

Report on Review of Surface Collection and Dredging of Riverbed Materials (RMB)



DISCLAIMER NOTE

The review was confined to surface collection and dredging of riverbed materials (RBM) along the southern borders. The audit was based on the audit objectives and criteria determined by the audit team and the findings are based on the information and documents made available by the DFO, Gedu, DFO, Samtse, RTIO, Phuentsholing, NRDCL, Thimphu, Regional Manager, Phuentsholing, DGM, Thimphu, Phuentsholing, Samtse, Regional Office, (DoR), Phuentsholing, Dzongkhag Administration, Samtse, & Samtse, RRCO, Samtse, RRCO, Phuentsholing, RRCO, Samdrupjongkhar and RRCO, Gelephu.

This is also to certify that the auditors during the audit had neither yielded to pressure, nor dispensed any favour or resorted to any unethical means that would be considered as violation of the Royal Audit Authority's Oath of Good Conduct, Ethics and Secrecy.



རྒྱལ་ཁབ་ལྷན་ཁྲིམས་འཛིན་པའི་འཕྲིན་པོ།
ROYAL AUDIT AUTHORITY



Bhutan Integrity House
Reporting on Economy, Efficiency & Effectiveness in the use of Public Resources

RAA/AG-SP/07/2019-2020/077

Date: 20 September 2019

The Hon'ble Minister
Ministry of Agriculture and Forests
Thimphu

Subject: Audit Report on Review of surface collections and dredging of riverbed materials (RMB) in Phuentsholing and Samtse

Your Excellency,

Enclosed herewith, please find a copy of report on review of operation of **surface collections and dredging of riverbed materials** in southern border of Phuentsholing and Samtse for the period from January 2015- October 2018. The review also included the export of riverbed materials that was permitted by the revised Forest and Nature Conservation Rules and Regulations (FCNRR 2017) from 1 January 2017.

The review was conducted with an objective to ascertain whether due regard was accorded and comply with applicable Laws and regulations in management and operation of surface collections and dredging of riverbed materials. The RAA reviewed the adequacy of legal and policy instruments, coordination amongst stakeholder besides the monitoring and enforcement mechanism in place.

During the period, the Department of Forest and Park Services (DoFPS) had granted approval to a total of 91 private parties for the surfacing collections and dredging of RBM besides the NRDCL and Phuentsholing Thromde. The audit team visited surface collection sites falling within the jurisdiction of Divisional Forest Office, Samtse and Gedu.

In an attempt to present a balanced and fair reflection of operation of surface collections process, the report divided into two parts as briefly highlighted below:

*"Every individual must strive to be principled. And individuals in positions of responsibility must even strive harder."
- His Majesty the King Jigme Khesar Namgyel Wangchuck*

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Part I: Initiatives and Positive Developments

Some of the positive developments noticed during the review are briefly highlighted below:

- Cross border illegal operations due to large accumulation of riverbed materials in the southern belt and user right issues have been addressed to a great extent;
- Channelized river flow and did not witness major flash floods in 2017 and 2018;
- Started earning foreign currency, income generation and creation of employment;
- Revenue of Nu 9.43 million was generated in the form of royalty and export fees, and
- Export earnings aggregated to Nu 3,328.75 million from the export of 3,031,915 MT

Part II: Lapses and Deficiencies

The RAA's review also noticed lapses and deficiencies that are primarily rooted to inadequacies in the legal and regulatory framework governing the operation of surface collections further exacerbated by weak enforcement and administration of relevant rules and regulations by relevant authorities as briefly mentioned under:

- Conflicting legal mandates creating implementation difficulties to stakeholders;
- Inclusion of 'surface collection and dredging of riverbed materials' in the revised Forest and Nature Conservation Rules & Regulations 2017 not in conformity to relevant Acts;
- Lack of standardized capacity of truck load led to under-realisation of royalty;
- Non-compliance and enforcement of mandatory Clearances;
- Differing modes of award of surface collections and dredging of riverbed materials, and
- Lack of monitoring and coordination among stakeholders;

The preliminary audit observations was issued to the Ministry of Agriculture and Forests, Ministry of Economic Affairs, Department of Geology and Mines, Regional Trade and Industry Office on 12 March 2019 and subsequently conducted audit exit meeting on 30 April 2019. We have received responses on the stipulated timeframe, and the report had been finalized after reviewing and incorporating comments and justification made available.

The RAA would appreciate receiving the **Management Action Plan (MAP) with definite timeframe for implementation of each audit recommendation on or before 25 December 2019. We would also like to request the Ministry to identify officials and Department/Divisions responsible for implementation of each recommendation and submit the duly signed Accountability Statement along with the Management Action Plan (as attached in Appendix I and II).** In the event of non-receipt of the Accountability Statement or responsible officials not identified, the RAA shall fix the responsibility for implementation of the recommendations on the Head of the Agency upon expiry of the deadline for submission of action plan stated herein. The RAA will follow-up implementation of the recommendations based on the timeline identified in the **Management Action Plan** submitted by the stakeholders concerned. Failing to adhere to the timeframe for implementation of each recommendation may result in taking appropriate actions, which may include suspending audit clearances to the officials held responsible.

We would once again like to acknowledge officials of DGM, NRDCL, DFO, Samtse and Gedu, RRCOs, RTIOs and individual officials for extending full cooperation and support to the audit team which facilitated the completion of audit.

Yours Sincerely,

(Tshering Kezang)

AUDITOR GENERAL

Copy to:

1. The Hon'ble Lyonchhen, Royal Government of Bhutan, Thimphu
2. The Hon'ble Gyalpoi Zimpon, His Majesty's Secretariat, Tashichho Dzong, Thimphu
3. The Hon'ble Speaker, National Assembly of Bhutan, Thimphu
4. The Hon'ble Opposition Leader, National Assembly of Bhutan, Thimphu
5. The Hon'ble Chairman, National Council of Bhutan, Thimphu
6. The Hon'ble Minister, Ministry of Economic Affairs, Thimphu
7. The Secretary, Cabinet Secretariat, Royal Government of Bhutan, Thimphu;
8. The Secretary, Ministry of Economic Affairs, Thimphu
9. The Secretary, Ministry of Finance, Thimphu
10. The Secretary, Ministry of Agriculture & Forest, Thimphu
11. The Director General, Department of Geology and Mines, MoEA, Thimphu
12. The Chief Executive Officer, NRDCL, Thimphu
13. The Director, Department of Revenue and Customs, MoF, Thimphu
14. The Regional Director, RRCOs, Phuentsholing & Samtse
15. The Regional Director, RTIO, Phuentsholing
16. The Chief Engineer, Regional Office, DoR, Phuentsholing

TITLE SHEET

- | | | |
|----|---------------------|---|
| 1 | Title of the Report | : Report on Review of Surface Collection and Dredging of Riverbed Materials (RBM) in Phuentsholing and Samtse |
| 2. | AIN | : 16196 |
| 3 | Audited Entities | : Divisional Forest Office, Samtse
: Divisional Forest Office, Gedu
: Regional Trade and Industry Office, Phuentsholing |
| 4 | Schedule of Audit | : October 10, 2018 to December 31, 2018 |
| 5 | Audit Team | : Sonam Chopel, Sr. Auditor, OAAG, PL
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: Chimi Dorji, Dy. Auditor General, DPCA |

GLOSSARY OF ABBREVIATIONS & ACRONYMS

1. FNCA : Forest and Nature Conservation Act 1995
2. M&MMA : Mines and Mineral Management Act 1995
3. EAA : Environmental Assessment Act 2000
4. NEPA : National Environment Protection Act 2007
5. ECRP : Environmental Clearance Regulation of Project 2016
6. MDP : Mineral Development Policy 2017
7. R&RR : Roads and Rules and Regulations 2016
8. PRR : Procurement Rules and Regulations 2009
9. FNCR : Forest and Nature Conservation Rules of Bhutan (FNCR) 2006
9. FNCRR : Forest and Nature Conservation Rules and Regulations 2017
10. MoAF : Ministry of Agriculture & Forests
11. MoEA : Ministry of Economic Affairs
12. NEC : National Environment Commission
13. DoFPS : Department of Forest and Park Services
14. DoR : Department of Roads
15. DFO : Divisional Forest Office
16. DGM : Department of Geology & Mines
17. RTIO : Regional Trade & Industry Office
18. RRCO : Regional Revenue & Customs Office
19. NRDCL : Natural Resources Development Corporation Limited
20. FC : Forestry Clearance
21. EC : Environment Clearance
22. CoO : Certificate of Origin
23. DAA : Dzongkhag Administration Approvals
24. RBM : Riverbed Materials
25. MTs : Metric tons
26. T/Ls : Trucks Loads
27. USD : US dollar
28. Nu. : Ngultrum
29. GFPMO : General Forest Produce Movement Order

- 30. FIR&MS : Forestry Information Resource & Monitoring System
- 31. Cum : Cubic meter
- 32. Cft : Cubic feet
- 33. ISSAI : International Standards of Supreme Audit Institutions
- 34. OAAG : Office of the Assistant Auditor General
- 35. RAA : Royal Audit Authority
- 36. GNH : Gross National Happiness
- 37. ADB : Asian Development Bank
- 38. CDCL : Construction Development Corporation Limited
- 39. DHI : Druk Holding Investment
- 40. FDCL : Forestry Development Corporation Limited
- 41. CA : Competent Authority
- 42. OAG : Office of the Attorney General

- (i) Riverbed Materials (RBM) refer to stone boulders, gravels, stone chips, & stone dust;
- (ii) Private Parties refer to parties with surface collection dredging of Riverbed Materials approvals;
- (iii) Exporters refer to parties who buy RBM from Private parties and Crusher Plants and export
- (iv) Domestic consumption refers to rural consumptions and commercial purposes within country;
- (v) Exports refer to exports of RBM to India and Bangladesh

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EXECUTIVE SUMMARY

As mandated by the Constitution of the Kingdom of Bhutan and Audit Act of Bhutan 2018, the Royal Audit Authority (RAA) has conducted the review of Surface Collection and dredging of Riverbed Materials (RBM) with an overall objective to ascertain compliances to applicable laws and regulations in its operations.

The review was carried out for surface collections and dredging activities along the southern borders in Phuentsholing, Gomtu and Samtse covering the period from January 2015 to October 2018. The export of riverbed materials that was permitted by the revised Forest and Nature Conservation Rules and Regulations (FCNRR 2017) from 1 January 2017 to 30 October 2018 was also reviewed.

In the past, the Department of Forest and Park Service (DoFPS) granted approvals for surface collection of riverbed materials to the private parties for both commercial and non-commercial purposes within the country. The approvals granted were in line with the Joint Guidelines 2010 prepared by the Ministry of Agriculture and Forests and Ministry of Economic Affairs for Surface Collection of Stone and Sand that was approved by then Cabinet and as per the Forest and Nature Conservation Rule (FNCR) 2006. The exports of sand and stones collected under “surface Collections” was not permitted by the joint Guidelines 2010. However, with the adoption of the FCNRR 2017, the DoFPS permitted surface collections & dredging as well as export of RBM to neighboring countries by private parties beginning January 2017. The same facility was also extended to the Natural Resource Corporation Development Limited (NRDCL) and Phuentsholing Thromde.

During the review, the RAA noticed few positive outcomes as highlighted below:

- ensuring that there are no cross border illegal operations due to large accumulation of riverbed materials in the southern belt leading to resource user right issues;
- canalizing the river flow during monsoon;
- earning revenue in foreign currency, income generation and creating employment;
- total revenue earned in the form of royalty and export fees amounted to Nu.9.43 million during the period, and
- exporters earned Nu 3,328.75 million from the export of 3,031,915 MT of RBM

Notwithstanding the positive initiatives, the RAA had also observed certain lapses and deficiencies which are summarized below:

- 1) Conflicting legal mandates on surface collection creating implementation difficulties;
- 2) Inclusion of ‘surface collection and dredging of riverbed materials’ in the Forest and Nature Conservation Rules & Regulations 2017 which is not in accord with FNCA 1995;
- 3) Lack of standardized capacity of truck load for levying royalty resulting into revenue forgone to the tune of Nu. 230.920 million;
- 4) Non-compliance and enforcement issues on Forestry and Environmental Clearances;
- 5) Lack of monitoring and coordination;
- 6) Massive extraction of RBM after exports was permitted;

- 7) Discrepancies in quantities of RBM in primary form, exports and stocks balances leading to non-accountal of royalty and permit fees amounting to Nu.25.764 million; and
- 8) Revenue foregone of Nu.299.868 million due to direct award of surface collection and dredging of RBM by DoFPS.

The deficiencies were largely caused by inconsistencies in provisions of Laws, lack of monitoring, supervision and coordination amongst the relevant enforcement agencies resulting into operations without proper compliances to the applicable laws and regulations. Such activities have not only had huge social impact and environmental consequences but also question the sustainability of such activities. Such activities also seem to benefit only few individuals.

Based on the audit findings, the RAA has provided a total of eleven recommendations that may be desirable for efficient and effective administration and management of RMB which are highlighted below:

- The Government should review and harmonize the legal framework and existing policies governing surface collection and dredging of RBM;
- The definition of “dredging” in FNCRR 2017 need to be properly reviewed and defined;
- Government should consider revision of royalty for Riverbed Materials and levy on the basis of Metric Ton and not on Truck Load;
- Carrying capacity of trucks should be standardized in accordance with the applicable laws;
- Issuance and approval of Forestry Clearances and Environmental Clearances should be strictly enforced, and
- Relevant authorities should strengthen the monitoring and coordination of execution of such activities

The RAA is hopeful that the relevant agencies will enhance efficiency and effectiveness in surface collection and dredging of RMB considering the fact that there is huge opportunity of earning good revenue besides creating employment opportunities.

CHAPTER 1: ABOUT THE AUDIT

1.1 Mandate

Article 25 (1) of the Constitution of the Kingdom of Bhutan and **Section 68 of the Audit Act of Bhutan 2018** stipulates that *'The Authority shall audit and report on the economy, efficiency and effectiveness in the use of public resources.*

Further, **Section 90 of Audit Act 2018 states, - The Authority shall conduct audits of the following:**

- *'Any entity whether private or public engaged in extracting, processing, trading and mining of natural resources of the State', and*
- *'Any other public interest entity, if considered necessary by the Auditor General'*

1.2 Objectives

The RAA conducted the review with an overall objective to ascertain compliances to applicable laws and regulations on the operations of surface collection and dredging of riverbed materials. Some of the specific objectives are as provided below:

- a) To determine the adequacy, uniformity and effectiveness and in the application of the acts, rules & regulations and policies governing surface collection and dredging of riverbed materials (RBM) in the country;
- b) To ascertain the enforcement mechanism in administering the surface collection and dredging activities as per the applicable clearances;
- c) To ascertain adherence to process of approval and award of the surface collection and dredging works;
- d) To ascertain whether the applicable fees such as royalty and export permit fees are collected as per the existing schedules;
- e) To ascertain whether the exports of the riverbed materials through surface collection and dredging are being carried out as per the existing legal and policy instruments on exports;
- f) To assess the extent of contribution from the surface collection and dredging activities to the country in terms of revenue and the financial implication to the government; and
- g) To ascertain consumptions of RBM through domestic and exports and sustainability of resources in long run and its consequences to environment.

1.3 Scope

The audit covered the operation of surface collection of riverbed materials for the period from 2015-2018 and the export of riverbed materials collected through dredging activities from 1 January 2017 to 30 October 2018. The teams visited thirteen (13) large scale surface collection sites in Samtse and five (5) large scale surface collection sites along Toorsa river in Phuentsholing carrying out surface collection and dredging activities from a total of ninety-one (91) sites in fourteen (14) Dzongkhags.

1.4 Methodology

Due to dispersed nature of activities being carried out, the team applied various audit methodologies as discussed below:

- a) Reviewed Mines and Mineral Management Act 1995, Environmental Assessment Act 2000, National Environment Protection Act 2007, Forest and Nature Conservation Act 1995, Water Act of Bhutan 2011, Revised Taxes and Levies of Bhutan 2016, and its subsequent regulations and guidelines promulgated through these Acts;
- b) Understanding of other regulations such as the Environmental Clearance Regulation of Project 2016, Mineral Development Policy 2017, Roads and Rules and Regulations 2016, Procurement Rules and Regulations 2009;
- c) Review of documents, correspondences, minutes of meeting, executive orders from the government;
- d) Cross-verification of records of export quantities of riverbed materials recorded at Forest Checkposts in Samtse and Phuentsoling against the records provided by the RRCO exit gates in Samtse and Phuentsholing and RTIO, Phuentsholing;
- e) Interview and enquiry with key officials;
- f) Site visits of surface collection and dredging sites, crushing plants; and
- g) Walk-through of the FIRMS system, collection of the riverbed materials to final dispatch for export, issue of Certificate of Origin (CoO) issued by the RTIO, Phuentsholing to the final export of the riverbed materials through Forest Check post and RRCO exit gates.

CHAPTER 2: INTRODUCTION

The Constitution of the Kingdom of Bhutan requires strong conservation efforts and sustainable utilization and management of the natural resources. **Article 5 (1)** under Environment states, *'Every Bhutanese is a trustee of the Kingdom's natural resources and environment for the benefit of the present and future generations and it is the fundamental duty of every citizen to contribute to the protection of the natural environment, conservation of the rich biodiversity of Bhutan and prevention of all forms of ecological degradation including noise, visual and physical pollution through the adoption and support of environment friendly practices and policies'*.

Article 5(2), *'The Royal Government shall:*

- ☛ *Protect, conserve and improve the pristine environment and safeguard the biodiversity of the country; (b) Prevent pollution and ecological degradation; (c) Secure ecologically balanced sustainable development while promoting justifiable economic and social development; and (d) Ensure a safe and healthy environment'*.

Further, **Article 8 (2)**, Fundamental Duties, states, *'A Bhutanese citizen shall have the duty to preserve, protect and respect the environment, culture and heritage of the nation'*.

Article 9 (7), Principle of State Policy states, *'The State shall endeavor to develop and execute policies to minimize inequalities of income, concentration of wealth, and promote equitable distribution of public facilities among individuals and people living in different parts of the Kingdom'*.

Such a Constitutional provisions clearly stipulates that every citizen is the trustee of the natural resources, environment and sustainable use of the country's non-renewal resources for economic and social development.

The State of the Tsa-Wa-Sum by the former Prime Minister, Dasho Tshering Tobgay to the Third Session of the Second Parliament in 2014, particularly focused on the **Five Jewels** of Economy namely Hydropower, Agriculture, Tourism, Small Enterprises and Minerals. The report draws attention to the fact that mining contributed only Nu 2,000 million to the economy in 2013, which was less than 2 % of the economy. The Report also highlighted that the mining sector has huge potential to increase economic opportunities, increase jobs, generate more revenue to the government and communities by using environmental friendly technology and enforcing environmental rules and regulations. It was also informed that the State Mining Corporation would export minerals to India and Bangladesh and the revenue will be used to finance school reforms.

Since the collection of RBM such as stone boulders, gravels, stone chip and dust are also minerals, it is important that such activities are carried out with proper mandate and standards in place to ensure that there is minimal impact/consequences to the environment.

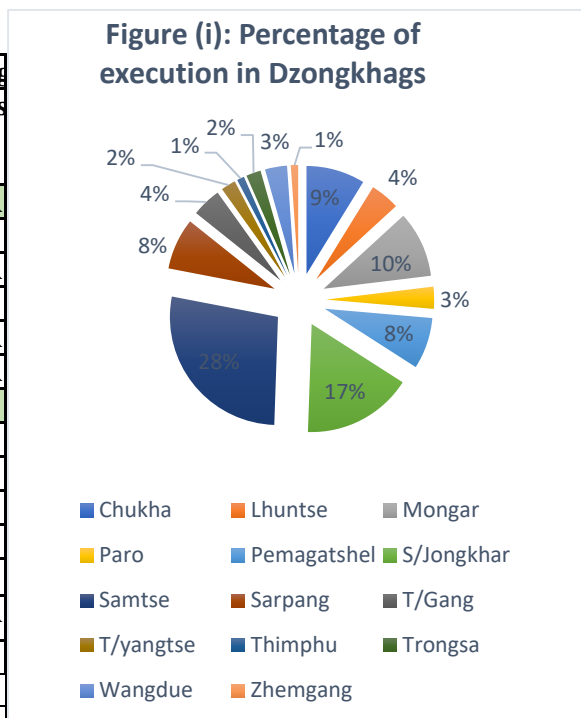
Thus, recognizing the importance of such activities and the impact it has on the environment and sustainability being a big concern, the RAA decided to carry out the review of surface collection and dredging of RBM along the southern borders particularly in Phuentsholing and Samtse.

2.1 Overview of surface collection and dredging in the country

A total of 91 approvals were granted by DoFPS for surface collection involving blasting, drilling, excavation works for road widening purposes and surface collection for domestic consumption in fourteen (14) Dzongkhags Administration as shown in the **table 1** and **figure-(i)** below:

Sl. No.	Dzongkhags	Nos. of private parties	Approving Agencies
1	Chukha	8	DoFPS and one by DoR
2	Lhuntse	4	DoFPS
3	Mongar	9	DoFPS and one by DoR
4	Paro	3	DoFPS
5	Pemagatshel	7	DoFPS and one by DoR
6	S/Jongkhar	15	DoFPS and one by DoR
7	Samtse	25	DoFPS
8	Sarpang	7	DoFPS
9	T/Gang	4	NRDCL
10	T/yangtse	2	NRDCL
11	Thimphu	1	DoFPS
12	Trongsa	2	DoFPS
13	Wangdue	3	DoFPS and one by DoR
14	Zhemgang	1	DoFPS
	Total	91	

Source: DGM, P/ling, DFO, Samtse & Gedu



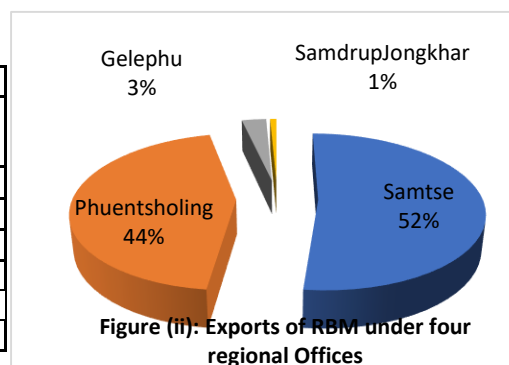
Out of 91 approvals granted, twenty-five (25) and eight (8) sites were operating under Samtse and Chukha Dzongkhags representing 28 % and 8% respectively.

The RAA reviewed entire approvals granted by DoFPS for surface collection and dredging along the Toorsa River in Phuentsholing, DhamDhum and Budhoney River in Samtse and other smaller activities in Gomtu, Tashijong and Diana River except one case in Thimphu.

A summary and percentage of RBM exports as per records of four Regional Revenue & Customs Offices (RRCOs) as on 30 October 2018 are shown in **Table -2** and **figure - (ii)** below:

Sl. No.	RRCO	RBM Exported (in MTs)	Percentage of Exports	Appendix
1	Samtse	1,630,276.00	51.82	B1
2	Phuentsholing	1,401,639.00	44.55	B2
3	Gelephu	90,812.36	2.89	Q
4	SamdrupJongkhar	23,149.30	0.74	R
	Total	3,145,876.66	100	

Source of Information: Respective RRCOs



The RAA noted that majority of the exports of RBM were being carried out in Samtse representing 52 % followed by Phuentsholing representing 45 %. The exports from Gelephu and Samdrup Jongkhar were insignificant at the time of review.

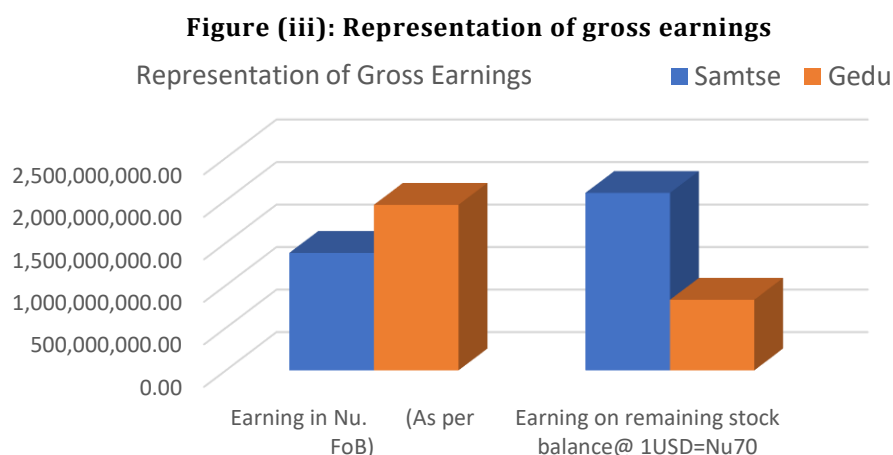
2.2 Estimated gross earnings from the export of RBM and stocks balances at STOCK yards

Royalty at the rate of Nu. 40 per Truck Load (T/L) were collected from the parties. On the other hand, the exporters earn hard currency (USD) ranging from USD 14 to USD 29 (approx.) per Metric ton (MT) against payment of royalty on the basis of truckload (TL).

During the period from January 2017 to October 2018, the parties and exporters had earned over Nu 3,328.75 million from the export of 3,031,915 MT against which royalty realized amounted to only Nu. 9.43 million. As on 30 October 2018, there were stock balances with various parties of staggering 2,976,893 MT which is almost equivalent to quantity already exported to neighbouring countries. The stock balance is expected to earn around USD 41,676,497 (1 MT @ 14 USD which is the minimum amount taken for the review) equivalent to Nu. 2,917.354 million (1 USD =Nu 70, which is the approximate prevailing rate taken in October 2018). The total earning would amount to Nu 6,246.111 million including earnings from exports already made and remaining stock balance at different yards of various parties. The estimated Gross Earnings excluding the operational/overhead expenses of the parties/crusher plants and exporters is summarised in **Table-3** and **figure-(iii)** below:

Table- 3 Estimated Gross Earnings						
DFO	Qty. Exported as per RRCOs in MTs	Earning in Nu. (As per FoB)	Stocks balance in MT	Earnings on remaining Stock @ 1MT =14USD	Earning on remaining stock balance@ 1USD=Nu70	Gross Earnings (Earnings for exports + earnings on remaining stock balance)
Samtse	1,630,276	1,381,826,221.30	2,129,530	29,813,416	2,086,939,096.20	3,468,765,317.50
Gedu	1,401,639	1,946,930,629.18	847,363	11,863,081	830,415,681.20	2,777,346,310.38
	3,031,915	3,328,756,850.48	2,976,893	41,676,497	2,917,354,777.40	6,246,111,627.88
<i>Note 1: Gross value in USD = the price per MT in USD ranges from USD 14 to 27</i>						
<i>Note 2: For RAA study on the financial implication on the stock balances 1 MT = USD 14.00 taken which is the minimum price</i>						
<i>Note 3: The Gross financial implication excludes the operational /overhead expenses of the Private Parties and Exporters.</i>						

The gross earnings as per records of Divisional Forest Office (DFO), Samtse and Gedu are shown in the graph below:



2.3 Current practice of surface collection and dredging of RBM

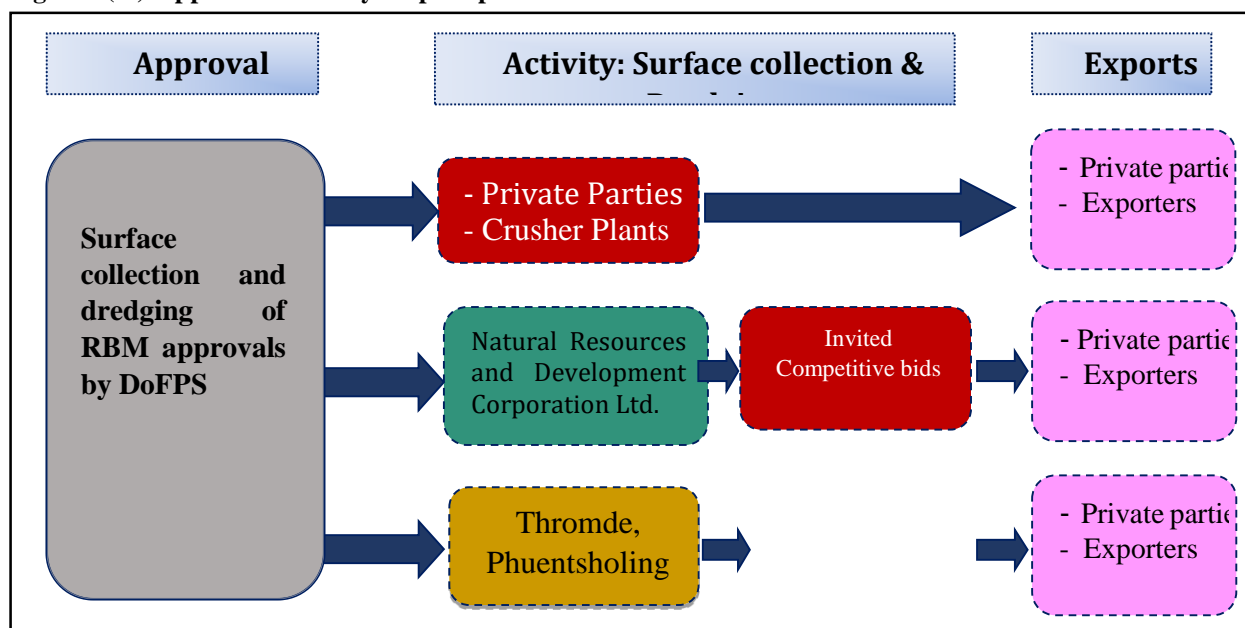
2.3.1 Operation of Surface collection and dredging of RBM by DoFPS

In the past, the approval for surface collection of riverbed materials (RBM) for both commercial and non-commercial purposes was granted by the Department of Forest and Park Service (DoFPS) in line with the Guidelines for Surface Collection of Stone and Sand approved by then Cabinet in 2010. The guideline disallowed exports under the surface collection process.

However, with the adoption of the Forest and Nature Conservation Rules and Regulations (FNCRR 2017), the DoFPS had directly issued approvals for surface collection, *dredging* and *exports* from January 2017 to parties and NRDCL along the southern borders of Samtse and Phuentsholing. Since then, it had led to unprecedented surface collection and dredging of RBM using excavators, a scale not witnessed in the past.

The **figure-(iv)** below indicate the approval and export process being followed.

Figure- (iv) Approval-Activity-Export process



2.3.2 Operation of Surface collection and dredging of RBM by NRDCL

From 2018, the NRDCL after obtaining approvals from the DoFPS had also contracted out the surface collection and dredging of RBM from Moa River Gelephu and Sarpang River under Sarpang Dzongkhag to parties through invitation of competitive bids.

In the past, NRDCL had failed to achieve the model of establishment of stone crushers throughout the country. The Ministry was of the opinion that such ventures should be carried out with assured markets, proper business plan along with mitigation/preventive measures to the environment to avoid any future catastrophe. NRDCL was also allotted various potential riverbeds in the southern part of Phuentsholing, Samtse, Gelephu and Samdrupjongkhar for extraction and supply of the riverbed materials but was not able to fully operate due to lack of required machineries and manpower.

The NRDCL vide note sheets no NRDCL/HO/MRD/05/2018/1127 dated 03/04/2018 and NRDCL/HO/CEO/01/2018/2408 dated 02/09/2018 had contracted the surface collection

of RBM and dredging to the interested parties charging production cost, administrative overhead and service charges beside the payment of royalty to the government. The contract was awarded to those parties offering the best competitive rates per cft. and payment of performance security of 10 % of the total value of work. The private parties were required to carry out mitigation works or river protection works arising out of the extraction of riverbed materials.

During the first phase, a total of 16 interested parties had submitted bids for surface collection and dredging of RBM to operate in six locations under Samtse, Phuentsholing and Gelephu. Three contractors namely M/s Rubthuen Construction, Gomtu, M/s Penjore Export, Sukriti & Chamurchi and M/ Gaseb Construction Pvt. Ltd, Toorsa, Phuentsholing that offered the best rate per cft, with similar field experiences and availability of machineries were awarded the works in different areas as detailed below in the **Table 4**:

Sl/ no	Areas	Contractors	Rates (Nu)/Cft.			Remarks
			Boulders	Sand	Gravels	
1	Sukti-Sangal, Gomtu	M/S Rubthuen Construction	1.24	1.33	1.13	Segregated
2	Sukriti&Chamurchi	M/s Penjore Export	1.59	1.59	1.59	All RBM
3	Purbay side Toorsa	M/s Gaseb Const. Pvt Ltd	1.86	0.71	0.71	Segregated

Source of Information: NRDCL, Thimphu

During the second phase, the NRDCL had received 23 applicants for surface collection and dredging of RBM. The 71st Board meeting reviewed and endorsed report on the status of collection of stones in the southern belt to be given to private parties with the same conditions set in the first allotment. Six contractors with best offer price and with self-owned machineries were awarded the works in different locations as detailed in **Table 5** below:

Sl. No	Areas	Contractors	Rates (Nu)/Cft.)			Remarks
			Boulders	Sand	Gravels	
1	Khanavorty, Halongreekhola, Compartment III	M/s Tashi Phuntsho, Yadi, Mongar	2.48	2.46	2.46	RBM
2	Khanavorty, Compartment II	M/s HANs Enterprise, Phuentsholing	2.46	2.46	2.46	RBM
3	SibsooKhola, Below Bridge	M/s Norzee Construction Pvt. Ltd, Thimphu	2.9	2.9	2.9	RBM
4	Toorsa around sewerage near Indo-Bhutan Border	M/s Buddha Construction	2.14	2.14	2.14	Work Order to be withdrawn, if objected by law & order.
5	Pugli, Samtse	M/s Sersang Pvt. Ltd, Thimphu	1.16	1.16	1.16	RBM
6	Sankosh, Lhamoizingkha, Border Pillar 111-118, Jamuney	Mr. Dilip Kumar Mukhia	3	3	3	RBM

Source of Information: NRDCL, Thimphu

2.3.3 Operation of Surface collection & dredging of RBM by Phuentsholing Thromde

Diversion of Toorsa River to the right bank (Original Course) by dredging works was awarded directly to two private parties viz: M/s Rigsar Construction Company Pvt. Ltd. Trashigang vide work proceed letter No: PT/2016-2017/ADM-48/2625 dated 14/12/2016.

The company was required to execute and achieve following minimum technical parameters at site:

- a. *Width* 50 meters
- b. *Depth* 4 meters
- c. *Length* 2000 meters

M/s Chukha Construction Company, Chhukha was also awarded vide work proceed letter No: PT/InfraDivision/05/2016-17/4025 dated 27th January 2017 and was required to execute and achieve following minimum technical parameters at site:

- a. *Width* 50 meters
- b. *Depth* 4 meters
- c. *Length* 1000 meters

The Work Proceed Letters also included the following terms and conditions based on the mutual agreement.

1. *There shall be no financial bearing to Phuentsholing Thomde;*
2. *All dredged materials extracted from the site shall be the contractor's property;*
3. *Sale and supply of dredged materials within Bhutan shall be as per the existing rules and regulations in force;*
4. *Phuentsholing Thomde shall obtain necessary approval from relevant agencies for export of value added dredged materials to other countries;*
5. *The work must be completed in all respects before the onset of next monsoon rains; and*
6. *Phuentsholing Thomde shall provide land without lease fee for stacking dredged material for a period of one year from the date of issue of this letter.*

It was learnt that owing to urgency and initiative of Phuentsholing Thomde, the work was awarded directly to M/s Rigsar Construction Company Pvt. Ltd. and M/s Chukha Construction Company, Chhukha using the forestry clearance and environmental clearance issued to the Chief Executive Officer, DHI-INFRA Ltd. for the partial diversion of Amochhu River from Chamkuna to Dhotikhola (3.673 Km). The dredging was carried out without any financial bearing to Thomde to mitigate the flood in future after bitter experience of 2016 along the Toorsa river. The dredged materials were allowed to export with approval from the DoFPS to cover up the huge cost of mitigation works (embankment) carried out by the two parties at free of cost. It was reported that there were no major floods during the monsoons in 2017 and 2018 and could successfully protect the Toorsa area.

Part- I: Initiatives and Positive Developments

The Forest Protection & Enforcement Division (FPED)¹ under the Department of Forest and Park Services is entrusted with the responsibilities of protecting the forest and ensuring the sustainable utilization of forest resources and land management through effective system of monitoring, regulation and adequate allocation of forest resources in collaboration with other relevant agencies like Territorial Division and FDCL now NRDCL. It is responsible to monitor & assess the supply of forest produce (timber, firewood fencing posts, sand, stones, boulder) for rural use and coordination and assessment of allotment of stone and sand by way of surface collection.

In line with its functions, the Department of Forest and Park Services (DoFPS) is involved in the issuance of permits for surface collection of riverbed materials such as stones, boulders and gravels.

During the review, the RAA noticed some initiatives and positive developments as summarized below:

- a) The Department of Forest and Park Services (DoFPS) accorded approvals for surface collection and dredging of riverbed materials to ensure that there is no cross border illegal operations due to large accumulation of riverbed materials. This was mainly intended to address resource use and right issues in neighboring areas;
- b) As the riverbeds of all major rivers and streams, adjoining the international borders are highly unstable and with ever changing courses, when left undisturbed, the DoFPS allowed surface collection with the condition to channelize the river flow and undertake riverbank protection works as key component to the forestry and environmental clearances;
- c) The export of stones was also allowed since there was no viable market for such products in Bhutan which accrued multiple benefits like earnings in terms of foreign currency, income generation, employment creation etc.;
- d) The Government had earned around Nu.9.43 million in terms of royalty and export fees, and
- e) The gross earning by the private parties and exporters aggregated to Nu.3,328.75 million from export of 3,038,952 MT of riverbed materials during the period from January 2017 to October 2018.

¹www.dofps.gov.bt

Part - 2: Lapses and deficiencies

Notwithstanding the initiatives taken and contribution to the economy through export of riverbed materials, the RAA's review and analysis of the available documents and information gathered for the period from January 2015 to October 2018 revealed shortcomings, inadequacies and inconsistencies in the operations and management of RBM as discussed below:

3.1 Legal instruments

3.1.1 Conflicting legal mandate on Surface Collection of Riverbed Materials (RBM) creates implementation difficulties to stakeholders

Currently, there are three legal instruments governing the surface collection of RBM as highlighted below:

1. The Forest and Nature Conservation Act of Bhutan (FNCA) 1995 empowers the Department of Forest & Park Services (DoFPS) to engage in surface collection of RBM and Clause 3 (g) explicitly states, '*Forest produce, includes boulders, stone, sand, gravel, rocks, peat, surface soil*'. The revised Forest and Nature Conservation Rules and Regulations (FNCRR) 2017, **Section 362** provides that '*Surface collection of sand and stones for both commercial and non-commercial purpose shall be under the control of department*'.
2. The Mines and Minerals Management Act (MMMA) 1995 mandates the Department of Geology and Mines (DGM) to manage the mineral resources of the country and the Act defines Minerals as, '*any substance occurring naturally in or on the earth and having formed by or subject to a geological process and which can be obtained from the earth by digging, drilling, **dredging**, and quarrying or by other mining operations*'. Further, as per the Mines and Mineral Management Regulation (MMMR) 2002, Chapter 4-Exploration, **Sub Section 10** states, '*Surface or sub-surface minerals prospecting may only be carried out on the basis of a license issued by the Director under Article 15 of the MMMA*'.
3. The Water Act of Bhutan 2011, **Section 26** states,
 - a) *No person shall develop or otherwise encroach upon bed and banks of watercourses and a strip of land the width thereof as determined in regulations under this Act except for operation and implementation of activities with an Environmental clearance,*
 - b) *Without prejudice to the sub clause (a), any surface collection of sand and boulders shall be operated by a **State Agency***'.

Foreseeing difficulties in the enforcement of different Acts, Rules and Regulations governing the surface collection activities, then Cabinet vide C/03/409 of April 23, 2009 had approved the joint proposal submitted by the Ministry of Economic Affairs (MoEA) and Ministry of Agriculture and Forests (MoAF) for streamlining the management of sand, stone and boulder collections and quarries. Subsequently, the two Ministries vide letter DF/Ka-6-2/2009/2721 dated 25th November 2009 submitted the draft guidelines for surface collections of stone and sand, which was approved by then Cabinet vide letter no. C/03/1221 dated 7th April 2010.

The Guidelines under heading Authority clearly stipulates the following:

- a) The Department of Forests shall be the sole agency to issue permits for surface collections of sand and stones both for non-commercial and commercial purposes;
- b) No permit will be issued for export of sand and stones collected under “surface Collections” process;
- c) All permits issued by the Department of Forests shall only be used within the country, and
- d) Other than surface collections of stones and sand, all other minerals including stone quarries will be under the control of the Department of Geology and Mines (DGM).

The RAA’s review of applicable Acts, Rules and Regulations and Guidelines issued over the years noticed conflicting mandates leading to implementation difficulties, as highlighted under:

- While the FNCA 1995 and the Forest and Nature Conservation Rules of Bhutan (FNCR) 2006 elaborately cover the process and procedures for surface collections of stones and boulders, there is no mention of word **dredging**. Further, **Section 55 (5)** of FCNR 2006 specifically states, “***collections of sand, stone, boulders and gravels is not permitted from any riverbed in order to protect the aquatic environment***”. However, dredging activities which is more of a mining nature was included under **Section 366 (6)** of the revised **FNCR 2017**. There was no records of having carried out consultation with relevant stakeholders before adoption of FNCR 2017. The dredging if considered as mining, the authority to govern and manage lies with the Department of Geology and Mines (DGM) which has set procedures such as requirement of detailed feasibility study, detailed project reports, environmental mitigation strategy and environmental restoration bond, to ensure sustainability and mitigate environmental impacts;
- While the regulations mandates respective Departments for the surface collection of riverbed materials such as stone and boulders, the Water Act of Bhutan 2011 gives specific mandate for surface collection of boulders to a **State Agency** only;
- Issuing of permits to parties by the DoFPS in line with revised FNCR 2017 for surface collection and dredging of river bed materials including export is hence, found not in accord with the provisions of the MMMA 1995, Water Act of Bhutan 2011 and joint Guidelines 2010;
- The bilateral meeting between the MoEA and MoAF held on July 14, 2017 reported that DGM as the most relevant stakeholder for surface collection was never consulted during the revision of FNCR in January 2017;
- Rule 363 under FNCR 2017 allows export of surface collection materials which is not permitted as per Cabinet directives and Guidelines jointly developed by MoAF and MoEA in 2010, and
- DGM’s request to halt the operation and export was not taken into due consideration. Subsequently, there was unprecedented operations of surface collections and dredging works at Phuentsholing and Samtse.

Response of DoFPS

DoFPS responded that OAG submitted that both MMMA 1995 and FNCA 1995 does not clearly define surface collection and substantiated that an individual intending to collect forest

produce as per FNCA 1995 without using excavator or machinery would not fulfil the legal intent of the provision under the Act. The DoFPS disagree that there is overlapping mandates and MoAF has formulated and approved the FNCRR 2017 in line with authority.

The Department views current dredging activity cannot be construed as mining activity, otherwise the issuance of EC for sand dredging should lie with MoEA. Based on the Act dredging activities were carried out prior to rule 2003, 2006 and 2017 to protect property from floods and as an embankment for rivers in Barsa and Balujora Khola, in Chhukha and Dam Dhum and Diana Khola in Samte. The Department responded that DGM was approached for export of aggregates by many stone crushing unit owners and NRDCL but DGM was not in the position to issue permits for export as DoFPS was the approving authority for collections and processing and stated that the crushed aggregates should be treated like any other industrial product and should be allowed for export.

The Hon'ble Prime Minister during the meeting on Surface Collection and Dredging held on 15th March instructed to allow current operation to continue and formulate an interim guideline to facilitate operation and monitoring activities. The "interim Guidelines for Surface Collection and dredging of riverbed materials for export 2019" was formulated by a multi sectoral team from MoAF, MoEA, NECS, OAG, MoWHS, NRDCL, and already submitted to the Hon'ble Prime Minister and the Cabinet Secretariat. The OAG also stated during their review presentation to the HPM that the FNCRR 2017 legally supersedes the Guideline 2010.

3.1.2 Core social mandate of establishment of NRDCL undermined

Executive Order PM/01/07/571 dated 7th November 2007 approved the nationalization and marketing of sand and pricing of sawn timber in furtherance of the Royal Command to then Prime Minister and its conveyance to the 87th Session of the erstwhile National Assembly. The order specifically emphasized the need to:

- a) Promote rapid development of housing, construction and infrastructure development to support nation building;
- b) Bear responsibility for the sustainable use of the natural resources and in order to keep them *affordable, accessible and available* for judicious use in the best interest of the nation and people, and
- c) Prevent corruption, inefficiencies and *undue profiteering* in the collection, delivery and sale of natural products.

Under the Executive Order, the erstwhile Forestry Development Corporation Ltd. was restructured as Natural Resources Development Corporation Limited (NRDCL) and was accorded the social mandate for the collection of sand and stones from the riverbeds and also operation of stone quarries in the Forest Management Units (FMUs) on a need basis.

As per **Section 366 (6)** of the **FNCRR 2017**, "*surface collection and dredging of riverbed materials shall be given to the authorized agency. In the event, the authorized agency fails to operate within the stipulated time period, then the Department shall demarcate the river bed into appropriate plots and allot **directly** or **auction** to individual/company*". However, the DoFPS had directly engaged **33** private parties for the surface collection and export of riverbed materials in Samtse and Phuentsholing. Further, Section 26 (b) of the Water Act of Bhutan 2011 also requires engagement of "**State Agency**" for any surface collection of sand and boulders.

Like private parties, the NRDCL had also applied for approval from DoFPS for surface collection of riverbed materials in Phuentsholing and Samtse. Later, it also contracted out to private parties besides operating on its own. This is construed as not in accord with the noble intent of the above cited policy and its social mandate of undertaking activities responsibly and ensuring sustainable use of the natural resources.

Response of DoFPS

The DoFPS responded that the definition of “State Agency” is not clear and that the interpretation of OAG clearly stated that both the Water Act 2011 and FNCRR 2017 does not define State Agency as NRDCL. The Department opined that majority sites were allocated to NRDCL but it did not have the capacity to carry out such activities at all allotted sites and engaged private individuals which could be considered as sub-contract. Since NRDCL had not applied, DoFPS had allotted the areas to private parties in the interest of the Nation, since the resources were being washed away across the border every year if not collected. In line with the executive order PM/01/07/1571 dated 7 November 2007, the DoFPS continues to award and engage NRDCL in providing public services for supply of sand and stone within the country. Rule 366(6) provides specific provision to engage NRDGL for allotment of any surface collection or riverbed dredging thereby giving NRDCL preference for achieving their social mandates to supply resources.

The NRDCL responded that as per Joint Guidelines for surface collection of stone and sand issued by Lhengye Zhungtshog during its 37th session of the meeting held on 15th April 2009, NRDCL was provided exclusive rights over operation and marketing of stones from riverbeds and it was limited to surface collection only to meet the local demand. With enforcement of FNCRR 2017 by MoAF, the exclusive right for surface collection had become almost null and void as provision in the FNCRR 2017 does not specifically mention NRDCL as the “authorized agency” to claim as a statutory right.

3.1.3 Inclusion of “surface collection and dredging of RBM” in the FNCRR 2017 provided undue policy benefit

As per the joint Guidelines on Surface collection of Stone and Sand approved by then Cabinet in 2010, surface collection is defined as ‘*collection of loose boulders, stone, and gravel from riverbeds and land surface without involving excavation machinery and use of explosive. It may include dredging of only the sand from riverbed by using excavation. The collection from land surface will limit to breaking and lifting of loose stone, which are not embedded into the ground. Any excavation in the construction site specifically as a part of construction activity followed by the use of stone from such excavation in the same site will fall under the definition of surface collection*’.

However, Section 436(63) of the FNCRR 2017, defined surface collection as ‘*collection of loose boulders, stone, and gravel from riverbeds and land surface which may include dredging of sand and boulder from river bed by using excavator*’.

Inclusion of word **dredging** of stone and boulders from the riverbeds by using excavators in FNCRR 2017 is not in accord with the FNCA 1995 and also as per the definition of surface collection specified in Guidelines issued in 2010. Further, MMMA 1995 provides materials

obtained through dredging as minerals, which would then come under the purview of the DGM.

Over the last two years, the DoPFS had engaged private parties in surface collection of riverbed materials and engaged heavy earth movers (excavators) on a large scale along the Toorsa River in Phuentsholing and Dhamdum River, Tashijong (Daurpani), Sukti-Sangla, and Gomtu in Samtse.

The RAA further noted the following:

- Extensive use of excavators for the surface collections and dredging of riverbed materials had resulted in digging of earth of depth more than three (3) meters to (4) meters similar to extraction of minerals in a mining process as evident from **Figures (v) & (vi)**:



Figure (v) Samtse Dhamdum site



Figure (vi) Phuentsholing Toorsa site

- The FCNRR 2017 allowed dredging under surface collection which has resulted in unrestraint surface collection of riverbed materials and huge quantities of export.

As the revision of FCNRR was carried out without proper consultation with relevant stakeholders like DGM, National Environment Commission Secretariat (NECS), NRDCL, the RAA cannot rule out undue policy benefit and profiteering at the cost of State resources.

Response of DoFPS

The DoFPS responded that FNCRR 2017 was drafted as stipulated in the FNCA 1995, Section 19 (a) and 3(g)(IV) and also retained the provisions on export of RBM in the previous FNCR 2003 and FNCR 2006. The Department defended that since the Competent authority for dredging of sand lies with them as per the Environmental Clearance Regulation of Project 2016, also dredging of RBM are considered as same, otherwise if dredging is only limited to mining, MOEA should be the Competent Authority to issue Environmental Clearance. The DoFPS responded that the EC for surface collection and dredging of RBM at Toorsa River and Damdum, was issued by NECS who should be responsible for any non-compliances in the operations. The allowable depth for surface collection is not defined in any of the relevant legal and policy documents and also surface collection including digging has been carried out in the

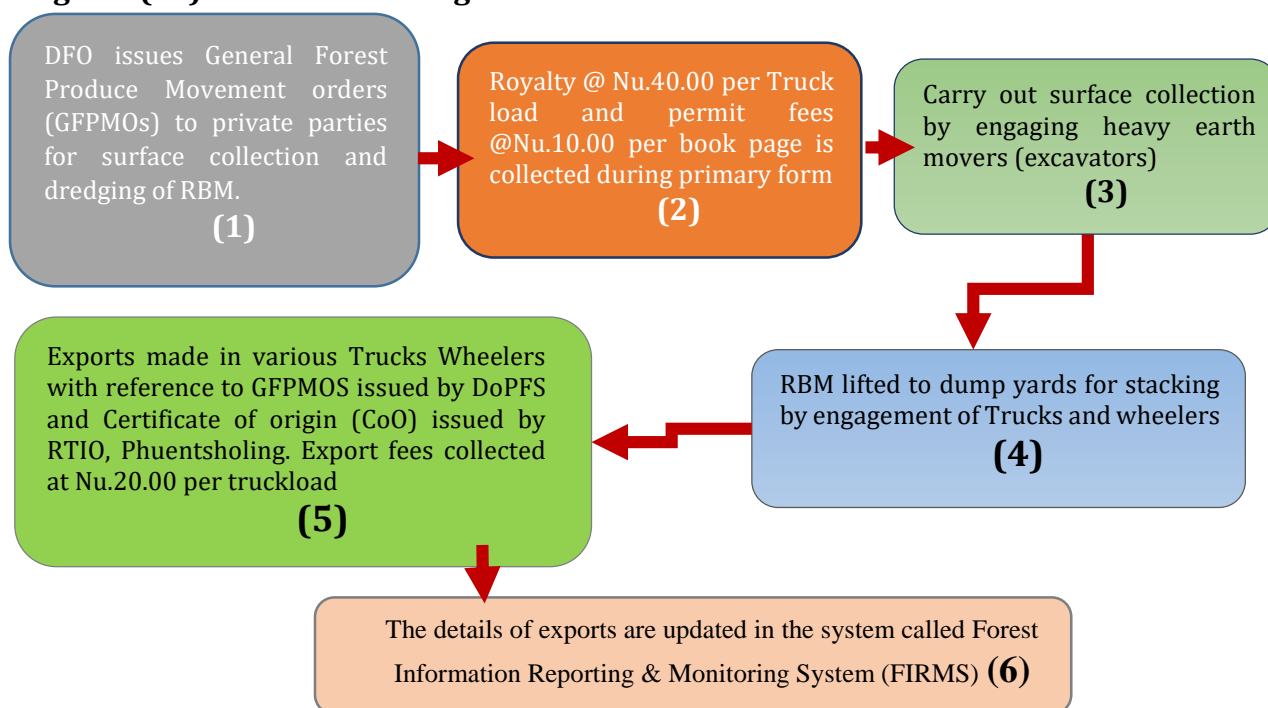
past for many years for domestic supply of sand and stone and mitigation works and there has never been any issue on allowed depth for collection.

The DoFPS in its response also stated that the issues have been adequately addressed in the draft interim guidelines which was developed on the instruction of the Hon'ble Prime Minister during the meeting held on 15th March 2019.

3.1.4 Lack of standardized capacity of truck load for levying royalty resulting into revenue forgone to the tune of Nu.230.920 million

As per the Joint Guidelines 2010, the royalty for sand, clay, gravels and boulders is charged as per the existing rate on a truck load basis subject to revision from time to time. The current practice of collection of royalty and permit fees for RBM and exports under DFO, Gedu and Samtse are illustrated in **Figure-(vii)**:

Figure- (vii) Process of issuing GFPMOS



During the period from January 2017 to October 2018, the surface collections of RBM under the jurisdiction of DFO Gedu and Samtse computed to 235,806 truckloads (refer **Appendix -A1 & A2**) and collected total royalty of Nu.9.432 million at the rate of Nu 40.00 per truckload in primary form as shown in **Table 6**. The RBM exports as per records of RRCOs, Samtse & Phuentsholing computed to 3,031,915 MT (refer **Appendix-A3 & A4**) and stock balance with various parties at stockyards computed to 2,976,893 MT (refer **Appendix-A5 & A6**) which translate to 6,008,807 MT.

Royalty in terms of Trucks Loads							Royalty in terms of MTs	Estimated Revenue
DFOs	GFPMOs issued for Surface Collection in primary form in T/L (A)	RBM Exported as per RRCOs (in MTs) (B)	Stock balance at site in T/ls =C	Stock balance at site (in MT) (D)	Total stocks E=B+D (in MT)	Royalty receivable from the issuance of GFPMOs in T/L (E=A @ Nu.40.00)	Estimated royalty from the exported RBM in terms of MT (F=D@ Nu.40.00)	Loss in between the levies made on T/ls and if levied on MT (G=E-F) (Nu.)

Gedu	93,841	1,401,639	105,920	847,363	2,249,002	3,753,640.00	89,960,086.40	-86,206,446.40
Samtse	141,965	1,630,276	266,191	2,129,530	3,759,805	5,678,600.00	150,392,211.60	-144,713,611.60
Total	235,806	3,031,915	372,112	2,976,893	6,008,807	9,432,240.00	240,352,298.00	-230,920,058.00
<i>Source of Information: DFO, Gedu, Samtse and RRCOs P/Ling, Samtse</i>								
<i>Note: *The above workings included the stocks balances at various yards as of October 2018</i>								
<i>Note: The conversion factor adopted for Physical Stocks Balance - 1 Cum = 1.5 MT as decided during the audit exit meeting dated 30.4.2019</i>								
<i>Note: Stocks balances of RBM under DFO, Gedu exclude stocks balances of Mrs. Sonam Dema at Tading site, Torsa site, PlingTromde sites and balance from the road widening under Manitar - Raidak Highway.</i>								
<i>Note: Stocks balances of RBM under DFO, Samtse include stocks balances of large-scale crushing plant operators and balance from the road maintenance extracted by M/s Tshering Stone & Aggregates</i>								

With regard to collection of royalty, the RAA noted the following:

- The government has foregone royalty revenue of Nu.230.920 million by considering dredging as surface collection instead of minerals as per the MMMA 1995.
- The exporters earned huge revenue ranging from minimum of USD 14 to as high as USD 27 per metric ton while the government received only Nu.40.00 per truck load as royalty.

In order to protect the interest of the nation and citizens who are trustees of the Kingdom's natural resources, the competent authorities could have exercised due diligence and levy royalty per metric tons and not on truckloads basis.

Response of DoFPS

The DoFPS responded that the revision of royalty were proposed to the Ministry of Finance several times but the revision was not approved. The Department has now standardized truck capacities based on tonnage using 1T/L=8MT and royalty is realized at site as under:

6 wheelers = 1 Truckload permit

10 wheelers = 3 Truckloads

12 wheelers = 4 Truckloads

15 wheelers = 6 Truckloads

The Department in its response stated that the draft interim guidelines on Surface Collection and Dredging of Riverbed Materials has been submitted to the HPM and Cabinet Secretariat with a chapter on revised charges and fees to bring revenues from export of surface collection and riverbed dredging at par with construction materials collectable under the RTLA 2016 and Royalty to be charged based on MT and not Truckload.

3.1.4 Lack of clarity in rate of export permit fees resulting into short collection of fees by DFO Gedu -Nu.1.752 million

As per **Annexure XI** of FNCRR 2017 on the import/export permit for Non-Wood Forest Produce (NWFP) it states 'Permit fee shall be charged for the import/export of NWFP in addition to import/export fee as per Schedule of Fees'.

The schedule of fee mentioned in import/export permit form on which export fees should be based could not be traced. However, in practice the DFO, Samtse had levied export permit fees @ Nu.20 per permit page which is based on the earlier form (**Annexure X**) wherein the amount is specified as Nu.20.00 On the other hand, the DFO, Gedu charges only Nu.10.00 using the new form (**Annexure XI of FNCRR 2017**) where no amount is mentioned. There is no basis for revision of export permit fee from Nu.10 to Nu.20.

The inconsistency in charging of fee by the DFO Samtse and Gedu had resulted into short collection of export permit fees amounting Nu.1.752 million as summarized in **Table 7** and detailed in **Appendix-B1 & B2**

Sl. No.	Year	Exports-Gedu, DFO (T/Ls) =A	Exports- Samtse, DFO (T/Ls)=B	Exports fees charged by DFO, Gedu @ Nu.10.00 =C	Export fees charged by DFO, Samtse @ Nu.20.00 =D	Difference in exports fees charged (E=C-D) (Nu.)
1	2017	68,984	81,043	689,835.90	1,620,857.20	10
2	2018	106,221	122,742	1,062,213.20	2,454,831.80	10
Total		175,205	203,784	1,752,049.10	4,075,689.00	

Source: Source of Information: RRCO, Phuentsholing and Samtse

The short collection of Nu.1.752 million was mainly due to lack of clarity in the application of export permit fees.

Response of DoFPS

The DOFPS responded that proposed royalty and fee structure in the draft FNCRR 2017 was circulated for comments prior to finalization of FNCRR 2017 but was adopted by the DFO, Samtse since the approval from MoF was pending. Therefore, application of Nu.20 per export permit was based on the draft proposal. Therefore, there is no loss of revenue to the Government but collection of extra revenue amounting to Nu 1.752 million without legal authority as the existing rate is Nu. 10 per export permit fee.

3.2 Issuance of Forestry Clearance (FCs)

As per the FCNRR 2017, it is mandatory for every Institution and Individual to obtain forestry clearance for the purpose of allotment of State Reserved Forest Land for *Kidu* land, Rehabilitation land, Substitute land, Exchange, Government institutions, *Gerab Dratshang* and Lease. The clearance shall be issued upon fulfillment of the criteria specified under Chapter 2, Rule 14 (1-14) of the FCNRR 2017.

On review of the issuance of forestry clearance related to surface collections and dredging of RBM, the following shortfalls were noticed:

3.2.1 Forestry Clearance (FC) issued without fulfilling the requirements

To approve and issue Forestry Clearance, the following conditions should be fulfilled:

- (1) *The proposed land does not fall inside recreation park;*
- (2) *Slope should not be more than 45 degree centigrade;*
- (3) *Should not be inside research plot;*
- (4) *Should not be inside forest plantation;*
- (5) *Should not be declared wild life habitat;*
- (6) *There should not be water source in the area;*
- (7) *Should not fall within critical watershed;*
- (8) *Should not be within 500 meters from Monastery and Dzong;*
- (9) *Should be outside 200 meters of existing settlement;*

- (10) Should not be within 180 m uphill or 90 m downhill of the National Highway;
- (11) Should not be within 30 m from the edge of the river bank and 15 m from the edge of stream/water source;
- (12) Should not be inside protected area;
- (13) Should not be inside community forest;
- (14) Should not be inside FMU/WS/LFMP;
- (15) Should not be declared wetland;
- (16) Should not be in high forest.

In order to confirm the fulfillment of the above requirements as per **Chapter II of FCNRR 2017** which stipulates that, 'Upon receiving the letter from the Chairman of the Dzongkhag Committee, Chief Forestry Officer (CFO) shall carry out feasibility study as per the prescribed format given in Annexure-I' which includes the above 16 conditions.

Upon review of site inspection reports of Range Offices and DFOs, Gedu and Samtse, the RAA observed non-compliances in issuance of forestry clearances although the above 16 conditions were marked as complied in inspection reports as discussed below:

- (i) During the site visits and on conducting enquiry with public, it was reported that the area along Budhoney River, Samtse is inhabited by Peacocks and Peafowl and the place is popularly known as *Majathang*. The site inspection reports pertaining to establishment of M/s Tshering Crusher and M/s Leewang Crusher Plants falling along the Budhoney River under Range Office, Samtse, did not have declaration of such existence. The public informed that numbers of Peacocks and Peafowl have dwindled over the period of time posing risk of extinction and threat to the ecosystem. This could be attributed to massive surface collections and river dredging works;
- (ii) As per condition (10) above, the activities should not fall 'within 180 m uphill or 90 m downhill of the National Highway' and conditions (6) & (7) requires that 'the areas should not fall under water source and critical watershed'.

However, the surface collection and river dredging activities carried out by M/s Tshering Crusher, M/s Leewang Crusher and M/s SKD (Singay Dorji Construction) are located within 180 m uphill and 90 m downhill along the Dhamdum River and fall under critical watershed as evident from **Figure-(viii)** below.

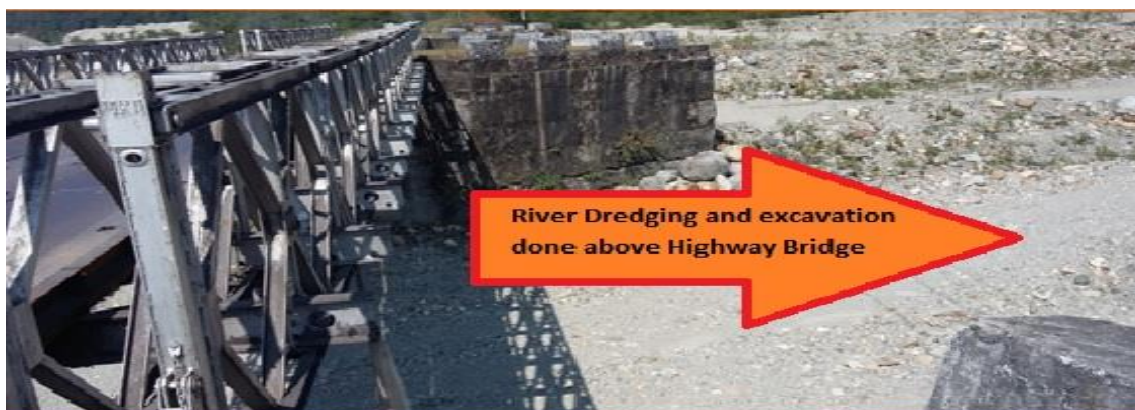


Figure (viii): dredging just above highway (bailey bridge over Dhamdum river, Highway Samtse to Sipsu)

- (iii) The surface collection sites of M/s Bhutan Mines and Mineral Ltd. Enterprise and M/s Bhutan Mines and Mineral Ltd. Stone and Aggregates along Budhoney River also falls within the critical watershed and water source. For instance, the main water reservoir of Samtse Town is located close to surface collection and dredging sites as shown in **Figure-(ix) & (x)**.



Figure - (ix)-Critical water shed (along Dhamdum river), Samtse



Figure-(x) Location of Water Tank (near suspension bridge Dhamdumriver), Samtse

- iv) The report of Samtse Municipal Office on the damage of two panels of RCC protection wall and weir dam across Dhamdum River (Nu.2.323 million) stated as due to swollen river on September 25, 2018 and river dredging downstream which developed high velocity of river flow. The damages caused on structures are shown in **Figure (xi), (xii), (xiii), (xiv) & (xv)**.



Figures- (xi) & (xii) RCC protection wall two panels and weir dam across Dhamdum stream located opposite to Suspension Bridge reported damaged by swollen river on September 25, 2018 and one main cause is due to river dredging down stream



Figure (xii), (xiii), (xiv) and (xv) Major damage caused and maintenance awaited

The above damages had occurred apparently due to non-consideration of distance of river dredging works from the Water Tank Reservoir. The issuance of Forestry clearance not only deviated from the laid down conditions but also caused damages to government property built at huge cost of Nu.23.238 million. Unless timely mitigation works are carried out at these locations, there is high risk of further damages to existing main reservoir tank of Samtse municipality.

The site inspection team not declaring habitats of peacock along Budhoney River, permitting dredging work within the vicinity of critical watershed, water sources and not meeting the distances coverage from the highway is in total violation to conditions prescribed in **Annexure-I of FNCRR 2017**. Simply considering the conditions as complied (through ticking the box) seems to be a mere completion of formalities and lacked due diligence by the inspection team from the DFO, Samtse.

Response of DoFPS

The DoFPS responded that 16 conditions in the field inspection report as per Chapter II, FNCRR 2017 for issuance of FC are mainly applicable for permanent/long term diversion of SRFL (land leasing, satshab, exchange, thram registration and kidu land). The requisite-clearances from the LG, DoR and DoT have been issued and these clearances did not indicate presence of or impacts on peafowl population and no issue on the distance from the highway.

Since the dredging area falls within Dhamdum industrial development area requiring huge investment to construct river protection walls, the Department of Industry, MoEA had approved the sites to M/s SKD and M/d Leewang Crusher.

The observation that surface collection and river dredging along Damdum river fall under "Critical Watershed" is incorrect. The Article 5(5) of the Constitution of Bhutan 2008, states that the "Parliament may, by Law, declare any part of the country to be National Park, Wildlife Reserve, Nature Reserve, Protected Forest, Biosphere Reserve, Critical Watershed and such other categories meriting protection". The areas mentioned in the observation have not been declared as critical watershed by the Parliament.

The water reservoir for Samtse Dzongkhag is located 500m away from the dredging site and the location of the reservoir is totally along different river stretch called DhadumKhola. The landslide in the area was due to MoEA ongoing water supply work for the industrial park located below the Samtse water reservoir.

The Department responded that prior to 2017, at many of the areas currently being operated by private individuals, dredging is a regular activity to protect bridges, roads and other installations at additional cost to the Government. The main objective of the surface collection and river dredging was to channelize the river course to a safe area to minimize the damages to the properties in the vicinity. The damages to the RCC protection wall and weir dam and water source may not necessarily be caused by operations permitted in the vicinity.

Subsequent events

Based on the decision of the audit exit meeting, a joint site verification was conducted by officials from DoFPS, Samtse Dzongkhag, Dham Dum Industrial Park and RAA on 4 May 2019 to establish the assertion of the DoFPS that damages to structures were not due to surface collection and dredging activity. Following were the justifications provided by concerned stakeholders at sites:

By DoFPS

It was explained that the cause of damages on **the damaged weir dam across Dhamdum** was not due to river dredging works as there is sufficient distance maintained between damaged sites and dredging sites. The excavations for temporary movements of Trucks for ongoing water supply work executed above the Water Reservoir Tank of Samtse Town were executed by Dham Dum Industrial Park, Samtse. The issue ensued from this work was resolved between Municipal, Samtse and Industrial Park, Samtse, MoEA.

Project Manager, Dhamdum Industrial Park

The Project Manager stated that the excavations were done only on a surface level without digging depth to engage trucks for the transportation of construction materials of water tanks for the Industrial Park located 3 Km upstream of Samtse Town Water Reservoir Tank. Therefore, the project is not responsible for the damages occurred on the weir dam.

Dzongkhag Engineer, Dzongkhag Administration, Samtse

It was stated that even though the floods had occurred several times in the past prior to operation of dredging activity, there were no damages on the weir dam. The damages on the weir dam had occurred only after the executions of the river dredging activity. He also mentioned that the same issue was raised during dzongkhag audit and we have requested the experts to inspect the sites and come up with the factual cause of damage.

RAA's conclusion:

To order to confirm the assertion of DoFPS that the water reservoir for Samtse Dzongkhag is located 500 meters away from the dredging site and the placement of the reservoir is totally along different river stretch called Dhadum Khola, the distance was physically measured and reconfirmed the length as 155 meters not 500 meters as witnessed by all respective parties. The evidences of physical measurements conducted, officials who attended the sites measurement, damaged a weir dam, and roads are depicted in the figure (xvi) and (xvii).

Thus, the main cause for damages to weir dams could be due to surface collection and dredging activity conducted much closer to the structures built at huge cost to government coffer.



Figure (xvi) and (xvii): Photographic evidence obtained during joint site verification of 4.5.2019

3.2.2 Surface collection and dredging of riverbed materials carried out without Forestry Clearance (FCs)

A total of 25 parties comprising of 13 under DFO, Samtse and 12 under DFO, Gedu were operating dredging works without forestry clearance. Out of 25 parties, 15 parties had forestry clearance for surface collections only and 10 parties did not obtain forestry clearance for both surface collection and dredging works as shown in **Table 8**.

SL. No.	Name of Parties	Locations	Remarks
1	Tshering Stone Crushing Unit	DFO, Samtse	FC only for surface collection
2	Tshering Concrete Manufacturing Unit	DFO, Samtse	FC only for surface collection
3	Garab Talc Powdering Unit & PD Crushing Plant	DFO, Samtse	FC only for surface collection
4	Lachhen Stone Crushing Unit	DFO, Samtse	FC only for surface collection
5	Lachhen Minerals Industry	DFO, Samtse	FC only for surface collection
6	Nob Minerals	DFO, Samtse	FC only for surface collection
7	TashiTaagay Crushing Unit	DFO, Samtse	FC only for surface collection
8	GII Crusher	DFO, Samtse	No FC for surface collection & dredging
9	MG Crushing Unit	DFO, Samtse	No FC for surface collection & dredging
10	Pema Crushing Unit	DFO, Samtse	FC only for surface collection
11	T. Dema Stone Crushing Industry	DFO, Samtse	FC only for surface collection
12	NP Stone Crushing Unit	DFO, Samtse	FC only for surface collection
13	Sengeygang Stone Crushing Plant	DFO, Samtse	FC only for surface collection
14	YeshiJamtsho	DFO, Gedu	No FC for surface collection & dredging
15	M/s Rigsar construction	DFO, Gedu	FC only for surface collection
16	Chukha	DFO, Gedu	No FC for surface collection & dredging
17	Yangkhil const.	DFO, Gedu	No FC for surface collection & dredging
18	Dekiling crusher unit	DFO, Gedu	No FC for surface collection & dredging
19	M/s Budha construction	DFO, Gedu	FC only for surface collection
20	M/s Perli enterprise	DFO, Gedu	No FC for surface collection & dredging
21	M/s Gaseb construction	DFO, Gedu	FC only for surface collection
22	Mr. Pema Tenzin	DFO, Gedu	No FC for surface collection & dredging
23	NRDCL, Pling	DFO, Gedu	No FC for surface collection & dredging at two sites
24	M/s Gyeldron Ventures	DFO, Gedu	FC only for surface collection
25	M/s SersangPvt Ltd	DFO, Gedu	No FC for surface collection & dredging

Source: DFO Samtse and Gedu

Operating surface collections and dredging activities without obtaining the forestry clearance is a direct violation of prevailing Acts and Rules.

Further, during the sites visit along Budhuney River in presence of project engineer from DoR, Samtse and public representatives from Budhuney village, the team noticed surface collections by M/s Tshering Crusher Plant at Budhuney River upstream. It was awarded by DoR, Phuentsholing without obtaining Forestry Clearance. The pictorial evidences of extraction and royalty permit and export fees based on physical balance of stocks are shown in **Figures (xviii) & (xix)** and worked out in **table 8**:



Figure (xviii) Stone boulders stacked by M/s Tshering Crusher few meters above highway before Budhuney Bridge towards Sipso



Figure (xix) -Stone boulders stacked by M/s Tshering Crusher few meters above highway before Budhuney bridge towards Sipso

The royalty and permit fees amounting to Nu.361,331.69 for RBM extracted was not paid as of date of physical verification (6/11/2018) as computed in the **Table 9** below:

Table 9: Stocks balance at Budhuney River upstream collection by M/s Tshering Crusher Plant under DoR, Samtse as per Joint Physical Verification Team. The collection of royalty, permit fees and export fees awaited.							
Location	Volume (Cum) (A)	Qty. converted into MT (1 Cum = 1.5 MT)	Quantity in T/Ls (B=A/8)	Royalty Receivable (C=B*40)	Permit fees Receivable (D=B*10)	Export fees Receivable (E=B*20)	Total charges Receivable (Nu.) (C+D+E)
Location-1	2913.75	4370.63	546.33	21853.15	5463.29	10926.6	38,243.01
Location-2	2913.75	4370.63	546.33	21853.15	5463.29	10926.6	38,243.01
Location-3	1698.75	2548.13	318.52	12740.65	3185.16	6370.33	22,296.14
Location-4	1698.75	2548.13	318.52	12740.65	3185.16	6370.33	22,296.14
Location-5	997.26	1495.89	186.99	7479.45	1869.86	3739.73	13,089.04
Location-6	95.24	142.86	17.86	714.3	178.58	357.15	1,250.03
Location-7	2868.75	4303.13	537.89	21515.65	5378.91	10757.8	37,652.39
Location-8	2868.75	4303.13	537.89	21515.65	5378.91	10757.8	37,652.39
Location-9	2868.75	4303.13	537.89	21515.65	5378.91	10757.8	37,652.39
Location-10	2868.75	4303.13	537.89	21515.65	5378.91	10757.8	37,652.39
Location-11	2868.75	4303.13	537.89	21515.65	5378.91	10757.8	37,652.39
Location-12	2868.75	4303.13	537.89	21515.65	5378.91	10757.8	37,652.39
Total	27,530	41,295.1	5,161.88	206,475.3	51,618.81	103,238	361,331.69

The royalty, permit fees and export fees for unauthorized collection of 27,530 cum of RBM must be *settled with realization of fine and compensation at fair market value of forest produce connected with the offence as prescribed under Settlement of Forest Offence sub-clauses 6(a)&(b) of FNCRR 2017*. The receivable royalties, permit fees and export fee amounting to Nu.361,331.69 along with the penalty should be recovered and deposited into Audit Recoveries Account.

Response of DoFPS

The DoFPS in its response does not accept that FC's are not issued for surface collection and dredging of RBM in Samtse and Gedu. The Department justifies that 13 private parties carrying out surface collection and dredging in Samtse are operating in areas allotted to NRDCL. The Department responded that M/s Tshering Crusher Plant has not exported the RBM and is within the 50 feet radius in line with FNCRR 2017.

3.2.3 No uniformity in obtaining clearances from other relevant authorities prior to issuance of Forestry Clearances (FCs)

Clause 370 (6) of the FCNRR 2017 requires the parties to obtain clearances from relevant agencies like local government, local community, Bhutan Power Corporation (BPC), DoR, and other related stakeholders, wherever applicable, after conducting field inspection at sites prior to issuance of Forestry Clearance. For example, if the activities fall within highways and nearer to human settlements, the clearances from the DoR and local community should be obtained indicating that there is no adverse impact from carrying out surface collection and dredging of riverbed materials.

However, there were instances where applicable clearances from the relevant authorities were not obtained by a total of 32 operators as detailed in **Appendix-C**.

- Clearances from Dzongkhag, Local Government and local community although mandatory were obtained by the parties.
- The need for obtaining Dzongkhag Administrative Approvals (DAA) for the establishments of Crusher Plants were not uniformly applied as some of the Crusher Plants are being operated without the approval of Dzongkhag Administration.
- Other applicable clearances from relevant agencies were also not obtained. For instance, M/s Tshering Stone and Aggregate factory, M/s SKD and M/s Leewang Stone and Aggregate factory's operations fall within the close proximity of national highway. There is no clearance obtained from the DoR.
- M/s BMML Stone and Aggregates operating near the BPC's sub-station, Samtse had not obtained clearance from BPC.
- With regard to operations under the DFO, Gedu, none of the parties had obtained FCs and as such no clearances were obtained from other relevant agencies. There were also two cases of operation without FCs under DFO, Samtse.

The non-enforcement of required clearances is indicative of extension of undue favour to the operators and laxity on the part of regulatory agencies.

Response of DoFPS

The DoFPS responded that the Competent Authority (list of activities that the competent authorities shall screen and issue EC as per EC regulation of project 2016) issuing Forestry Clearances should get requisite clearances from relevant agencies and these agencies should be held accountable for any lapses.

3.3 Issuance of Environmental Clearance (ECs)

Environmental Clearance is defined under Chapter **III of the EA Act, 2000** as the decision issued in writing by NECS or the **Competent Authority**, to let a project proceed, which includes terms and conditions to ensure that the project is managed in an environmentally sound and sustainable way.

As per Regulations for Environmental Clearance of Project 2016, Chapter IV- Environmental Clearances for the non-listed project shall be issued only by the National Environment Commission Secretariat (NECS) while for the listed project, *the Competent Authority* may issue an Environmental Clearance.

Surface collections of sand and boulders and stone crushing activities fall under listed project for which the competent authority to issue EC rest with the DoFPS and Dzongkhag Environmental Committee or Thromde. The authority to issue EC for dredging works which is not in listed project lies with NECS.

On review of whether the approval and ECs were issued to various private parties and crusher plants for surface collection and dredging of riverbed materials in line with the above mentioned conditions, the RAA noted the following shortfalls:

3.3.1 Irregularities in issuance of Environmental Clearances (ECs)

On review of ECs for the establishments of stone crushing plants, surface collection of sand and boulders and dredging activities under DFO Samtse and Gedu, the following shortfalls were noted:

- The EC for surface collections of sand and boulders should have been obtained from DoFPS while for dredging activities, the EC should have been obtained from NECS. However, the DoFPS had issued one EC for both surface collections and dredging works for nine parties which was in contravention to the provision outlined in **Regulations for Environmental Clearance of Project 2016**, Chapter IV: Environmental Clearance under **Section 27** provides that *‘The Secretariat may issue an Environmental Clearance to non-listed projects only after screening, scoping and assessing the environmental impacts of such projects under Chapter III of the EA Act, 2000 and Chapter III of this regulation’*.
- Although all the parties were engaged in dredging work, none of the parties had obtained EC from the NECS, except by M/s BMML enterprise. The remaining 21 parties had not obtained EC from any authorities (**refer Appendix-D**).
- Similarly, the operations of surface collection and dredging works along the Toorsa River, Phuentsholing were contracted out to M/s Buddha Construction and M/s Gaseb Construction by NRDCL with EC from DoFPS by submitting a Detailed Project Report (DPR). Furthermore, the site inspection vis-à-vis the review of Detailed Project Report, noted the following:
 - ✓ Mitigation works like plantation, bio-engineering and embankment were not carried out although the operators were required to carry out simultaneously, and
 - ✓ Demarcation of dredging areas with pillars and geo-referencing were not carried out as per the DPR.

- Based on EC obtained by DHI-INFRA Ltd., the work for partial diversion of Amochu river from Chamkuna to Dhotikhola (3.673 km) for erection of boundary pillars for ALRTP was awarded to M/s Rigsar Construction Pvt. Ltd. and M/s Chukha Construction Company by Phuentsholing Thromde vide letter No.PT/2016-2017/ADM-48/2625 dated 14/12/2016 and PT/InfraDivision/05/2016-17/4025 dated 27/1/2017 respectively. However, the site inspection vis-à-vis the review of conditions of EC and the work order noted the following:
 - ✓ Although the work order indicated a total length of 2000 meters and width of 50 meters for execution of works, there was no demarcation of the area to be dredged. Therefore, in absence of properly demarcated area, the operators had carried out dredging activities at their discretion and without proper monitoring by Thromde;
 - ✓ As required, the operators have not carrying out plantation;
 - ✓ As per the work order issued to M/s Rigsar Construction Pvt. Ltd, one of the terms and conditions clearly stated that “*there shall be no financial bearing to Phuentsholing Thromde*”. However, gabion wall measuring 423 meters length and 5 meters height was constructed within the area allotted to M/s Rigsar Construction (refer work order No.PT/Infra Division/05/2016-17/10027 issued on 27 March, 2017) by Phuentsholing Thromde at a cost of Nu.11,232,206.22. The construction of the Gabion Wall is not only in contravention to the terms and conditions of the work order but also resulted into avoidable financial burden to the government, and
 - ✓ Out of 35 parties involved in surface collection and dredging works, 24 parties also operates stone crushing plants. To operate the crushing plants, the EC should be obtained from the Dzongkhag Environment Committee (DEC) or Thromde. However, out of 24 parties, 9 crusher plants had not obtained the EC as shown in **Appendix-E**.
- It is important to set a rational limit of depth of excavations and demarcate the area for dredging works to operate in a sustainable way and minimize environmental impacts. With regard to depth, generally, there is no limit set on the depth of excavation for dredging works;
- In case of NRDC and Phuentsholing Thromde contracted dredging works, the depth of excavation were mentioned in DPR and in work order as 3 meters and 4 meters respectively, which is also not consistent and also not adhered to at site. With regard to demarcation of area for dredging works, no such demarcations were carried out for all the operators. As a result, the operators without DPR/set limit and demarcated area were excavating indiscriminately with no monitoring from relevant authorities thereby impacting the sustainability and environment.

Such non-compliances to the applicable provisions/ terms and conditions of the regulations and the work order had led to violation of terms and conditions of the work order and Environmental Clearance Regulation of Projects 2016. The surface collection and dredging of riverbed materials without valid ECs and also violation of terms and conditions under EC and work order question the legitimacy of the operation and lack of due diligence on the part of regulatory authorities.

Response of DoFPS

DoFPS in its response justify that the Competent Authority to issue EC for surface collection of sand and boulder including sand dredging lies with them and dredging is one of the methods to collect RBM and it is not a separate activity by itself. Moreover, rule 436 (63) of FNCRR 2017 clearly provides dredging as one method of collecting RBM and dredging does not fall under the unlisted activity. The EC of crusher plant lies with DEC or Thromde as per the delegation of Competent Authority.

Further, DoFPS responded that issuing authorities shall monitor the activities based on the terms and conditions of EC. The mitigation works were not carried out will be done by Thromde, Phuentsholing and DHL. The draft interim guidelines submitted to the Government has prescribed clear provisions on site demarcation and geo-referencing.

3.3.2 Non-enforcement of the prescribed conditions in the Environmental Clearance (EC) leading to huge environmental impacts

The EC Regulation of Project 2016 –**Definitions, Section 96** states, ‘*Environmental Clearance means the decision under Chapter III of the EA Act, 2000, issued in writing by the Secretariat or the Competent Authority, to let a project proceed, which includes terms and conditions to ensure that the project is managed in an environmentally sound and sustainable way*’.

Section 14 of the EC Regulation of Project 2016 Chapter II on Application for Environmental Clearance states that ‘*When there is a requirement of water abstraction for a project, the applicant shall adhere to the Water Act and its regulation*’. As per Water Regulation 2014 under Water User Rights, Section 39 provides that ‘*Water being property of the state, any user right developed in the individual, household or community will not tantamount to ownership right over a water body at any point of time*’.

Several non-compliances were noted during site visits as highlighted in **Case 1 and 2**.

Case 1: Social and Environmental impacts

M/s Tshering Stone & Aggregates, M/s Leewang Crusher Plant & M/s SKD in Budhuney River Samtse



Figure (xx): Social and Environmental impacts

Initially, the Dhamdum river was flowing from **scene 1 to scene 2 & 4**. The DoR had constructed retaining wall as well as carried out dredging at **scene 1**, with the intention to protect the Culvert Bridge at **scene 4**. This has led to diversion of river completely to Scene 2 and river at scene 4 was totally dried up. As a result of total diversion of river to scene 2, the retaining wall constructed along scene 2 and 3 were damaged and washed away in October 2018 due to high volume of Dhamdum river.

After the diversion of river from scene 4 to scene 2, massive surface collection and dredging works are being operated by M/s Tshering Stone and Aggregates, M/s Leewang Crusher Plants and M/s SDK construction at scene 4 located along Samtse –Sipsoo Highway. No social and environmental impact assessments were carried out. The EC was issued by DoFPS which is not a Competent Authority.

The diversion of river to scene 2 poses risk to the settlement of Majathang village which is supported by public complaint lodged to Samtse Gewog Administration, as no public consultation and clearance was obtained, as required. There was no mitigation measures carried out along the river near the dredging areas causing scouring on the hill side. Structures like steel deck bridges, guard house, retaining and gabion walls downstream were already weakened, damaged and washed away. Further, the diversion of river has impacted the river ecology and aquatic life.

This could be attributed to irregularities in issuance of EC without carrying out proper environmental impact.



Figure (xxi) - scouring on the hill side

Based on the above facts, the RAA could not establish whether the intention of diversion of river was to protect the bridge or allow dredging works.

Case 2: Lapses in issuance and enforcement of Environmental Clearance

M/s BMML Enterprise had obtained EC for surface collection and dredging of RBM from NECS in line with Environmental Assessment Act 2000 of Bhutan as required. The NECs as a competent authority should ensure that the local communities, properties and any religious, cultural, historic and ecologically important sites are not adversely affected by the activities and Section IV of Water Act of Bhutan 2011 requires the holder to ensure that activities does not disrupt the water flow and pollute the water bodies.



Figure (xxii): impact on aquatic lives due to dredging activities

It was noted that historic site of deity of Samtse Dzongkhag and water reservoir is located within the vicinity of M/s BMML Enterprise and M/s BMML Stone & Aggregate's dredging site along the Budhoney River in Samtse. Heavy slides had occurred within the vicinity of the operation of dredging causing landslides to historic site and water reservoir as evident from Figures-(xxiii) & (xxiv).



Figure (xxiii) - Slides and threat to historic sites (Along Dhamdum river few meters below suspension bridge), Samtse



Figure (xxiv) - Location of Water Tank (near suspension bridge Dhamdum river), Samtse

Further, the flow of the river is disrupted and water bodies polluted which could be attributed to massive surface collection and dredging of riverbed materials by use of excavators.

This will not only have adverse impact on the lives of river ecology but also would hinder clean water supply as depicted in Figure - (xxv). The stability of entire area is at risk



Figure -(xxv) Excavations over river leading to water pollution

Massive excavations and depth of excavations exceeded the limit specified in DPR & Work orders

Figures –(xxvi) & (xxvii) depth of excavation beyond the limit specified in DPR (M/s Buddha sites Toorsa)



Figure–(xxviii) & (xxix) volume of stacked stocks, Toorsa River, Phuentsholing (M/s Rigsar sites)

Response of DoFPS

The DoFPS responded that social clearances were obtained by the operators from the Gewog Administration. Further, the surface collection and river dredging work falls within the industrial area of Samtse Dzongkhag and the operators have acquired the clearance for dredging from Chief Engineer, Department of Industry, MoEA. The dredging site for two operators also falls within the Right of Way and the necessary clearance for river dredging from the DoR office was obtained. Further, the Department justified that the landslide next to Neykhag was not because of the river dredging but the slide has been there more than a decade and the erosion is caused due to phyllite deposit on that ridge. Rabdey, Namgaychoelling has written to BMML to support the construction Nekhang and clearance obtained from Department of Culture.

The NECs responded that compliance monitoring was conducted on October 24, 2018 at the BMML Sites in Dam Dum, Samtse and observed that dredging activities has been carried out haphazardly without any technical guidelines in place. Dredging being detrimental to the environment and requiring more in-depth studies issued notification informing on the requirement of Environmental Impact Assessment (EIA) study for dredging.

3.4 Monitoring and coordination

3.4.1 Inadequacy in the Forest Information Reporting & Monitoring System (FIRMS)

The **Forest Information Reporting & Monitoring System (FIRMS)** is used by Forest Check Posts to record export data related to forest products. It is also used for recording export of RBM collected from surface collections and dredging activities in Phuentsholing and Samtse.

FCNRR 2017 Section 383 stipulates that, *“Database on the location, size, validity of permit, and quantity of sand and stone extracted shall be maintained at respective offices and submit report to FIRMS on quarterly basis”.*

On review of the system, the RAA noted the following deficiencies:

- a) The materials recorded are in truckloads irrespective of carrying capacity of trucks. It does not capture the actual quantities exported thereby rendering it difficult to cross verify the quantity for which royalty had been paid against the actual quantity exported. For instance, it was observed that royalty paid per truck was for six wheelers (8 cum) while in practice the parties deploy 10 to 16 (24-64 cum) wheeler trucks for the export;
- b) General Forest Produce Movement Order (GFPMOs) is issued by DFOs indicating the total quantity to be extracted and allowing movement of forest produces. In addition, the royalty and permit fee to be paid is also mentioned in GFPMOs. However, the system does not have the provision to record GFPMOs number, thereby posing risk of using the same GFPMOs several times;
- c) There is no provision in the system to record the name of location from where the materials were extracted, which if recorded would enable comparison of actual collections as per GFPMOs against the actual quantity extracted from the particular location;
- d) There is no provision in FIRMS to record the weight in reference to weightiest coupon issued by the weighing Agent, though weighing is mandatory for export. On the other hand, RRCO's check post maintains such records of materials being exported;
- e) Name of private parties and exporters were not properly recorded and updated in the system, and
- f) There is no provision in the system to record the issuance and validity of forestry and environmental clearances to render effective monitoring

Thus, the system which is supposed to provide vital information for informed decision making and day to day operation and monitoring of the surface collection and dredging activities has failed to meet the intended objective.

Response of DoFPS

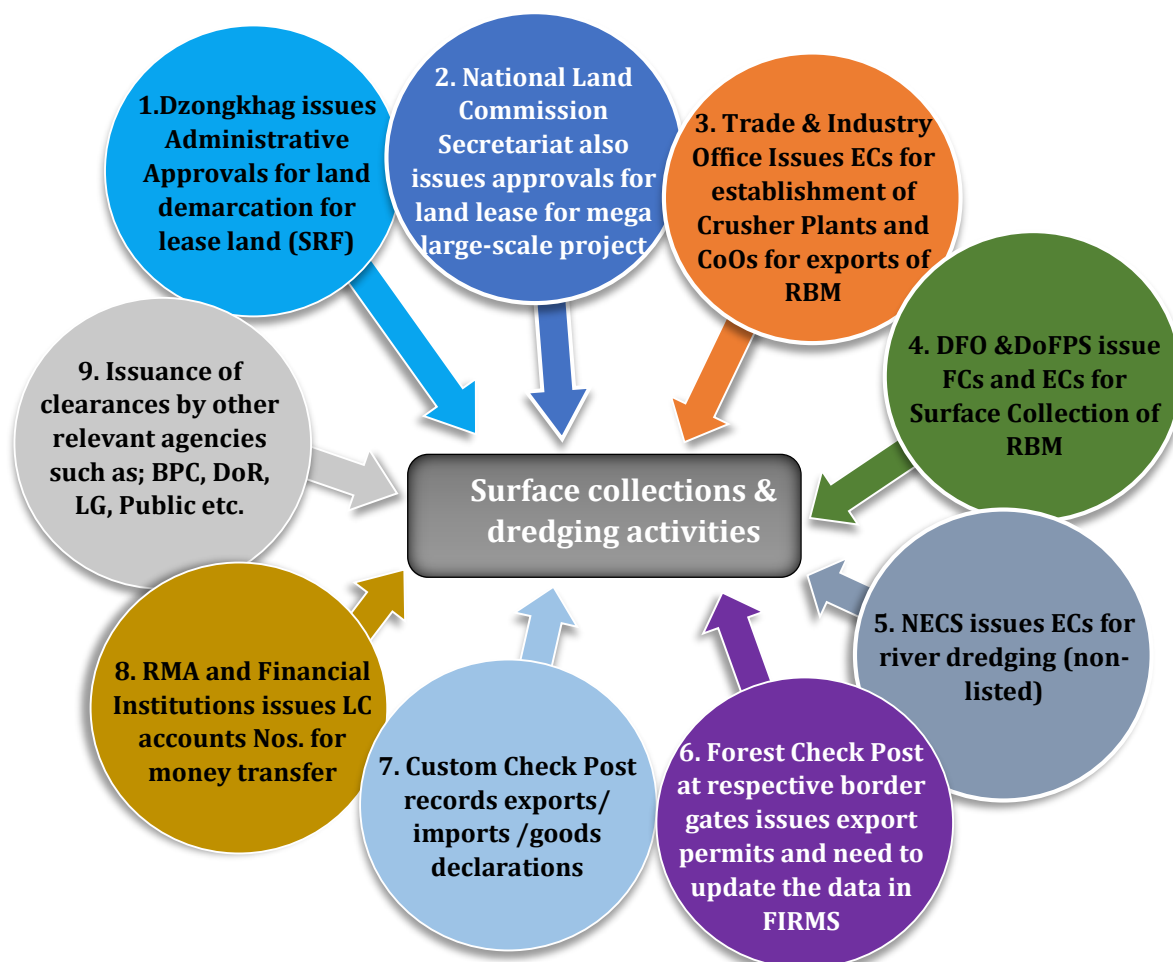
The DoFPS responded that Forest information Management System had numerous problems as it was initiated in late 2016. The new FIRMS system launched in July 2017 by DoFPS is still in the process of correcting systemic flaws and gaps. The Department accepted that the export component was not captured properly and is confident that the concerns raised by RAA on the FIRMS can be addressed in future.

3.4.2 Lack of coordination among the relevant agencies

Clause 383 of FCNRR 2017 requires Chief Forestry Officer to conduct compliance monitoring of the sand and stone collection sites.

There are multiple agencies involved in the governance and management of surface collections and dredging of RBM. The roles and responsibilities of each agency are depicted in the **Figure (xxx)**.

Figure-xxx: Involvement of various relevant agencies for surface collection and dredging of RBM



Although the agencies are provided with specific responsibilities which requires them to coordinate and collaborate as per the prevailing Acts, rules and regulations and guidelines, the agencies were functioning in isolation that resulted in following lapses:

- 1) Environmental clearances for non- listed projects were issued by DoFPS although the authority to issue such clearance solely rest with the NECS. The NECS has also not raised issue and monitored such matters. Similarly, there were operations being carried out without clearances from appropriate competent authorities;
- 2) Lack of implementation coordination among the relevant functional agencies had resulted in discrepancies in maintenance of data. For instance, as per the record of RRCOs on export of RBM, there were 203 parties and exporters engaged during the period from January 2017 to October 2018 under Phuentsholing and Samtse as against 141 indicated in the records of RTIO, Phuentsholing (**refer Appendix- F**);

- 3) Each Certificate of Origin (CoO) has seven duplicate copies indicating to be endorsed to relevant agencies to provide correct information on quantity, price, source, LC number etc. on export materials. However, all the duplicate copies are found maintained and kept with RTIO only in absence of clarity on the endorsement of duplicate copies to the relevant agencies. This indicates that RTIO is not aware of other agencies involved and other relevant agencies are also not aware about the CoO;
- 4) There were poor collaboration amongst relevant agencies for the purpose of issuing clearances and permits resulting into operation of surface collection and dredging of RBM within areas not permissible such as nearby highways, religious sites, watershed areas, etc. for such operations.

Response of DoFPS

The DoFPS in its response again reiterated that the Department is the Competent Authority (as per power granted in EC regulation for project 2016) to issue EC for surface collection of stone and boulder and sand dredging. Dredging is considered to be a method to collect RBM and not a separate activity by itself.

The DoFPS responded that draft the interim guidelines submitted to the Government clearly defines requirement of rapid Environmental Impact Assessment and NECS as the authority for issuance of EC for surface collection and dredging of RBM.

3.4.3 Illegal mining in the name of surface collection at Gumpadara, Sampheling Gewog, Phuentsholing Drungkhag

The Dzongkhag Administration, Chhukha vide letter no.CDA/DEC-19/2017/898 dated 4th October 2017 had granted an administrative approval to Mr Jamyang Loden for surface collections of Stone/boulders at Gumpadara under Sampheling Gewog. The Environmental Clearance was issued by DoFPS vide DoFPS/Ka-7-1/2017/631 dated 23rd October 2017 for surface collections of Stone/boulders in private land measuring 2.80 acres. Further, the DoFPS had also issued export approval for the same vide letter no DoFPS/FPED/FLCS/6-2/2017/1205 dated 5th February 2018.

As per the joint report of NECS, DGM and Ministry of Labour and Human Resources (MoLHR), it was stated that Mr. Jamyang Loden had been carrying out mining instead of approved surface collection.

Accordingly, the DGM vide letter no X-58/DGM/2018/1035 dated 24th April 2018 had communicated to the DoFPS to take immediate action as the surface collection activity violated the Environment Assessment Act 2000 and the MMMA 1995.

However, there are no actions taken by the DoFPS indicating poor monitoring as well as extension of undue favour to the operator by allowing continued unauthorized mining operation.



Figures- (xxx1) & (xxx2) Unauthorized mining in the name of surface collection of RBM

Response of DoFPS

The DoFPS responded that FC and EC for surface collection was issued based on administrative approval from Chhukha Dzongkhag for collection of stones from the private registered land of Mr. Jamyang Loday at Gumpadara. DoFPS immediately suspended the operations based on the joint report of DGM and NECS, in order to confirm the existence of illegal mining. However, it was lifted when CFO Gedu submitted field report that the applicant had applied for surface collection to develop his private land.

3.4.4 Commercialization of construction materials from road widening of Manitar – Raidak National Highway

As per letter No.RO/DoR/P/Ling/2017-2018/W-16/1216 dated 26/2/2018 of the Regional Office, DoR, Phuentsholing, it was stated that M/s Gyeldron Venture had proposed for the widening of rocky stretches of Manitar – Raidak National Highway at chainage 35 Km and had been instructed by the Secretary, MoWHS to allow collection of materials from road widening works during his visit to Regional Office, Phuentsholing.

Section 161 and 162 of the Road Act of Bhutan 2013 states:

161 - *“Notwithstanding anything contained in the Forest and Nature Conservation Act, Mines and Mineral Management Act, its rules and regulations, the Department of roads or a Local Government may use the natural resources available within a road right of way or from any government land near to or adjoining a road as of right, for the purpose of construction, repair, maintenance and improvement of roads”.*

162- *“Without prejudice to any provisions contained in the Forest Act, Mines and Minerals Management Act or any other Act and its rules and regulations, the Department of Forests and the Department of Geology and Mines shall not issue any permit to any person or organization for the collection of resources from the road right of way or from any adjoining government land near a road except for purposes mentioned in Section 161”.*

As per the above provision of the Road Act, the DoR does not have the authority to approve the collection of resources from road widening activity for purpose other than construction, repair, maintenance and improvement of roads. However, while approving the road widening works at Manitar –Raidak road at chainage 35 KM, the DoR had also approved the

collection of materials to M/s Gyeldron Venture. Further, the DoFPS had approved the export of extracted materials which is also in contravention to above mentioned provisions. The DGM vide letter No PRO/DGMI28/2018/411 dated 04/12/2018 addressed to the Regional Office, DoR, Phuentsholing strongly objected on the extraction of high-grade quartzite which is used for ferro-silicon industries.

On review of materials extracted and exported, it was noted that neither DoR nor M/s Gyeldron Venture had recorded the quantities of stones and boulders extracted from the work site. Further, M/s Gyeldron Venture had obtained approval for export of 259,080 cum (32,385 T/Ls) stones and boulders vide letter No.DoFPS/FPED/FLCS/6-2/2018/2030 dated 22/06/2018. M/s Gyeldron Venture had established stone crushing plant and obtained an approval for export of 500 T/Ls value added stone aggregates vide letter No.DOFPS/FPED/FLCS/6-2/2018/2050 dated 28/06/2018. No Forestry and Environmental clearances were obtained for establishment of the crusher plant.

As on 27.01.2019, the export records of the RRCO, Phuentsholing showed only 12 Truckloads of exports of stone and boulders in the name of M/s Gyeldron Venture and physical stock balances of 248.86 T/Ls at site. The RAA could not understand the intent of obtaining huge export approval when the recorded exported is only 12 T/Ls representing 0.036 percent of the approved export, thus the RAA cannot rule out the possibilities of export through porous border and sale of materials in domestic markets.

Records on payment of royalty, permit and export fees for export of materials were not provided to the RAA by the Range Office, Phuentsholing. Thus, based on the quantities of export approved by DoFPS, the amount receivable worked out to Nu. 1.988 million as shown in **Table 10** below and physical stocks balance evidenced by **Figures (xxxiii), (xxxiv), (xxxv) & (xxxvi)**:

Stocks balance at site as per Physical Verification Team (Joint Measurement)											
SL. No.	Name of Company	Site	L	B	H	Volume =A	Unit	Conversion factor		Royalty, Permit fees & Export fees receivable (Nu.) (D=C*Nu.40.00+Nu.10.00 + Nu.10.00)	
								Cum = 1.5 MT	Conversion factor 1 T/L = 8MT		
								Qty. in MT (B = A* 1.5MT)	Unit	TL/s (C=B/8 MT)	
1	M/s Gyeldron Venture	Location-1	36.00	6.94	1.83	457.21	Cum	685.81	MT	85.73	5,143.58
		Location-2	19.00	6.20	1.70	200.26	Cum	300.39	MT	37.55	2,252.93
		Location-3	16.00	2.50	1.60	64.00	Cum	96.00	MT	12.00	720.00
		Location-4	19.00	9.13	2.37	411.12	Cum	616.69	MT	77.09	4,625.14
		Location-5	20.00	2.55	1.95	99.45	Cum	149.18	MT	18.65	1,118.81
		Location-6	14.30	6.66	1.00	95.24	Cum	142.86	MT	17.86	1,071.43
Sub- Total						1,327.28	1,990.92	-	248.86	14,931.89	
SL. No.	Particular	Location								Qty. in T/Ls	

Stones & Boulders approved for export	Manitar - Raidak Road (Chainage 35 Km)									32,385	1,943,100.00
Stones aggregates approved for export										500	30,000.00
Sub- Total										32,885	1,973,100.00
Grand Total										33,133.86	1,988,031.89



Figures (xxxiii), (xxxiv) Stocks at road chainage 35 km Manitar-Raidak highway



Figures (xxxv), (xxxvi) Stocks at road chainage 35 & 32.5 km Manitar-Raidak highway

Commercialization of stone and boulders and granting approvals for exports from road widening activities is in contravention to rules and regulations, misuse of authority, loss of revenue to the government and have negative environmental impacts. The operation of crusher plant at peeping is shown in **Figure (xxxvii)** below:



Figure (xxxvii) Crusher Plant at Peeping

Response of DoFPS

The DoFPS responded that approval for export of the excess materials from road widening works by M/S Gyeldron Venture for 35 Km has been provided based on the clearance from DoR stating that the materials collected from the Road Right of Way was excess and that DoR does not have any objection on utilization of the surplus material.

It is also apparent from the DoR clearance that the road widening is agreed to be carried out on pro-bono basis without any cost to the Government.

3.4.5 Non-execution of mitigation plan

Only six parties have submitted the mitigation plans for obtaining the Environmental clearance (EC). However, none of the six parties have executed the mitigation plans except small component by M/s BMML Stones &Aggregates.

As per the mitigation plans submitted by the parties, they are required to carry out mitigation work valuing to Nu.622.581 million.

During the site visits, the mitigation works were not found executed by the parties. The Reinforcement Cement Concrete (RCC) walls up stream above highway, river diversion walls and retaining walls along Dhamdum River were found already constructed by industrial project of DoI, DoR and by BPC respectively.

This indicates that DFOs have not reviewed and demarcated the areas for mitigation works and also not enforced the mitigation plans submitted by the parties

Response of DoFPS

The DoFPS accepted the need for carrying out mitigation plan and now onwards the renewal of FC and EC will be subject to fulfilment of the terms and conditions in the approval.

The Department assured the implementation of planned mitigation works and to introduce stringent compliance monitoring of the dredging work as it has already constituted a six-member committee in Samtse to monitor and ensure the surface collection and dredging are carried out as per the agreed terms and conditions.

The draft interim guideline has provisions for rapid Environmental Impact Assessment with specific terms and condition for mitigation work and the applicant need to deposit an unconditional bank guarantee with the Department equivalent to the value of mitigation work and any non-compliances will result into forfeiture of the amount.

3.5 Certificate of Origin (CoO)

As per the Guideline for issuance of Certificate of Origin (CoO), June 2018 issued by the MoEA, a Certificate of Origin is an important international trade document certified by a recognized competent authority attesting that goods in a particular export shipment are wholly/partially obtained, produced, manufactured or processed in a particular country'. The purpose of CoO under sub clause 4.1 states, 'The Customs authorities in the importing country require the CoO to determine whether or not to apply certain trade measures at the border' and sub clause 4.2 stated that 'The exporters need the CoO to claim preferential tariff treatment eligible under the bilateral/regional or multilateral trade agreements of the exporting country'.

For the export of riverbed materials, the private parties and exporters in Phuentsholing and Samtse obtain CoO from the RTIO, Phuentsholing. Upon review of management and issuance of CoO, the RAA noted the following:

3.5.1 Inadequacy in the management of Certificate of Origin (CoO)

CoO records vital information such as description of goods, LC number & date, invoice number & date, number of packages, quantity, price per unit, price in total, gross and net weight and declaration by the exporters.

On review of CoO issued to exporters from January 2017 to October 2018, it was observed that a total of 71,149 CoO booklets were issued to the parties recording export amount of USD 63.924 million. Of these 1,083 CoO form did not record the name of the parties and exporters and 454 CoO were found cancelled without retaining the original CoO form. Further, 2,524 CoO form were found missing with RTIO, Phuentsholing as shown in **Table 11**.

Sl. No	Particular	Qty. in Booklets	Amount (Nu.)	Remarks	Refer
		contains 12 leaflets			
1	CoOs without names of Private parties and Exporters	1,083	USD 701,739.60	Export amount earned by parties as per CoO	Appendix-G
2	CoOs Cancelled	454	-		Appendix-H
3	CoOs missing	2,524	Nu.454,320.00	Cost of CoO form at Nu.180 per booklet	Appendix-I
Total		4,061.00			
Source of Information: RTIO, Phuentsholing					

As the name of parties was missing, it was difficult to cross verify the export data with that of RRCO to authenticate the actual quantities of exports vis-à-vis the parties. This also possess risk of CoO being misused by parties other than the one to whom the CoO was issued. There is also possibility of tax evasion by the parties without basis for RRCO to cross verify the earnings declared.

The cost of missing CoO amounting to Nu.454,320.00 needs to be accounted in case of non-production of the missing CoOs. For the cancelled CoO, although the available duplicate copies mentioned the product exported as stone and boulders but without the original CoO, the RAA could not rule out the possibility of using the original of CoO for exports of items other than stone and boulders. Therefore, the RTIO should furnish the original copies of cancelled CoOs.

All these lapses indicate poor management of important documents such as CoOs by the RTIO as the CoOs are issued in advance in bulk to the private parties and exporters in both Phuentsholing and Samtse. As such the private parties and exporters have the sole discretion over the use of the CoOs.

3.5.2 Non-compliance to Guidelines for issuance of Certificate of Origin (CoO)

Under **Clause 7.1** of the Guideline for issuance of Certificate of Origin (CoO) *'the exporter would be required to furnish the following documents to the RTIOs to obtain CoO'*:

- *Letter of credit;*
- *Commercial invoice;*
- *Packing list; and*
- *Any other document from the relevant agency where necessary.*

Further, Clause 7.2 states the need to fulfill the minimum value addition requirements as applicable and Clause 7.4 states that the exporter shall pay applicable prescribed fee for the cost of CoO.

However, Letter of Credit (LC No.) though required by the CoO form was not recorded properly and consistently. Inadequacy in such vital information may lead to payment for the exports in cash instead of it being transferred to the LC account. Regarding the value addition to the materials exported there is no system or practice in place to assess whether the export material has been value added.

Further, Clause 8 of Guideline for issuance of Certificate of Origin (CoO) requires two different stamps/seals on the certificates. The RTIO's round stamp and the official stamp of the issuing authority of the RTIO. However, it was noted that only round stamp was obtained on the CoO and no stamp of the issuing authority is obtained. Without the stamp of the issuing authority on the CoO, it is difficult to ascertain who has issued the CoO and whether the official who had issued has authority to issue or not.

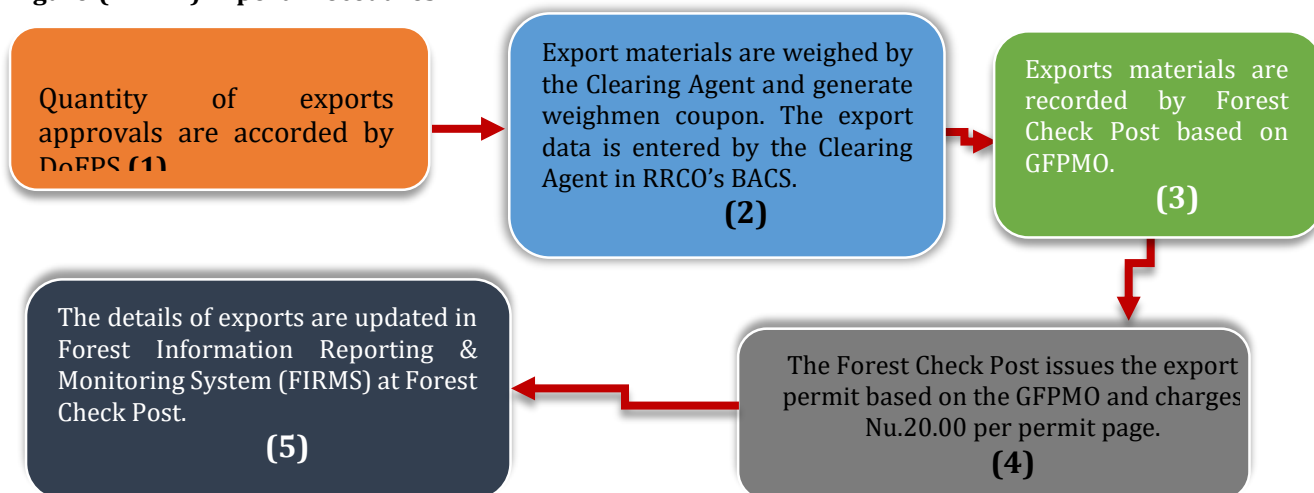
Response of RTIO

The RTIO, Phuentsholing in its response accepted the findings which was due to acute man power shortage, absence of designated staff for management of CoO and absence of standard operating procedure for issuance of CoO which resulted into the lapses pointed out by RAA. The issuance of CoO drastically increased since 2018 with the start of export of boulders from Phuentsholing and Samtse to Bangladesh. The discrepancies in CoO and verification of data pertaining prior to 2016 could not be carried out. The finding on missing CoO should be corrected as Nu 180 per booklet and not per leaflet, thus the amount change to Nu 454,320.00 instead of Nu 5,452,840.00 as reported by RAA.

3.6 Exports

The current export procedures adopted by the Divisional Forest Office, Samtse is as illustrated in **Figure (xxxviii)** below:

Figure-(xxxviii) Export Procedures



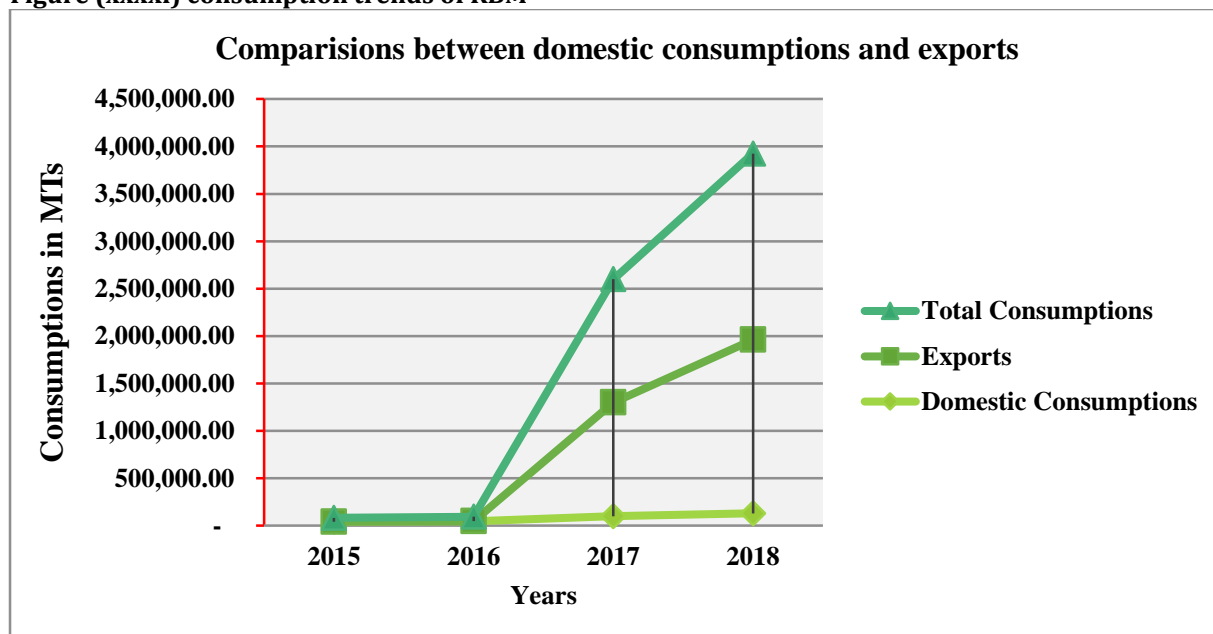
The review of the export and domestic consumption of the riverbed materials revealed the following:

3.6.1 Massive extraction of RBM due to increased exports

The total consumption of RBM from Phuentsholing and Samtse during the period January 2015 to October 2018 aggregated to 3.350 million MT. Of the total, the domestic consumption was only 0.318 million MT representing 9.50 % and the export quantity was 3.031 million MT representing 90.49 % of the total consumption. The detailed workings are presented in **Appendix- J, K&L** and summarized in **Table 12**.

Sl. No.	Year	Domestic Consumptions	Exports	Total Consumptions
1	2015	41,488.00	-	41,488
2	2016	46,816.00	-	46,816
3	2017	99,808.00	1,200,211.56	1,300,020
4	2018	130,312.00	1,831,703.27	1,962,015
Total		318,424.00	3,031,914.83	3,350,339

Figure (xxxxi) consumption trends of RBM



As transpired from the table and figure above, the RBM consumption has increased significantly by 25.63 times from 2016 to 2017 owing to the commencement of export. The export for 2017 was 1.200 million MT while the domestic consumption for four years (2015-2018) was only 0.318 million MT. In 2018, the export quantities almost increased by double the quantity of 2017.

The consumption trend strongly indicates that extraction of RBM has drastically increased after revision of FNCRR 2017 which allows export of RBM. If extraction of RBM continues at the same trend profiteering the few operators, the sustainability and environmental safety remain uncertain.

Response of DoFPS

The DoFPS responded that surface collection and dredging of RBM is carried out only in the southern foothills where the rivers are not perennial and the materials are deposited every season. If the materials are not allowed for collection, siltation of the riverbed will occur every season thereby changing the river course, ultimately causing both physical and environmental damage to the embankment and downstream communities and infrastructure. In Damdum, Samtse the industrial estate, BPC colony, bride located downstream which was in dire threat from flooding from river during the monsoon now stands intact without any risk from flooding.

The Department views that DoR spends huge amount for engaging private contractors for protection of road furniture compared to surface collection and dredging which has actually minimized the cost to the government and being allowed only in the border areas to avoid wash of materials and curbing illegal activities.

3.6.2 Exports of RBM without export approvals

In order to export RBM, the exporters are required to obtain export approvals from DoFPS based on inspection report submitted by Range Offices. However, review of the documents revealed discrepancies in exports approvals obtained and actual quantities exported as summarized in **Table 13** and detailed in **Appendix-M, A3 & A4**.

SL. No	Location	Export approved (in T/Ls) (A)	Actual Quantity Exported (B)	Exports without approvals (in T/Ls) (C=B-A)	Percentage of exports without approvals D=C/A*100
1	DFO, Samtse	57,360	203,784	-146,424.00	-255.27
2	DFO, Gedu	12,161	175,205	-163,044.00	-1,340.71
Total		69,521	378,989	-309,468.00	-445.14

Source of data: DFO, Samtse & Gedu and RRCO, Samtse & Phuentsholing

As apparent from **Table 13**, the quantities exported were beyond the approved quantities to the extent of 255.27% and 1,340.71% for DFO, Samtse and DFO, Gedu respectively. This could be attributed to lack of controls at the check posts where the export permit is issued based on GFPOMs rather than on the basis of export approvals.

The exports without approvals can be construed as illegal export and failure to exercise proper supervision and monitoring by the relevant authorities. In addition, the export of RBM in excess of approved quantities led to incorrect information on exports records maintained by DoFPS which may impede informed decision making.

Response of DoFPS

The DoFPS responded that export approvals for M/S Rigsar Construction, M/S Yangkhil Construction and M/s Chukha Construction was granted by the Ministry as per the FNCRR 2017 except that approvals did not specify the quantity for export which should be submitted by Thromde. The quantity exported is being regulated through issuance of export permit and thereby is no royalty loss to the Government as royalty is based on truckload exported.

The Department in its response justified that there were few cases of the export data obtained from RRCOs including the exports made through DGM approval.

3.6.3 Discrepancies in quantities of RBM in primary form, exports and stocks balances leading to non-accountal of royalty and permit fees amounting to Nu.25.764 million

The royalty and permit fee for surface collection and dredging of RBM was paid in advance of collection and dredging. On comparison of quantities for which royalty and permit fee had been paid vis-à-vis quantities collected comprising of stocks balance at site and quantities exported for the period from January 2017 to October 2018 under Samtse and Gedu, the quantities collected exceeded the quantities for which royalty and permit fees were realized as depicted in **Table 14** and detailed in **Appendix A1, A2, A5,A6, A3 & A4**.

Location	Qty for which GFPOMs for royalty and permit fees issued (T/Ls) =A	Quantities collected & dredged (in T/Ls)			Difference in Qty (in T/Ls)	Royalty & permit fees not paid (Nu.40 + Nu.10) @ Nu.50.00
		Physical Balance at sites	Qty. Exported as per RRCO	Total		
Samtse	141,965	266,191	203,784	469,975	-328,010	-16,400,500.00
Gedu	93,841	105,920	175,205	281,125	-187,284	-9,364,200.00
Total	235,806	372,111	378,989	751,100	-515,294	-25,764,700.00

As transpired from the above table, DFO, Samtse and Gedu have collected and dredged 328,010T/Ls and 187,284T/Ls of RBM respectively without collecting royalty, permit and export fees amounting to Nu.25.764 million from the operators. The collection and dredging of RBM without paying royalty, permit and export fees is construed as illegal and is indicative of failure to conduct proper supervision and monitoring by the relevant authorities.

3.6.4 Stocks difference of 7,119 Trucks loads of RBM and irregularities thereof

As per records of Samtse Range Office, the royalty and permit fees amounting to Nu.2,051,950.00 was recorded against Mrs. Sonam Dema for collections **41,039 Trucks Loads** of surface collection and dredging of riverbed materials (RBM) along Amochu River, Tading.

The validity of permit for surface collection and dredging of riverbed materials was from 12.08.2017 to 12.07.2018. Since the surface collection and dredging site is closer to Phuentsholing, Mrs Sonam Dema was allowed to export the materials via Phuentsholing check post.

On verification of exports made under RRCO, Samtse and Phuentsholing for the period January 2017 to October 2018, it was observed that there was no export data in the name of Mrs.Sonam Dema which was later confirmed by the operator vide letter dated 03/12/2018.

Accordingly, to confirm the stocks positions at sites, the Range Offices of Samtse and Phuentsholing were asked to conduct the physical verifications of stocks at site. The physical verification report of materials at site showed total of 43,158 Truckloads (34,361.25T/Ls at Tading site and 13,797 T/Ls) transported at Rigsar sites, Phuentsholing as shown in **table 15**.

Sites	L (m)	W (m)	H(m)	Total (Cum)	Unit	Estimated Qty	Unit	Estimated T/L	Royalty collected to be validated (@ Nu.40+ @Nu10 per permit)
Tading site	140	77	17	183,260	Cum	274,890	MT	34,361.25	-
	140	77	17	183,260		274,890	MT	34,361.25	
Toorsa site (Rigsar site)	380	50	14	266,000	Cum	110,373	MT	13,797	-
	380	50	14	266,000	Cum	110,373	MT	13,797	
				449,260		385,263		48,158	2,407,900
Less: Qty. approved for collection in GFPMO								41,039	2,051,950
Difference Qty.								7,119	355,950
Source of Information: DFO, Samtse and Gedu, Chhukha									

As against the 41,039 T/Ls approved for collection of RBM as per GFPMOs, the physical stock balances at two sites (Tading and Toorsa, Rigsar Yards) was in excess by 7,119 T/Ls without collections of royalty and permit fees amounting to Nu.355,950.00 (7,119 T/Ls * Nu.50.00).

Further, during audit exit meeting (on 30.4.2019), it was informed that no physical verification was conducted on stock balance at another site of Toorsa belonging to Mrs. Sonam Dema.

Therefore, the DOFs, Gedu and Samtse along with DoFPS should collect royalties and permit fees from Mrs. Sonam Dema for the excess collection of RBM besides confirming the stock balance at another site of Toorsa and intimate RAA.

Response of DoFPS

The DoFPS responded that the quantity differences of RBM materials pertaining to M/s. Sonam Dema along Amochu River, Tading is mainly due to the temporary stocking of dredged materials at M/s Rigsar Construction site, Toorsa. The stocking of the dredged materials at M/s. Rigsar Construction site, Toorsa was allowed as M/s. Sonam Dema and M/s. Rigsar Construction has partnership license obtained from MoEA for river dredging. The materials stocked are not exported as of now and can be measured and verified at the site. Letter requesting to process export and subsequent monitoring for the stocked RBM materials was sent to DFO Gedu from DFO Samtse Forest Division.

3.7 Financial Implications to the Government

3.7.1 Revenue foregone due to direct award of surface collection and dredging of RBM by DoFPS–Nu.299.868 million

While surface collection of sand, stone and boulders under Samtse and Phuentsholing were in existence in the past, the largescale operation started from January 2017 after the adoption of FNCRR 2017 with inclusion of **dredging** as part of surface collection.

As per the FNCRR 2017, the surface collection and dredging of riverbed materials shall be given to the authorized agency. In the event, the authorized agency fails to operate within the stipulated time period, then the Department shall demarcate the river bed into appropriate plots and allot **directly or auction** to individual/company upon fulfillment of certain conditions.

The DoFPS had directly awarded the surface collections and dredging of RBM to 33 individuals and private parties as shown in **Appendix-N1 & N2**. Subsequently, the NRDCL also applied for such operation and awarded to private parties.

The private parties engaged by DoFPS have paid royalty @ Nu.40 per T/L (8 metric ton) and permit fee of @Nu.10 per page. On the other hand, private parties engaged by NRDCL paid service charges and other overhead cost @ Nu 2.14 per cft, in addition to royalty and permit fees realized like any other private parties approved by DoFPS.

If the DoFPS had awarded the surface collection and dredging of RBM to NRDCL or had auctioned, the government would have benefitted by the auction fee and dividend from the NRDCL. Since DoFPS did not exercise prudence in the award of surface collections and dredging of RBM, the government had foregone the benefit of Nu.299.868 million as worked in **Table 16 & 17** and detailed in **Appendix-01, 02, 03 &04**.

DFO	Quantity Exported in MT=A	Stock balance =B MT	Total Qty in MT (Export + Stock balance) =C	Qty. in Cft. (C * 23.32 Cft)=D	Earnings/ Revenue foregone if calculated at NRDCL quoted rate per Cft. E=D * Nu.2.14
Gedu	1,401,639	847,363	2,249,002	52,446,730	112,236,002.99
Samtse	1,630,276	2,129,530	3,759,805	87,678,659	187,632,331.04
Total	3,031,915	2,976,893	6,008,807	140,125,390	299,868,334.03
<i>Source of Information: RRCO, P/ling and Samtse</i>					

Sl. No.	Office	Oty Exported in MT	Qty Exported in CFT (1MT=23.32Cft)	Rate per CFT as per NRDCL	Revenue Receivables (Nu.)	Remarks
1	Gedu	1,401,639	32,686,226.70	2.14	69,948,525.14	Refer Appendix O1
2	Samtse	1,630,276	38,018,027.07	2.14	81,358,577.93	Refer Appendix-02
Sub Total		3.031,915	70,704,253.77		151,307,103.07	
Sl. No.	Office	Stock Balance in MT	Stock balance in CFT (1 Mt=23.32 Cft)	Rate per CFT as per NRDCL	Revenue Receivables (Nu.)	Remarks
1	Gedu	847,363	19,760,503.85	2.14	42,287,478.24	Refer Appendix O3
2	Samtse	2,129,530	49,660,632.39	2.14	106,273,753.31	Refer Appendix O4
Sub Total		2,976,893	69,421,136.24		148,561,231.55	
Grand Total					299,868,334.62	

The direct award of surface collections and dredging of riverbed materials by DoFPS have not only deprived the government of additional revenue but also deprived competitive and equal opportunity to the citizens who are trustees of State resources.

Response of DoFPS

The DoFPS responded that majority of the sites for surface collection and dredging have been allocated to the NRDCL but due to their limited operational capacity had resorted to sub contract of the operations at all allotted sites to private operators. Nu.2.14 per cft charged by NRDCL from the private parties is considered as commission and has no legal basis. The Department justified that the fair and equal opportunity has been achieved by engaging private operators instead of complete monopoly through NRDCL which is in contravention to private sector development policy which is affirmed by OAG's review presentation. The other parallel opportunities including mining and quarrying operations are also awarded to private operators in similar process without auctioning.

3.7.2 Financial implication in terms of operations and exports by private parties instead of DGM - Nu. 23.494 million

The Mines and Minerals Management Act (MMMA) 1995 mandates the Department of Geology and Mines (DGM) to manage the mineral resources of the country and defined Minerals as, *any substance occurring naturally in or on the earth and having formed by or subject to a geological process and which can be obtained from the earth by digging, drilling, dredging, and quarrying or by other mining operations*'.

Further, **Section 55 (5)** of FCNR 2006 states that "*collections of sand, stone, boulders and gravels is not permitted from any riverbed in order to protect the aquatic environment*".

However, dredging activities which is more of a mining nature was included under **Section 366 (6)** of the revised **FNCRR 2017**. The dredging if considered as mining, the authority to govern and manage lies with the Department of Geology and Mines (DGM) with different rate of levies.

As per the Revised Taxes and Levies Act of Bhutan 2016, the Royalty for exports are collected @ of 2 % on the Minimum Floor Price (prevailing MFP is Nu 405) and an amount equivalent to 10% of the projected export royalty or the domestic royalty whichever is higher as Mineral Rent totaling to Nu.8.91 per metric ton. The royalty levied by DoFPS for surface collections and dredging of RBM is Nu.40 per truckloads which translate to Nu.5 per metric ton.

If dredging of RBM is considered as mining, the government would have benefitted by higher royalty and mineral rent to the tune of Nu.23.494 million for the period from January 2017 to October 2018 as worked out in **Table 18 & 19** and detailed in **Appendix P1, P2, P3 & P4**:

Table18: Revenue foregone as result of dredging as surface collections					
Sl. No	DFO	Quantities extracted (in MT)			Revenue foregone @ Nu.3.91 (Nu.8.91- Nu.5/MT)
		Quantity Exported =A	Stock balance =B	Total Qty (C= A+B)	
1	Gedu	1,401,639	847,363	2,249,002	8,793,597.82
2	Samtse	1,630,276	2,129,530	3,759,805	14,700,837.55
Total		3,031,915	2,976,893	6,008,807	23,494,435.37

Source of Information: RRCO, P/ling and Samtse

Table19: Detail of Table 18					
Sl. No	Office	Qty Exported in MT	Rate per MT as per DGM	Revenue Receivables (Nu.)	Remarks
1	Gedu	1,401,639.22	3.91	5,480,409.35	Refer Appendix P1
2	Samtse	1,630,275.60	3.91	6,374,377.60	Refer Appendix-P2
Sub Total		3,031,914.82		11,854,786.95	
Sl. No	Office	Stock balances at yard	Rate per MT as per DGM	Revenue Receivables (Nu.)	Remarks
1	Gedu	847,362.94	3.91	3,313,189.10	Refer Appendix P3
2	Samtse	2,129,529.69	3.91	8,326,461.09	Refer Appendix P4
Sub Total		2,976,892.63		11,639,650.18	
Grand Total				23,494,437.13	

Response of DoFPS

The DoFPS responded that the replies to this finding is same as in audit finding No.3.1.3 & 3.1.4 above.

CHAPTER 4: RECOMMENDATIONS

Based on the issues reported above, the RAA has formulated series of recommendations with the objective of enhancing efficiency and effectiveness in the management of surface collection of riverbed materials through improved legislations, monitoring and enforcement by relevant stakeholders.

The recommendations are broadly classified into General and Specific as enumerated below:

4.1 General Recommendations

The recommendations under the general section include those which were formulated on the basis of inadequacies and inconsistencies in the overall legal, policy and institutional framework governing the surface collections of RBM. It is aimed at bringing about appropriate reforms in the legislations and policies to render better and effective system in the administration of RBM.

4.1.1 Government need to harmonize the legal framework and existing regulations governing surface collection & dredging and export of RBM

While the existing regulations mandate both the DoFPS and the DGM to issue approval for surface collection of RBM such as stone and boulders, the Water Act 2011 also gives specific mandate for surface collection of boulders to a “**State Agency**”. **Section 436(63)** of the **FNCR 2017** includes dredging of boulder from river bed using excavator which is not within the ambit of FNCA 1995 and the definition of surface collection specified in the Joint Guidelines issued in 2010 by then Cabinet. Existence of such overlapping mandates created difficulties in implementation and monitoring by the relevant agencies. It has also contributed to unrestrained surface collections and dredging of RBM by private parties and non-compliance to applicable Laws and Regulations governing the surface collections.

Therefore, the Government should review and harmonize the legal framework and existing regulations governing surface collection & dredging and export of RBM, keeping in mind the environmental impacts and sustainability of such resources.

4.1.2 Legality of “dredging” in FNCR 2017 needs to be reviewed

The FNCA 1995 does not contain specific provision on ‘*Surface collection of stones, boulders and dredging activities*’ but includes boulders, stone, sand, gravel, rocks, peat, surface soil under ‘**Forest Produce**’. The inclusion of surface collection of stones, boulders and **dredging of RBM in FNCR 2017 using excavators** is not in accord with FNCA 1995. RAA’s review noted that such inconsistencies have led to use of excavators and excavation of depth of more than 3 meters and massive dredging of river beds, which is further exacerbated by lack of proper monitoring mechanisms.

The Government should conduct the review of legality of inclusion of **Surface collection of stone, boulders and dredging** in the **FNCR 2017** and bring more clarity to ease enforcement by relevant authorities.

4.1.3 Government need to consider revision of royalty rate for RBM

Currently, the DoFPS collects royalty @ Nu 40 per Truck Load for riverbed materials irrespective of domestic consumption or for the purpose of export to neighboring countries. On the other hand, the exporters earn in hard currency ranging from USD 14 to USD 27 per Metric Ton while exporting to country like Bangladesh.

As the system of realizing royalty on Truck Load basis does not commensurate with the earnings made by the Exporters, the Government should review the royalty rates which has not been revised for a long period of time as well as consider to rationalize charging of royalty on the basis of Metric Ton (MT) instead of Truckload (T/L).

4.1.4 Issuance and approval of Environmental Clearances should be strictly implemented in line with the existing rules and procedures

Environmental Clearance are issued, to let a project proceed, which includes terms and conditions to ensure that the project is managed in an environmentally sound and sustainable way.

RAA's review noticed that while almost all the parties were involved in dredging activities, Environmental Clearance was not obtained from the NEC except by M/S BMML Enterprise. In few cases, the Environmental Clearance was obtained from DoFPS which is not the competent authority for issuance for Environmental Clearance for dredging activities. Further, to operate the crushing plants, the EC should be obtained from the Dzongkhag Environment Committee (DEC) or Thromde. However, some of crusher plants operators have not obtained the Clearance.

Due to non-enforcement of the rules and regulations, there are huge social and environmental impacts like non-restoration and mitigation plans as per the Detailed Project Report (DPR) at sites.

The Government and Competent Authorities should strictly implement Environment Assessment Act 2000 and the procedures outlined in Chapter IV, Environmental Clearance of Project 2016 for issuance and approval of Environment Clearances.

4.1.5 Relevant authorities should strengthen monitoring, coordination and enforcement mechanisms

The monitoring and coordination among the multiple agencies involved in the governance and management of surface collections and dredging of RBM were lacking in the current system. Due to lack of proper monitoring systems, coordination and enforcement during the execution of such activities it had led to breach of applicable Laws and Regulations, collections of RBM at the discretions of parties, no appropriate recording of exports by DoFPS, execution without completing formalities, forestry clearances issued without requirements, no uniformity in obtaining sectoral clearances, illegal mining, commercialization of construction materials from road widening activities and huge social & environmental impacts.

There are also shortfalls in the issuances of CoOs (Certificate of Origin) by RTIO, Phuentsholing for exports of RBM which are not properly monitored as stock reconciliation are not carried out to show its appropriate utilization. Issuances of CoOs (Certificate of

Origin) by RTIO, Phuentsholing for exports of RBM in bulk to private parties and exporters posing risk of CoOs being misused by parties other than the one to whom it was issued.

Therefore, the Government and relevant Authorities should strengthen the monitoring, coordination and enforcement of execution of such activities to ensure minimal social and environmental impact.

4.1.6 Methods of award of surface collection and dredging works need to review to ensure uniformity and equity

Currently, there are two methods of awarding the surface collection and dredging works such as direct award to parties by DoFPS and Thromde while the NRDCL invites competitive bids from the interested parties and award to parties offering the best price in accordance with the Procurement Rules and Regulations. The private parties engaged by DoFPS have paid royalty @ Nu.40 per T/L (8 metric ton) and permit fee of @Nu.10 per page. On the other hand, private parties engaged by NRDCL pays service charges and other overhead cost @ Nu 2.14 per cft, in addition to royalty and permit fees.

The existing practices is viewed irrational, lack transparency, uniformity and equity for extraction of same materials in same locations by different parties. Such practices has high risk of encouraging favoritism, nepotism and unethical business operations. It is desirable that government conduct thorough review and consider options that best protect interest of the Government and citizens who are trustees of the Nation's resources.

4.2 Specific Recommendations

The specific recommendations are draw on the basis of inadequacies in the enforcement of Acts, rules and regulations by the authorities delineated with responsibilities of enforcements.

4.2.1 Issuance of Forestry Clearances should be strictly enforced as per the existing rules and procedures

It is mandatory for every Institution and Individual to obtain the forestry clearance for the purpose of allotment of State Reserved Forest Land for *Kidu* land, Rehabilitation land, Substitute land, Exchange, Government institutions, *Gerab Dratshang* and Lease.

RAA's review observed instances of surface collections carried out without obtaining Forestry Clearances from the relevant authorities. There were also cases where forestry clearances were issued without conducting actual site inspection and obtaining sectoral clearances and consultation with the local communities which is mandatory as per the prevailing rules.

The DoFPS should review the existing practice of issuing forestry clearance and ensure strict enforcement of existing rules and procedures and subject to mandatory requirements.

4.2.2 DoFPS should carry out inspection to curb Illegal activities in the name of surface collection in the country and take necessary action

The surface collection site approved by DoFPS to Mr. Jamyang Loden, Gumpudara, Pasakha was reported as in the nature of mining and not necessarily of surface collection. The RAA's site visit unearthed extractions of boulders from the hill lock and boulders were exported

by the owner of the registered land in contravention to his appeal that it would be using for his own site development and not export. Such incidences of illegal mining in the name of surface collection could be prevalent in other parts of the country as well.

Therefore, DoFPS should carry out inspections throughout the country to curb existence of such practices to ensure that surface collections are being carried out in conformity to existing procedures, rules and regulations. The relevant agencies should also place proper measures and mechanisms to enforce the implementation in line with the existing policies. With regard to the above case of Mr. Jamyang Loden, the applicable royalty, permit fees and export permit fees for the collection of boulders should be validated, levied and status intimated to RAA.

4.2.3 DoFPS should carry out inspection to see whether construction materials from road widening activities are being commercialized

Section 162 of the Road Act of Bhutan 2013 restricts the Department of Forests and the Department of Geology and Mines to issue any permit to any person or organization for the collection of resources from the road right of way or from any adjoining government land near a road except for purposes of construction, repair, maintenance and improvement of roads.

On the contrary, the DoFPS had granted an export approval to M/s Gyeldron Venture involved in the road widening at 35 Km road chain age along Manitar – Raidak National High Way based on approval of the Department of Roads which is flagrant violation of existing Acts, Rules and Regulation. In order to control such activities, the DoFPS should carry out prior inspections to see whether construction materials from road widening activities are being commercialized by contractors before issuance of forestry clearance and granting an export approval. Further, the applicable royalty and permit fees amounting to Nu. 1.988 million for the extraction and export of boulders should be levied and status intimated to RAA.

4.2.4 DoFPS should confirm the non-accountal of royalty and permit fees for the remaining stock balances at the yards of private parties - Nu. 25.764 million

During the period from January 2017 to October 2018, the parties had exported 3,031,915 MT of riverbed materials against which royalty realized amounted to Nu. 9.430 million. As on 30 October 2018, there were remaining stock balances with various parties of staggering 2,976,893 MT which is almost equivalent to quantity already exported to neighbouring countries.

The payment of royalty and permit fees on the remaining stocks balances at yards of private parties aggregating to Nu 25.764 million for 328,010T/Ls (DFO Samtse) and 187,284T/Ls (DFO Gedu) should be validated, levy and status intimated to RAA.

4.2.5 DoFPS should strictly accord approvals and quantification for export of RBM

While exporting RBM, the exporters are required to obtain export approvals from the DoFPS based on recommendation issued by the inspection teams of the respective DFOs. The inspection teams quantify the exports approval on Truckload basis. However, there were many instances where exports were being carried out without export approvals and also without quantification of the exports on the basis of Truckload. The private parties and

exporters have also replenished the export approvals prior to completing the export approval granted earlier.

The DoFPS should strictly accord exports approvals in line with the existing laws and policies and quantify such approvals to ensure that exports are not carried out without approvals.

CHAPTER 5: CONCLUSION

The surface collection and dredging of RBM is governed by FNCA 1995 and MMMA Act 1995 which provides overall frameworks for administration and management of natural resources in the country. There are other subordinate legislations such as Road Act 2013, Environmental Assessment Act 2000, Executive Order No PM/01/01/571 dated 7th November 2007 and FCNRR 2017 that provides framework for enforcement and basis for ensuring proper operations and compliances to applicable Laws.

Proper harvesting of riverbed materials has huge potential of “**narrowing the gaps**” and contributing to economic growth, generation of income and employment. However, RAA’s review of surface collections and dredging of RBM showed various shortcomings in practices basically resulting from inconsistencies and inadequacies in the application of the Laws and inadequate enforcement mechanism to deliver the intent of the Laws of the Country.

On monitoring and enforcement front, there are better opportunities for regulatory authorities to rein in undesired and unethical business practices through instituting appropriate enforcement mechanisms and shared responsibilities of reaping the benefits. The review could foresee better enforcement through well-coordinated efforts and information sharing among relevant agencies.

The conflicting Laws and regulations followed by poor enforcement machineries generally impedes economy, efficiency and effectiveness in business operations. The prevalence of inconsistencies and lack of enforcement not only affect business operation and culture, it also has ripple effects on larger interest of the society in terms of wealth distribution, inter-generational equity and sustainable use of natural resources.

As per the Budget Appropriation Act for last Financial Year 2018-19, the total approved budget was Nu. 36,317.937² million, out of which Nu. **29,075.167 million** was earmarked for current expenditure, Nu. 5,386.162 million for capital expenditure, Nu. 1,842.168 million for repayment of loans and Nu. 14.440 million for lending. The total earnings from the export of the riverbed materials by various private parties, crusher plants and exporters amounted to approximately Nu. **6,246.111 million** (exclude operational/overhead charges), which represents approximately 21.48 % of the current expenditure of FY 2018-2019 (data includes both exports and the stock balances at yards). The RAA consider this as substantial amount. The country’s ballooning fiscal deficits could be easily financed through proper review of the legislations governing surface collection of riverbed materials and proper enforcement of laws. Further, as the country would soon be graduating from Least Developed Country (LDC) status, it is befitting to streamline the procedures, improve enforcement mechanisms and derive maximum benefits from the available resources.

All the relevant authorities should strive to work towards the ruling Government’s policy of “**narrowing the gaps**” and fairer distribution of wealth/income among the citizens.

²National Budget , Financial Year 2018-2019, MoF, January 2019

Considering the relevance and potential, the RAA is hopeful that the information, findings and recommendation contained in the report would be useful and render insightful in formulating policy decision by the Parliament to bring improved administration and management of surface collection and dredging of RBM.
