amount of ERB is not rational and do not reflect the full environmental restoration cost. The ERB should ideally cover the entire environmental cost considering the damage it wrecks on the mining site and its vicinity. The system of calculation of ERB and usage of ERB may be made more transparent.

30. Quality of consultancy service on FMFS should be ensured

The quality of FMFS and FMP reports submitted by the proponents were found deficient in many respects. The DGM should scrutinize and approve the FMFS report only if the report is reflective of the ground reality. Since there is only one consulting firm at present preparing FMFS and EMP, the DGM should also explore and encourage establishment of other national consultancy firms which may bring in competition and enhance quality of reports.

31. The DGM should strengthen the HRM in mining Division

The DGM lacked a well thought out strategic human resource planning with resultant shortage and mismatch of skills including in key positions. Given the vast mandate, the DGM should develop strategic human resource plan so as to develop human resource capacity of dedicated and competent people of requisite mix. Considering non-compliances of FMFS and EMP by the mining companies, it is necessary that the DGM also focuses on strengthening the qualification and training of its mining inspectors.

32. Environmental impact assessment should be carried out to ascertain the actual impact of mining and quarrying operations

In absence of a system of carrying out comprehensive environmental impact assessment, the exact nature and extent of environmental, social and other impacts of mining and quarry operations have not been ascertained as yet. Though, many of these adverse impacts are visible.

It is, therefore, necessary that agencies concerned strengthen their capacity and carry out such studies which would help informed decision making and putting measures in place to mitigate adverse environmental and other impacts of mining and quarry activities.

33. Permission to extract mineral should not be given on ad-hoc basis

The DGM had granted permission to extract and dispatch talc to a private individual who was supposed to construct a private Higher Secondary School in a closed talc mine at Samtse. The proponent had extracted and sold huge quantum of talc in disguise of school construction. According approval for carrying out mining operation in a school construction site without fulfilling requisite procedures for allotment of mines was inappropriate and irregular. The DGM should, therefore, ensure that extraction of mines in the course of carrying out other developmental activities should be subject to detailed study and investigation of the site by the DGM to establish the extent of mineral deposit and value thereof besides complying with the requisite procedures including obtaining the environmental and public clearances. Normally, permission to extract mines in such projects should be given only if the quantum and value of such mineral is minimal. Should there be large deposit of mines and minerals, implementing other projects in such sites prior to extraction of mines may not be appropriate.

34. Corporate Social Responsibility should be integrated in the mining laws, rules and regulations

The concept of Corporate Social Responsibility is yet to be internalized and put in full practice which is not consistent with international best practices. While some ad-hoc initiatives were being made by some mining companies through cash and kind contributions to the local community, the same were found to be meagre considering the scale of operations and possible impact on the environment and lives of the local community. Moreover, such arrangements lacked long term commitments and trusts.

It is, therefore, imperative that the concept of corporate social responsibility is recognised and reflected in the relevant laws, rules and regulations. It may also be desirable that depending on the scale of operations, particularly for mining operations, the minimum level of contributions such companies should make is prescribed to compensate the local community for adverse impacts of mining operations and use of scarce natural resources in the vicinity.

CHAPTER 4

Conclusion

Leasing of government land has been an important initiative of the Royal Government of Bhutan in providing access to land and encouraging economic activities which have potential to accelerate socio-economic development of the country. Leasing of Land had provided avenues for pioneering and augmenting commercial, industrial and other socio-economic developmental ventures. This had contributed to national exchequer in the form of taxes, royalties, mineral rents and dividends besides generating employment and export earnings. Many mineral based companies have been established which have provided needed stimulus to the industrialisation and socio-economic development of the country. Leasing system has also provided avenue for small scale commercial farming for rural community.

However, absence of a clear policy framework for leasing, existence of multiple laws, rules and regulations and inconsistencies thereon, involvement of multiple authorities and agencies as well as long duration of lease period had rendered leasing operations cumbersome and complicated.

There were instances of misuses, abuses and disrespect to policies and legal requirements. Government land was found occupied and used without lease or specific authority. Absence of reliable and comprehensive inventory of leased land and inadequacies in monitoring and enforcement actions had provided opportunities for abuses of leased land including encroachment and unauthorised uses. Mining and quarry operations were being carried out close to human settlement and highways causing damages and threat to environment, public and private property, inconvenience to commuters and health and safety of communities. The leasing operations had also come under criticism and scrutiny of media, public as well as that of oversight bodies.

The state of management and control of leasing of Government and GRF land, usage of leased land and mineral resources and compliance with environmental and social aspects has not been found to be satisfactory.

Notwithstanding the shortcomings, there exist a great opportunity to promote sustainable and equitable management and uses of land and mineral resources having regard to intergenerational equity. A clearly laid out policy framework and coordinated and concerted effort at all levels with effective monitoring and enforcement mechanism will go a long way in promoting sustainable and equitable management and uses of Government land and mineral resources of the country.

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