

"We are a small country – a country like no other. Therefore, we are in a position to be more efficient and more effective than others. What others can do in a decade, we can and should accomplish in a few years. What others manage in years, we can and should achieve in months. It must always be our constant endeavour to perform better, carry out our tasks with greater efficiency, effectiveness and grace, and become exceptional in the world. As I have said many times before— if we are firm in our resolve, we will succeed and overcome the constraints posed by limited resources."

His Majesty the King Jigme Khesar Namgyel Wangchuck from National Day Address, 17th December 2018

Management:

Phub Rinzin, Director Yeshey Lotay, Chief Engineer, CSD Tsheten Dorji, Chief Engineer, CRD

Annual Report Committee Members (In alphabetical order):

Arjun Subba, ICT Section Budhiman Shingdan, CRD Tandin Norbu, CSD Tshering Nidup, CRD Yeshi Choden, CSD

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MESSAGE FROM THE CHAIRPERSON

he construction industry in the recent year has seen unprecedented development and change. And with development and change, comes greater responsibilities for each one of us. New challenges for the construction sector arise while new methods and innovation overcome old challenges. As Chairman of the board, it is indeed a privilege for me to be part of the change, development and challenges. The construction sector is in an exciting but also in a vulnerable cross road. Any wrong step could have a huge impact to the development process of Bhutan.

In such a situation, the Construction Development Board's role in the construction industry is ever more paramount in addressing the industry's challenges. Its intervention in many aspects of the industry through advocacy, dissemination of crucial industrial data and effort in eradicating corruption and promoting transparency will highlight the advancement of the industry in the next few years.

Employment in the construction sector remains a vital concern despite enormous contribution the construction industry makes to the economic development of Bhutan. In the past few years, the contribution of the construction industry to the Gross Domestic Product remains significant at more than 16%. However, employment of Bhutanese within the construction industry remains a valid concern with the construction industry absorbing less than 3% of the Bhutanese workforce, indicating a major fallacy and contradicting the promise of the construction industry to the development of the country. In this interest, the Construction Development Board with relevant stakeholders can be an influential force in fulfilling the objective of reducing unemployment.

Similarly, the last year has seen Construction Development Board (CDB) continue effort in professionalizing the management and leadership of private construction firms. There has been a lot of investment in developing the verification process and improving the compliance monitoring with initiation of the registration process for engineers in the construction industry, registration of all survey professionals in partnership with the National Land Commission and the Institute of Survey and Spatial Science Professionals of Bhutan (ISSSPB), and continual enhancement of the CDB online system with integration to the G2C services.

With these enhancements, the grip on the development activities are strengthened as the government implements the objectives of a *Just, Harmonious and Sustainable Society* through enhanced Decentralization in the 12th FYP with an outlay of Nu. 310 Billion, 38 percent more than the 11th FYP. The next few years will also see the graduation of Bhutan from the Least Developed Countries in 2023. Meeting the objectives in the stipulated time will indicate not only the fruits of our endeavor, but will also constantly remind us to achieve and retain the development of physical infrastructure that are safe, resilient and sustainable.

The Construction Development Board is consistently enhancing its research and development capacities and encouraging more communication and advocacy with regard to quality of construction, occupational health and safety and use of different construction technologies to encourage participation of our young people in the construction sector.

His Majesty the King, in his address to the nation on the National Day, 17th December, 2018, called out for firm resolve in achieving our goals and reminded everyone that as a small, unique country, we are in a position to be more effective and efficient than others.

Reflecting on the timeless vision and wisdom of the Golden Throne, I submit my enthusiasm in presenting the Annual Report 2018-2019 of the Construction Development Board. As Chairman, it is indeed a privilege to contribute the resources at my disposal in the development of the construction industry.

Tashi Delek

(His Excellency Lyonpo Dorji Tshering)

Zhabtog Lyonpo Chairman, CDB



FROM THE DIRECTOR'S DESK

t is an honour to present the second Annual Report of the Construction Development Board encapsulating the various undertakings and activities that were committed and delivered in multiple aspects in the development of the construction industry in the year 2018-2019.

The past year has been significant with the ending of term of the second government formed by democratic parliamentary elections and transition taking place for the new government. With the transition, we welcome the new chairperson, His Excellency Zhabtog Lyonpo to the CDB family. We consider priveleged to have His Excellency's experience and guidance in achieving CDB's vision in the development of the construction industry.

We are also filled with immense gratitude in welcoming new members of the Construction Development Board-Aum Kesang Deki, Director General, Department of National Properties and Mr. Tshering Yonten, Executive of the Construction Association of Bhutan.

At the same time, we also relay our gratitude to the outgoing members, Mr. Dawala, former Director of the Department of National Budget for his relentless service to the Tsa-wa-sum and his contributions to the reins of construction development board, and Mr. Ugyen Penjor, former Vice President of the Construction Association of Bhutan, for his voice, efforts and dedication to the cause of construction firms.

The year also saw transition within the CDB secretariat. We welcomed two new Chief Engineers for the two existing divisions and bid farewell to three staff members. We had the new Prime Minister of Bhutan visit us for the *Am with PM* program in April, 2019 and shared our vision and the challenges we encounter to overcome. In fulfillment of the strategic thrusts, we have approached the Royal Civil Service Commission for restructure with inputs in additional capacity development.

Adding to the continuation of our professional development trainings to the contractors with induction and refresher's course and capacity development of interested participants from the government, corporations and private in e-Tool and CiNET, we have initiated registration of engineers within the construction sector. We have also began the process to register survey and spatial science professionals in partnership with the Institute of Survey and Spatial Science Professionals of Bhutan (ISSSPB).

With the revision of the Procurement Rules and Regulation 2009, the e-Tool system is currently being enhanced to incoporate the changes in the preference score and will be ready by October, 2019.

The Annual Report 2018-2019 will not only cover the various programs such as mentioned above but also the data and information available in our database, compiled and analysed by our team.

There has been improvements in the verification of data from e-tool. With our desktop monitoring system, we are able to verify information input from procuring agencies with regard to their projects as well as monitor compliance of construction firms and their key human resource personnel. Although, compilation of data from the CDB database indicated 52.73% of 330 projects have time overrun and 65.76% have cost overrun, on further verfication of input data, we were able to compile justifications for the time and cost overrun where major factors each were indicated both for time overrun and cost overrun.

The Construction Development Board's service delivery caters to 2529 contractors, 202 architects, 71 consultants and 1276 engineers registered on our online system and with contractors. Employment of our youth is a national priority especially in the construction industry as the employment of Bhutanese indicated is still at a low 4.5% in the construction sector which has slightly increased from 2.56% in 2017. CDB understand the magnitude of this issue and is working closely with stakeholders to find resolutions which will require interventions in not only creating jobs but also in matching job skills, exploring mechanization and prefabrication technologies to attract job seekers and other major policy interventions.

The 12th FYP indicates an outlay of Nu.310 Billion. The construction industry stakeholders must ensure this amount is well managed and the physical infrastructures that we build are resilient and justifiable to the commitment of the government and the vision of our kings.

Despite the short period in anticipation of the formation of the new government, the CDB Secretariat team has delivered and I acknowledge their zeal and effort and commend all the CDB staff for their input.

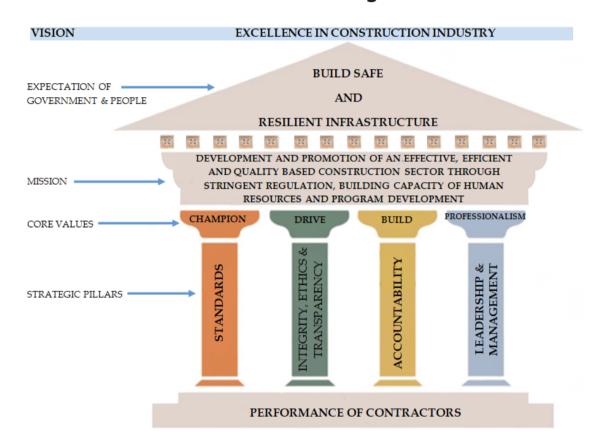
Tashi Delek

(Phub Rinzin)

Director

STRATEGIC PILLARS FOR THE DEVELOPMENT OF THE CONSTRUCTION INDUSTRY

We have to live by the infrastructure that we build and it is our responsibility to build Safe and Sustainable Infrastructure for future generations



onstruction Industry plays an indispensable role in the Bhutanese economy from delivering economic infrastructure such as roads and bridges to enhance the connectivity and delivery of people and goods, thus increasing profitability of people and their trade. Similarly, social infrastructure improve access to the needs for the well being of people, the community and contribute significantly to the accessibility of the Bhutanese people. Despite its imperative

role, the industry suffers from a lack of coordinated approach to solutions between agencies and is slowly becoming the victim of compartmentalized working nature of construction stakeholder agencies and implementation issues arising from limited enforcement of rules, lack of standard operating procedures, collusion and overridden sense of ethics, faults within the tendering process and lack of a central agency to withhold the values and integrity required by the construction sector.

On a positive note, new technologies, machines and equipments are gradually enhancing the efficiency of the sector, more people understand the requirement for improvements, more systems are being developed to improve regulation, more research and development activities are targeted with more coordination and collaboration between agencies being encouraged to address issues. Safety and quality are being made more prominent and activities to improve their scenario are being formulated, implemented and regulated by the agencies. Perception of the limitations in the construction sector is more pronounced than ever before.

Complementing this perception, it is imperative for every Bhutanese person, whether involved in the construction sector or not, to understand the necessity of the right to sustainable, resilient homes and public infrastructure.

The impact of climate change increases the risks imposed by substandard infrastructure to the people and the development of Bhutan. The location of Bhutan within the junction of the collision zone of the Himalayas in the Indo-Eurasian plate further stipulates greater unpredictability to disasters.

The Construction Development Board strives to achieve its vision of "Excellence in the Construction Industry" with regard to the expectations of the government and people for safe, resilient, high quality sustainable infrastructures by developing and promoting a quality based construction sector through strategic regulation and competent manpower, with capacity to enhance development of standards, inculcating a sense of ownership for

integrity and ethics, enhance transparency and accountability and develop perception for effective leadership and management in construction sector stakeholders. CDB, however, acknowledge that the weight of achieving the strategic pillars is dependent entirely on the performance of contractors. As the agency with primary mandates to develop the professionalism, efficiency, integrity, technological and managerial capacity of construction firms and its reach extending into quality compliance in contract, materials and equipment, CDB's current capacity ought to develop with additional manpower empowered by appropriate skills, equipments and tools and legal stance for efficient regulation.

Based on the above strategic pillars for development of the construction industry, the Construction Development Board inculcates the requirement to fulfill the following organizational strategic thrusts in order to achieve the aforementioned strategic pillars.

A well manned premier institution empowered by strong legal framework to effectively regulate the construction industry thereby promoting highest standards of transparency, accountability, leadership, ethics and integrity.

Endeavor towards construction of safe, green and sustainable quality infrastructure through stringent monitoring, capacity development and promotion of best practice technologies in the region;

Institute an effective performance management system of contractors to select the best construction firms to build high quality infrastructure.

STANDARD

Considering the importance of building Safe and High Quality, Resilient Infrastructure, it is imperative to have uniformity and standards in all spheres and process of works. Guidelines, specifications, codes and rules must channel the work flow while planning, design and drawings should have regulated benchmarks for appropriate and comprehensible implementation.

LEADERSHIP AND MANAGEMENT

The key success of building Safe and High Quality, Sustainable Infrastructure depends on ethics/Integrity and accountability of the construction professionals and contractors. It is essential for interventions to nurture fortitude of contractors and construction professionals to execute projects with accountability and integrity, driven primarily by an intrinsic urge to uphold the commitment to deliver highest quality infrastructure and sense of ownership. The construction Industry must own up to disseminate information to augment transparency and responsibility to the utilization of public/private funds.

ACCOUNTABILITY/ETHICS/INTEGRITY/TRANSPRANCY

Leadership in the construction industry is crucial at this juncture of Bhutan's rapid development period, a lack of which leads to passive and gradual approaches to addressing issues and challenges such as time and cost overrun of projects, delivery of substandard and defective quality infrastructure, and the risks of lagging in innovation and adoption of new technology. Therefore, developing/promoting technical and managerial skills in the construction sector especially of the private firms is crucial to embark professionalism.

A BRIEF HISTORY

Brief History

Established as the Contractor Selection Board in 1987, Construction Development Board has taken a long stride in the development of the Construction Industry. Some of the key milestones are outlined in the vertical scheme of events.

1961 First Five Year Plan Inception

1987

Contractor Selection Board

Instituted under the Ministry of Communication

1st Revision of CDB Manual

 In keeping with the original manual of 1987, the manual was first revised in 1992 and subsequently revised in 1997 and 2001

1995

Renamed as CDB

Contractor Selection Board was renamed Construction Development Board

2002

Ninth Five Year Plan Commencement

Work categories merged

Work categories reduced from 7 categories to 4 viz. **W1, W2, W3** and **W4**

2004

Formation of Interim NAC

The Interim National Arbitration
Committee was established with CDB

CDB Manual 4th (current) Revision 20

The current functional revision of the CDB Manual was endorsed in March, 2007 and prepared in two separate volume to segregate CDB's registration function and other functions

- 1. CDB Manual 2007
- 2. Registration Manual 2007

2008

Tenth Five Year Plan Commencement

2011 Re-classification and categorization

• Re-classification and Categorization of Contractors to **Large**, **Medium** and **Small** Class Contractors

Enhancement of Procurement Mechanism 201

- · Institution of New Point Based System
- Launched e-Tool for online evaluation of tenders

2012 Reconstitution of Board Members

The Board members were reconstituted from 11 members to 9.

013 Eleventh Five Year Plan Commencement

2015

Delegation of Power

- The 61st Board directed CDB Secretariat to identify list of activities of administrative nature that can be delegated to the CDB secretariat
- The 62nd Board endorsed delegation of power from the Board to the CDB Secretariat
- e-Zotin, a comprehensive online registration and construction information system launched
- Construction Arbitration Facilitation Center established with CDB

2017

Publications

- i. Registration Guideline;
- ii. ToR for e-Zotin;
- iii. Monitorina Guideline: &
- iv. Compendium of policy directives from Board and Minutes of Board Meeting since 30th Board meeting.

2018

2018

Institutional Linkages- Region

CDB signed MoU with:

- 1) Construction Industry Authority of Philippines
- 2) Construction Institute of Thailand
- 3) Construction Industry Development Council, India

Institutional Linkages- Local 2018

De-link from MoWHS 2016

•CDB formally **delinked** from the Ministry of Works and

Human Settlement

- MoU signed with RAA to enhance the accountability of construction firms
- MoU signed with ACC to collaborate in reducing corruption in the construction sector

2018

Successful Handing over of Bhutan ADRC

 After facilitating and seeing resolution of 43 cases of construction disputes from 2015 amounting to Nu. 1.2 Billion, CDB successfully handed over the arbitration mandates, arbitrator's list and legal instrument to Bhutan Alternative Dispute Resolution Centre

2018

CORE VALUES

- » Champion leadership, construction management, standards, ethics, integrity, accountability and transparency in construction industry.
- » **Drive** towards stringent regulations and enforcement in construction industry to enhance professionalism.
- » Build safe, sustainable and quality infrastructure.

ROLES AND RESPONSIBILITIES OF CDB

- » Act as promoter as well as regulator of the Construction Industry
- » Act as bridging organization to take the roles of coordinator, facilitator and enabler to develop construction industry by mobilizing the efforts and resources of both public and private sector
- » Assist the private sector in undertaking more expansive part in the industry through business, technology and manpower development
- » Assist the government in obtaining increased returns on its investment through the promotion of an efficient and quality based construction industry.
- » Ensure fair and equal access to the award of contracts as well as treatment in the execution of contracts
- » Provide essential services to construction industry and to act as a catalyst to fulfill the needs of the industry.

FUNCTIONS AS PER CDB MANUAL 2007



1.5.1 Registration & Coordination

Registration of construction firms, construction personnel, conducting workshops for resolutions, enable environment for promotion of local firms, resolutions of disputes, promote public-private partnerships and monitoring and regulation of compliance



1.5.2 Technology Development

Promote Research and Development of effective construction quality and improve construction technologies / techniques and materials, recommend improvements to the practices of procurement and contract administration



1.5.3 Dispute Resolution

Facilitate dispute resolution in all stages of contract, maintain a panel of arbitrators and facilitate exposure and trainings, and review procurement decisions.



1.5.4 Data and Information

Collect and disseminate construction industry information and statistics, create database, promote information technology, and online access through a one window services for enhanced planning, monitoring and decision making.



1.5.5 Manpower Development

Promote and facilitate certification of construction related manpower, enhance local workers, conduct skills awareness programs, develop technical and managerial skill of private firms and training workshops for aspiring firm



1.5.6 Overseer of the Industry

Plan the direction of the construction industry in collaboration with relevant agencies, address pertinent issues and challenges, procurement grievances, contractual disputes, policy reviews and formulation of rules and regulations pertaining to the construction industry.

BOARD MEMBERS



H.E Lyonpo Tshering Zhabtog Lyonpo Chairman

Mr. Tenzin Director General, DoR Ministry of Works and Human Settlement





Mr. Dawala
Director General, DNP
Ministry of Finance (till June 2019)

Mr. Mewang Gyeltshen Director, DoRE Ministry of Economic Affairs





Mr. Sonam Wangdi Director, DoL Ministry of Labour and Human Resources

Mr. Karma Dupchuk Director, DES Ministry of Works and Human Settlement





Mr. Thinlay Gyamtsho President Construction Association of Bhutan

Mr. Ugyen Penjor Vice President Construction Association of Bhutan (till June 2019)





Aum Kesang Deki Director General, DNP Ministry of Finance (from June 2019)

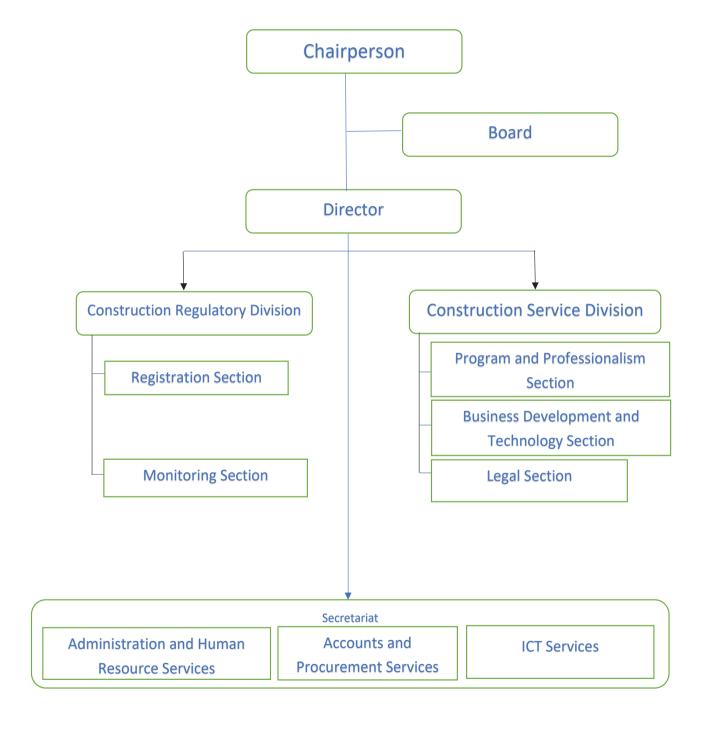
Mr. Tshering Yonten Executive Construction Association of Bhutan (from June 2019)





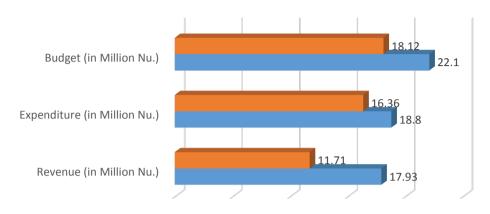
Mr. Phub Rinzin Director, CDB Member Secretary

CURRENT ORGANIZATIONAL STRUCTURE



BUDGET AND EXPENDITURE

Budget, Expenditure and Revenue 2018-2019 & 2017-2018



	Approved Budget (In million Nu.)
Capital Budget	2.99
Current Budget	15.13
	18.12

	Expenditure (In million Nu.)
Capital Budget	2.61
Current Budget	13.75
	16.36

Revenue Source	Revenue (In million Nu.)
Architect	
New Registration	0.03
Renewal	0.048
Late Fee	0.021
Consultant	
Registration services (Name, category, location change)	0.025
Renewal	0.089
New Registration	0.069
Late fee	0.016
Contractor	
Registration services (Name, category, location change)	1.13
Renewal	6.64
New Registration	2.21
Late fee	1.42
Total	11.71

SERVICES

1. Registration Services

- » Registration of contractors
- » Registration of consultants
- » Registration of architects
- » Registration of specialized trade (from June 2019)
- » Registration of engineers (from June 2019)
- » Registration of survey and spatial science professionals (from June 2019)

2. ICT Services (e-Zotin)

- » Online registration Online registration services provided by the Secretariat for Contractors,
- » Consultants, Architects and Specialized Trades.
- » e-Tool Online evaluation tool for procurement of civil works carried out by government procuring agencies.
- » CiNET Interface for corporate, NGOs and donor funded projects to update work information.
- » CRPS for managing contractors, consultants, architects and specialized trade.

3. Legal Services

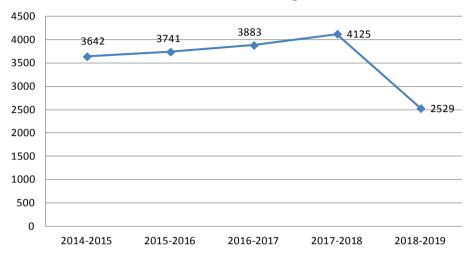
- » Grievance Redressal (facilitation of grievances in payment, human resource and equipment
- » registration, transfer etc)

4. Capacity Development and Promotion Services

- » Trainings
- » Awareness programs
- » Construction Expo in collaboration with Construction Association of Bhutan
- » Institutional linkages
- » Construction technology and best practices

REGISTRATION

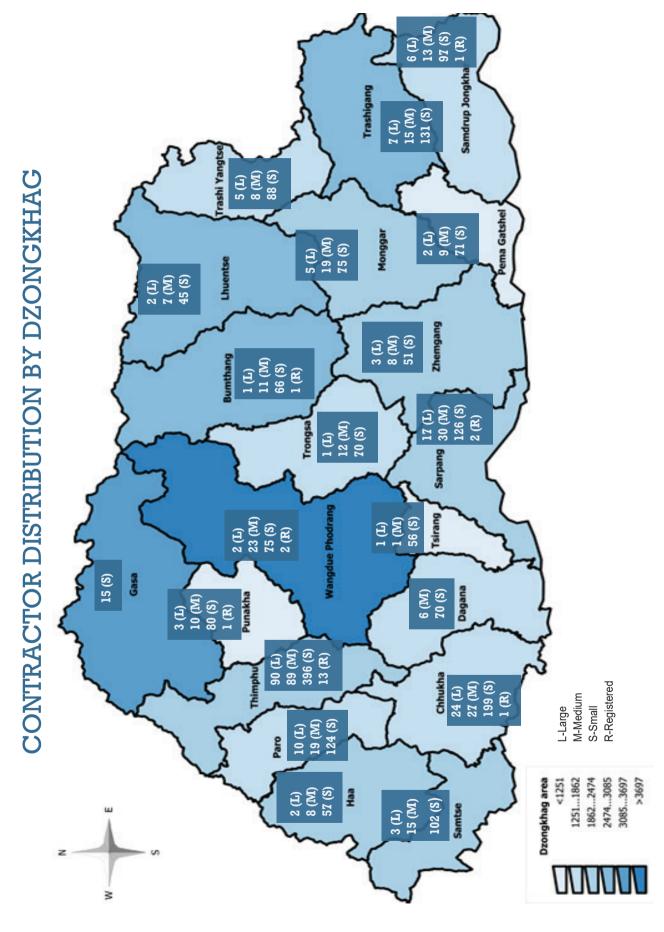
No. of Bhutanese Contractors registered with CDB



Note: The steep drop in the number of contractors between 2017-2018 and 2018-2019 after the 67th Board decision to deregister inactive contractors. In July 2018, after the deregistration the number of contractors was 2720

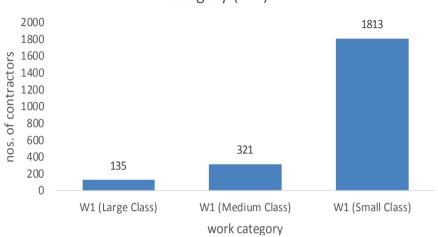
Number Of Bhutanese Contractors (Dzongkhag wise)

Dzongkhag	Large	Medium	Small	Registered	Total
Bumthang	1	11	66	1	79
Chukha	24	27	199	1	251
Dagana	0	6	70	0	76
Gasa	0	0	15	0	15
Haa	2	8	57	0	67
Lhuentse	2	7	45	0	54
Mongar	5	19	75	0	99
Paro	10	19	124	0	153
Pema Gatshel	2	9	71	0	82
Punakha	3	10	80	1	94
S/Jongkhar	6	13	97	1	117
Samtse	3	15	102	0	120
Sarpang	17	30	126	2	175
Thimphu	90	89	396	13	588
Trashigang	7	15	131	0	153
Trashiyantse	5	8	88	0	101
Trongsa	1	12	70	0	83
Tsirang	1	1	56	0	58
W/Phodrang	2	23	75	2	102
Zhemgang	3	8	51	0	62
Total	184	330	1993	21	2529



Number Of Bhutanese Contractors by work category

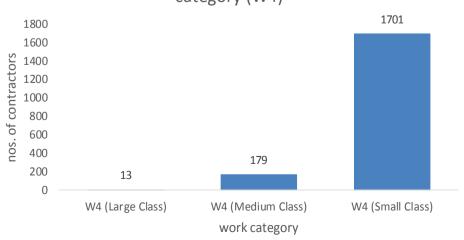
Number of Contractors registered by work category (W1)



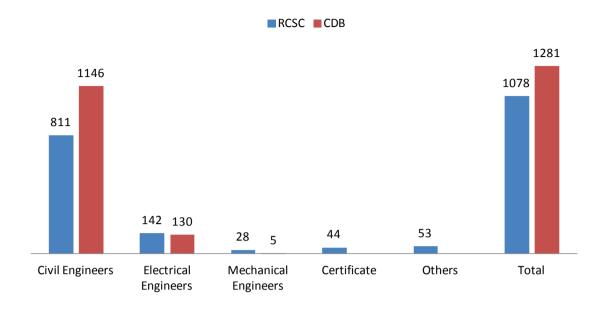
Number of Contractors registered by work category (W3)



Number of Contractors registered by work category (W4)



Number of Engineers registered in cdb and rcsc

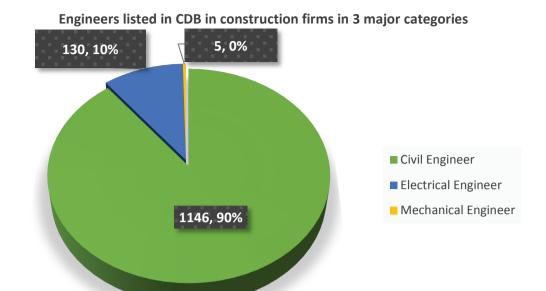


Number of Engineers registered in cdb database

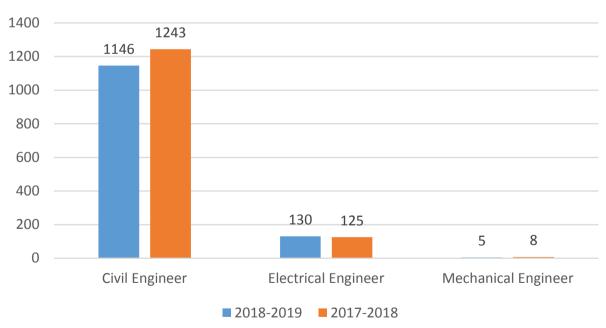
Civil Engineers					
•	e Qualification (Bachelor egree)	Diploma			
Bhutanese [Degree] Non-Bhutanese [Degree]		Bhutanese [Diploma]	Non-Bhutanese [Diploma]		
409 130		487	120		
To	tal: 539	Tot	al: 607		

Grand Total: 1146

Electrical Engineers				
With Undergraduate Qualification (Bachelor Degree)		Diploma		
Bhutanese [Degree] Non-Bhutanese [Degree]		Bhutanese [Diploma]	Non-Bhutanese [Diploma]	
59	2	69	0	
Total: 61 Total: 69				
Grand Total : 130				



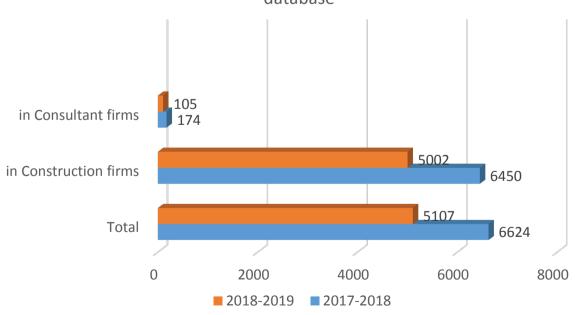




Other professionals in the construction firms and consultant firms

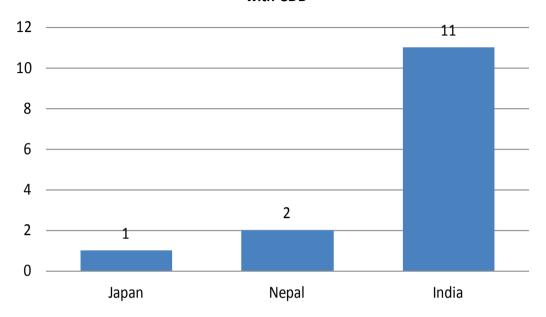
	Employed in Construction firms	Employed in Consultant firms	Total
Management	526	15	541
Accountant/ADM/Manager/MD/Messenger/OA/PO/Liaison Officer	396	6	402
Architect	6	44	50
Site Supervisor	3668	5	3673
Mechanical Engineer	5	0	5
Driver/operator/Blaster	29	0	29
Environment and Social/Geologist	0	19	19
Lab Technician/Carpenter/Plumber/Electrician	38	0	38
Project Manager	117	0	117
Survey Engineer/Surveyour	11	16	27
Project/Site Engineer	206	0	206
Total	5002	105	5107

Employment trend in construction industry as per CDB database

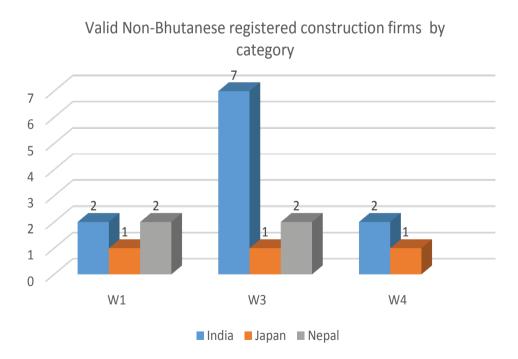


Valid Non-Bhutanese construction firms registered with CDB

No. of valid Non-Bhutanese construction firms registered with CDB

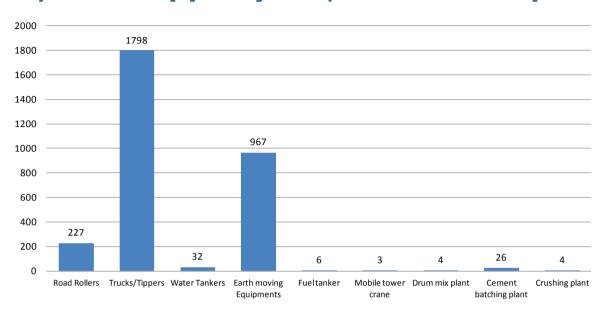


Valid Non-Bhutanese construction firms registered by category

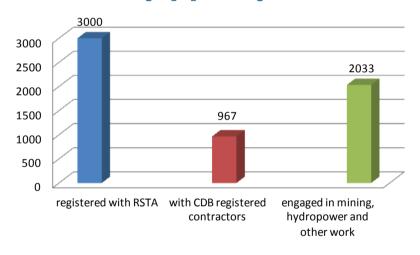


For details of Non-Bhutanese firms and category of registration, refer Annexure 4

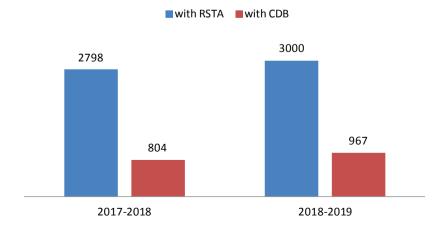
Major construction equipment registered by construction firms for compliance



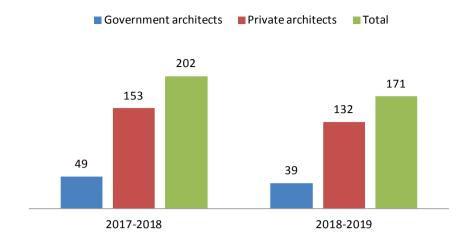
Earthmoving Equipment registration details



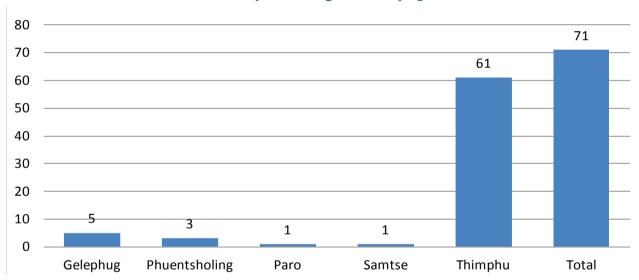
Earth moving equipment registration trend



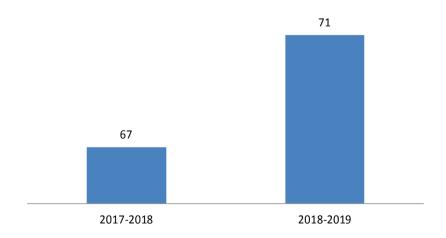
Number of architects registered



Number of consultantancy firms registered by operational location



Consultants registration trend



PROMOTION AND PROFESSIONALISM

Induction and Refresher's course for Contractors

he Program and Professionalism Section under CDB in pursuit of promoting a robust and vibrant construction industry conducted 11 batches of mandatory Refrsher's Course and 6 batches of Induction Course for new aspiring contractors. Besides, enhancing the professional capacity of contractors, the training also notably facilitates in boosting development and promotion of an efficient, effective, quality based construction industry, contributing to healthy and competitive growth. The training is a three days program for Large and Medium class contractors and two days program for Small class contractors conducted at the College of Science and Technology, Phuentsholing.

The integrated training program is uniquely designed to impart basic knowledge and skills in various construction field management aspects like Risk Management, Quantity Surveying and Quality Assurance, management and control, Occupational Safety and Health, project scheduling and are also familiarized to Construction development Board registration and regulatory procedures, procurement rules and regulations and aspects of contract administration including arbitration. Various stakeholders including the Anti Corruption Commission and Government Procurement and Property Management Division, Department of National Properties, Ministry of Finance are involved in imparting the modules.

The following modules were developed in liaison with the College of Science and Technology, Royal University of Bhutan since 2016 with two rounds of revision in 2018 and 2019.

	New Point Based system
Module 1	Procurement Rules and Regulations 2009
	Standard Bidding Document
	New Point Based System and e-Tool
	Project Management aspects
	Planning and Scheduling
	Estimation and Quality control
Module 2	Risk Managment
	e-Zotin
	Arbitration
	Mechanization
	Quality Assurance, Planning & Control
	Occupational Health & Safety in Construction Industry
Module 3	Impact of Point Based System & Compliance Monitoring
for Large	Code of ethics for contractors and engineers
and Medium Contractors	e-Zotin (online registration of construction services), Introduction to e-GP
	Process & functions of Independent Review Body(IRB) & Debarment
	Emerging trends in construction industry(Mechanization/material)
	Project management using MS project planner

	Bill of quantities (BOQ), rate analysis and specifications with examples	
Module 3 for	Practical & Group Exercise on Time, Cost, Resource planning & Scope Management	
small contractors	Quality Assurance, Planning & Control	
	Storage & stacking of construction materials and Book Keeping	
	Code of ethics for contractors	
	Occupational Health & Safety in Construction Industry	

induction training details

Batch	Type of Training	Period	Target Participants	Participants	Venue
1	Induction Course	15/04/2019- 16/04/2019	New contractors	83	NRDCL hall, Thimphu
2	Induction Course	17/04/2019 - 18/04/2019	New contractors	71	NRDCL hall, Thimphu
3	Induction Course	19/04/2019 - 20/04/2019	New contractors	79	NRDCL hall, Thimphu
4	Induction Course	22/04/2019 - 23/04/2019	New contractors	72	NRDCL hall, Thimphu
5	Induction Course	24/04/2019- 25/04/2019	New contractors	60	NRDCL hall, Thimphu
6	Induction Course	26/04/2019- 27/04/2019	New contractors	65	NRDCL hall, Thimphu
Total				430	

Mandatory Refresher's training details

Batch	Type of Training	Period	Target Participants	Participants	Module
1	Refreshers	11/03/2019-23/03/2019	Renewal	57	Module 3
2	Refreshers	14/03/2019- 15/03/2019	Renewal	60	Module 3
3	Refreshers	18/03/2019-19/03/2019	Renewal	57	Module 3
4	Refreshers	20/03/2019-21/03/2019	Renewal	57	Module 3
5	Refreshers	06/05/2019-18/05/2019	Renewal	36	Module 3
6	Refreshers	09/05/2019-10/05/2019	Renewal	44	Module 3
7	Refreshers	12/05/2019 to 13/05/2019	Renewal	43	Module 3
8	Refreshers	15/05/2019 to 16/05/2019	Renewal	22	Module 3
9	Refreshers	18/06/2019-22/06/2019	Renewal	29	Module 3
10	Refreshers	21/06/2019-22/06/2019	Renewal	63	Module 3
11	Refreshers	27/06/2019-28/06/2019	Renewal	18	Module 3
Total				486	

e-tool and cinet training

s indicated by the CDB Manual 2007 "To ensure fair and equal access to the award of contract" with development of Online Construction Industry Information (CiNET) in 2009 and online evaluation tool (e-Tool) in 2011, the use of the e-Tool has significantly benefitted procuring agencies by reducing the time taken to conduct the evaluation manually and providing easy access to contract information. The role of e-Tool focal person has been of paramount importance during evaluation as they are responsibile in making clarifications and input of correct project information and details and appraisal of tender matters to the Tender Committee. Also, they are entrusted with feeding in the details of performing and non-performing contractors impacting the bidder's eligibility in the future tenders.

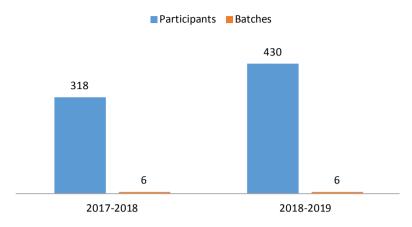
Considering the critical role played by e-Tool focal person in the respective agency for procurement of civil works and carrying out fair and uniform evaluation process, the secretariat has conducted training on e-Tool and CiNET annually for the procuring agencies. The ICT Services conducted 6 batches of e-Tool and CiNET with a coverage of 189 focal person(s) and interested e-Tool users of procuring agencies in Bhutan this year.

E-tool and Cinet Training Details

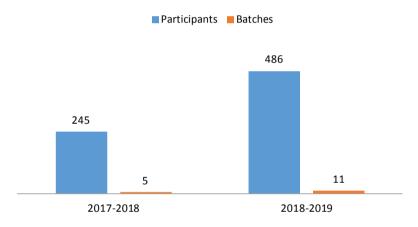
Batch	Type of Training	Period	Target Participants	No. participants	Venue
1	e-Tool and CiNET	25/03/2019- 26/03/2019	interested e-Tool users, focal person(s)	24	CST, JNEC
2	e-Tool and CiNET	27/03/2019- 28/03/2019	interested e-Tool users, focal person(s)	34	CST, JNEC
3	e-Tool and CiNET	29/03/2019- 30/03/2019	interested e-Tool users, focal person(s)	36	CST, JNEC
4	e-Tool and CiNET	01/04/2019- 02/04/2019	interested e-Tool users, focal person(s)	23	CST, JNEC
5	e-Tool and CiNET	03/04/2019- 04/04/2019	interested e-Tool users, focal person(s)	23	CST, JNEC
6	e-Tool and CiNET	05/04/2019- 06/04/2019	interested e-Tool users, focal person(s)	49	CST, JNEC
			Total	189	

Training trend

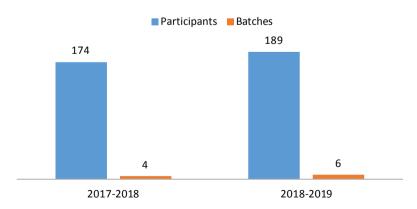
Induction Course-Participant and Batches trend



Refresher course-Participation and Batches trend



E-Tool and CiNET training-Participation and Batches trend



MONITORING

s an overseer of the construction industry, a key area for the development of construction is through CDB's mandate to regulate the construction industry through compliance monitoring. Complaince monitor ensures that construction firms are professional and conduct their commitments to projects and clients requirments as well as fulfill minimum requirments according to class and category. Construction firms are strategically and regularly monitored for compliance to registration commitments.

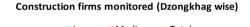
Depending on the category and class of the contractors, the requirement are cross checked and verified. In case of defaulters, relevant actions including downgrading, suspension and other regulatory measures are taken according to the Monitoring Guidelines and the decision of Monitoring Committee, Construction Development Board.

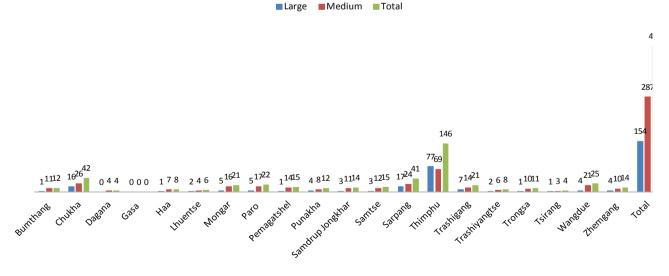
Office Establishment Monitoring of the Contractors

Office establishment monitoring comprises of monitoring of contractor's office set-up, human resources and registration requirement. All Large and Medium class contractors are obligated to maintain office setup in their registered Dzongkhag and employ the human resources as committed during registration/renewal. Administrative actions including downgrading to lower class/category and suspension are taken upon noncompliance.

	Large	Medium
No. of contractors monitored	154	287
Total		441

Construction firms monitored (Dzongkhag wise) 2018-2019utyoyt8





Administrative Actions taken

	Downgraded	Issued Reprimand/suspension
No. of contractors	48	72
Total		120

For details of administrative actions taken, refer Annexure 1 and 2

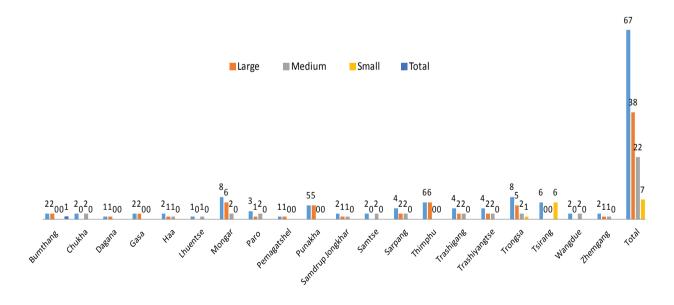
Ongoing Site Monitoring

The monitoring team of CDB randomly monitor/inspect ongoing construction sites on the compliance to fulfillment of the Human Resource (HR) and equipment requirements as committed in the contracts of projects. The compliance monitoring of project committed resources includes verification and monitoring of contractor obligations to deploy the committed resources to the work site as per the contract.

Contractors also have the responsibility to have good construction management practices at site. The monitoring team checks the compliance of both contractor and the procuring agencies to the contract documents.

With limitations in Human Resource, the monitoring team could only monitor 67 ongoing works out of 602 works awarded through e-Tool. The 67 sites in different parts of the country are indicated in the graph below

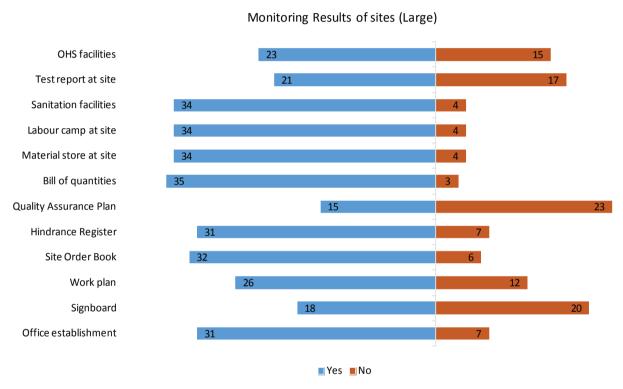
Construction sites monitored (Dzongkhag wise) and classification, 2018-2019



Major observations of site monitoring

Observations of Monitoring of 38 construction project sites of LARGE construction firms revealed that

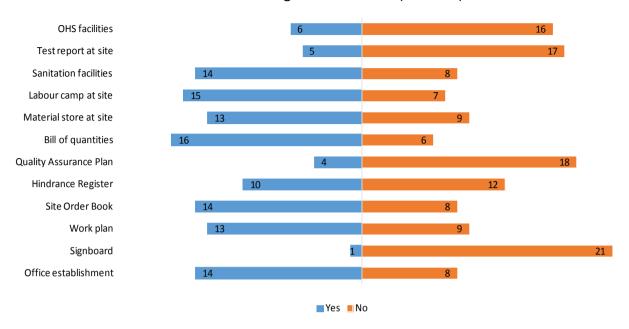
- 1. More than 18% of 38 sites monitored did not have a proper project office establishment
- 2. 52.63% of the firms did not have signboards or information boards of the projects
- 3. Only 26 projects sites of 38 have work plans
- 4. 39.47% of the sites used Quality Assurance Plans and 31 out of 38 sites kept Hindrance register record
- 5. Out of 113 committed human resources for the 38 project sites, only 67 were deployed
- 6. 37 of 67 deployed were replacements of committed personals.



Similary, observations from the 22 construction projects sites of MEDIUM construction firms indicated

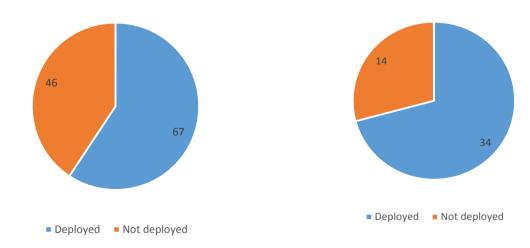
- 1. Only 14 of 22 project sites have an office establishment
- 2. More than 95% of the sites did not have a project information or sign board
- 3. 13 project sites have workplans whereas 9 sites did not
- 4. Only 4 out of 22 or 18.2% utilized a Quality Assurance Plan
- 4. Out of 48 committed Human Resource in the contract, only 70% were deployed at site as per committed, of which 16 personals were replacements.

Monitoring Results of sites (Medium)



	Large	Medium
Total no of HR committed	113	48
Fulfillment (deployed)	67	34
Replaced HR	37	16
Non fulfilment	46	14
Average no. of committed HR	3.3	2.8
Works with no committed HR	2	1

Deployment of Committed HR for project (Large) Deployment of committed human resource(Medium)



Pictures from Monitoring



(Left) CDB Monitoring Team verifying deployment of the committed resources at site. Contractors are required to deploy the committed resources at the site to build infrastructure of standard quality in stipulated time

(Right) CDB monitoring team checking the temperature of hot asphalt mixture with Infrared Thermometer

(Inset) Correct temperature during manufacturing and rolling of the mixture is vital in achieving a high quality and long lasting pavement



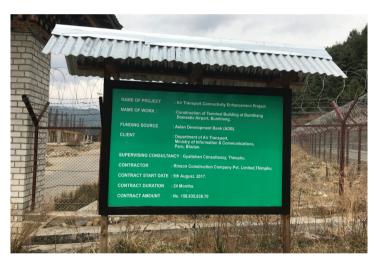


(Left) CDB Monitoring
Team verifying registration
requirements of Large and
Medium class contractors. Office
establishment monitoring ensures
genuine and fair access to award
of contract.





(Above) (Source: GJPMCH project, HIDD, MoH) Slump test for concrete in footing. Concrete slump test is the onsite means to assess the consistency and workability of fresh concrete. The pictures indicate 50-60 mm of slump fulfilling the requirement of 50-100 mm slump for medium workability for heavily reinforced sections as per IS 1199.



(Left) Project Information
Boards are important aspects
of dissemination of information
regarding specific projects for the
general public. During monitoring
this year, it was found that only
1 out of 22 (5%) construction
sites of Medium contractors
had a signboard and 18 out of
38 (47.4%) of construction sites
of Large contractors put project
information Boards. Refer Page
36 and 37 for more monitoring
observations

(Right) Practice of Occupational Health and Safety at construction sites are very crucial as construction projects are one of the most risky environments not only for the project personnel but also to the general public. Such peripheral boundary markings are important practices to indicate project area to the general public to avoid accidents.

Observations from monitoring indicate that general OHS facilities are provided in 23 out of 38 (60.53%) construction sites of Large contractors and in 6 out of 22 (27.3%) construction sites of Medium contractors.



RESEARCH & TECHNOLOGY DEVELOPMENT

Observations for works awarded in e-tool

No. of works awarded and total amount in the three class

Class	Large	Medium	Small	Total
No of works	38	84	480	598
Total Amount (Nu. million)	1887.23	506.79	562.48	2956.51

No. of works awarded and total project cost (Dzongkhag wise)

	No. of works	Amount (Nu. in million)
Bumthang	16	20.54
Chukha	50	171.35
Dagana	7	10.08
Gasa	17	58.63
Haa	26	75.550
Lhuentse	29	42.15
Mongar	25	206.39
Paro	23	152.02
Pemagatshel	18	68.01
Punakha	34	56.30
Samdrup Jongkhar	39	148.21
Samtse	41	113.93
Sarpang	46	101.73
Thimphu	59	1236.97
Trashigang	23	66.46
Trashiyangtse	26	46.79
Trongsa	30	133.75
Tsirang	38	103.42
Wangdue Phodrang	41	87.15
Zhemgang	14	57.06
Total	602	2956.51

In total, 602 works were awarded in 2018-2019 amounting a total cost of the projects to Nu. 2.957 Billion.

Thimphu had the highest number of works awarded at 59 works amounting to Nu. 1.237 Billion, 41.8% of the total projects cost.

Dagana Dzongkhag awarded the least number of works with upto an amount of Nu. 10 Million.

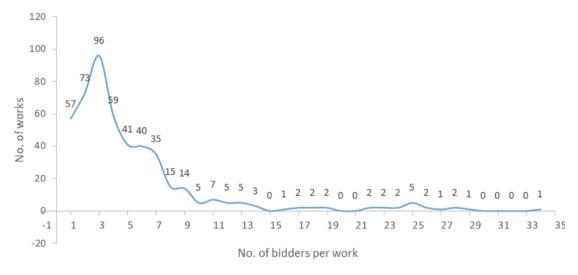
Bidder Participation

Following were the findings compiled from the Evaluation Report of works executed by Large and Medium Contractor's evaluated and awarded through e-Tool:

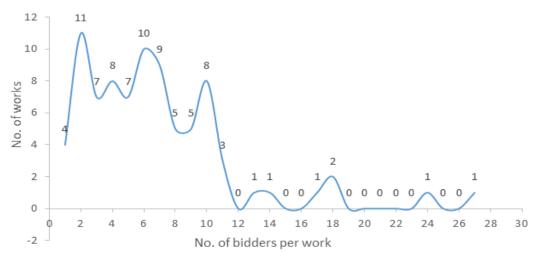
Bidder participation in tenders for works on e-tool

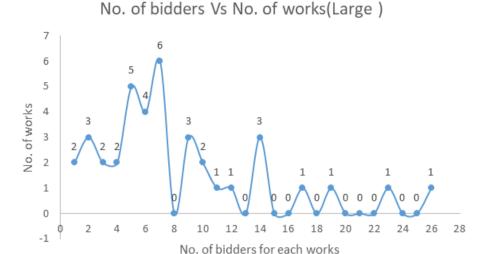
Class	No. of works awarded in e-Tool	No. of bidders participated	Average no. of bidders for each work	Max. bidders participated	Min. Bidders participated
Large	38	310	8	26	1
Medium	84	566	7	27	1
Small	480	2542	5	34	1

No. of bidders Vs No. of works (small works)



No. of bidders Vs No. of works (Medium)





Qualification of Bidders during the technical evaluation stage

The evaluation system for bidders selection is a two stage evaluation process. In the 1st stage (Technical evaluation), a firm need to obtain at least 65 points out of 100 in order to qualify for the 2nd stage (Financial & preference score evaluation). Only qualified bidders are taken to 2nd stage of evaluation.

Respective procuring agencies designs the HR & equipment requirement to suit their projects which is reflected in the bidding data sheet of the tender document.

The table below shows that on average 20.5% of bidders gets disqualified during the 1st stage of evaluation.

				~ -
Class	No of works awarded in e-tool		No of bidders qualified for 1st stage	No of bidders not qualified 1st stage
Large	38	310	274 (88%)	36 (12%)
Medium	84	566	400 (71%)	166 (29%)

Bidder Qualification in tenders for works on e-tool

Point Base System application

Point base system is applicable for works executed by large and medium construction firms. The advantage of the Point Base System is that the bidders are in position to determine whether they would qualify the 1st stage of evaluation since the required HR & Equipment along with point allocation is clearly mentioned in the bid document. Number of bidders disqualified in the 1st stage indicates:

- Lack of professional knowledge to analyze the bid document before bidding;
- Not updating work status on time with CDB; or
- Non-availability of required resource and technical capacity with the bidders

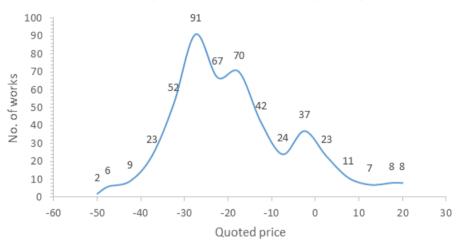
Compared to FY 2017-18 the number of bidders disqualified for 2nd stage has decreased from 37% to 20.5%.

Works awarded below and above government estimate

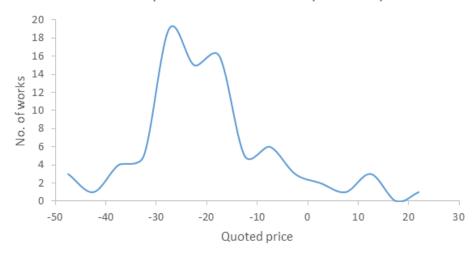
On average, 89.73% of all works was awarded below the government estimate. The average quoted price of the winning bids are 19.46% below government estimate.

Class	No of works	No of bidders participated	No. of works awarded below govt. estimate	No. of works awarded above govt. estimate	Max quoted price above govt estimate %	Min. quoted price below govt estimate %	Average quoted price %
Large	38	310	34	4	21.05	-39.03	-20.14
Medium	84	566	77	7	25.57	-53.79	-19.98
Small	480	2542	423	51	80.45	-51.52	-18.27
Total	602	3418	534	62			-19.46%

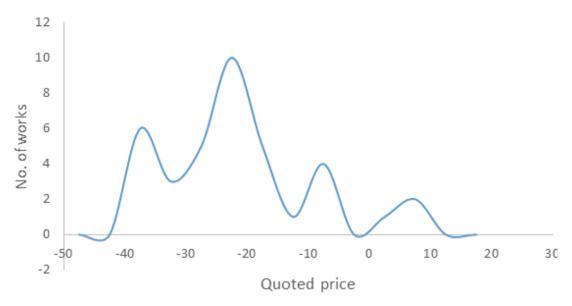
Quoted price Vs No. of works (Small)



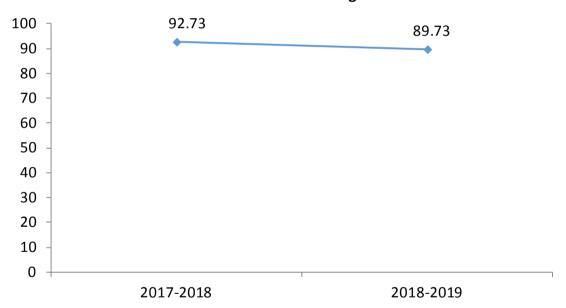
Quoted price Vs no. of works(Medium)



Quoted price Vs No. of works(Large work)



Trend of works awarded below govt. estimate



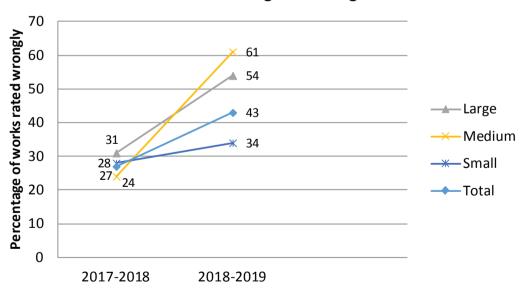
Discrepancy in Average Performance Score Rating (APS) of contractors

The Average Performance Score (APS) rated by the Procuring Agency after completion of the work for the contractor is one of the main parameters calculated during the technical bid evaluation for any future bid they participate. The APS rated by the Procuring Agencies generally differentiate between the performing and non-performing contractors in terms of 'timely completion of works' and 'quality of work' they have delivered. Despite informing Procuring agencies, after findings in the previous Annual Report, of the discrepancy, on compilation and analysis of work completion data for this year's report, it was still observed that the APS ratings are still with discrepancies. The table below indicates that 43% of 220 work are rated wrongly despite having time overrun. Such non-compliance will miscalculate the bidder's technical capacity and their performance scores resulting into unfair bidding process and unethical practices.

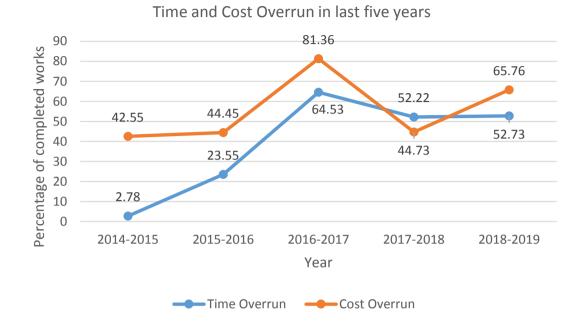
Class	Works rated full score (30/30)	Works with time overrun but rated full score	% of works rated wrongly
Large	28	15	54%
Medium	49	30	61%
Small	143	49	34%
Total	220	94	43%

(Disclamer: The finding is from the analysis of data updated/provided by e-tool focal person of various agencies in the e-TOOL/CiNET)





Time and Cost Overrun Observations



The analysis found that complications in the construction process arise in the project implementation phase. In an analysis of executed projects within, the percentage time and cost overrun has increased significantly, recording the highest in the financial year 2016-2017, where time had elapsed in 64.53% of the works and the cost had increased from the contract price in 585 of 719 executed works. The study found improper planning, unsatisfactory site feasibility studies, design changes, incomplete specifications, noncompliance with contract conditions, disputes due to discrepancy of contract documents and weak enforcement of regulation and monitoring as drawbacks of procuring agencies and negligence including poor site management, documentation, work planning, financial mismanagement, non-deployment of committed resources and complacency as drawbacks of construction firms, attributing to such overruns in time and cost.

In 2018-2019, the time overrun had significantly increased with 52.73% of 330 works exceeding the actual project period and the cost overrun in number of works increased by more than 20% compared to 44.73% in 2017-2018.

Although initial data compilation indicated a cost overrun of 65.76%, after verification of data the cost overrun reduced to 64.8% due to wrong data entry by e-Tool focal persons. On deliberation of other indications, it was found that various factors were responsible for the time and cost overrun in projects implemented in the year and the projects in previous years. The secretariat, through its desktop monitoring indicated the procuring agencies to justify the reasons for the overrun in cost and time as a result of which it was found that although projects are awarded at lower rate than the agency estimated cost, the cost escalllated to more than 50% in many projects. Some of the major reasons are as cited in the tables below.

Time and Cost Overrun Observations for previous years and current financial year



Factors causing Time overrun

Change in design	Additional/change in scope	Time extension	Delay by contractor
12.4%	50.6%	14%	23%

Factors causing Cost overrun

Change in design	Additional/change in scope	Change in BOQ items/quantities
18%	69%	13%

Time and Cost Overrun after desktop monitoring

The information on works completed between July 1st 2018 to June 30 2019 using e-tool and CiNET were verified for the time and cost overrun of the works. Respective procuring agencies were asked to submit justifications for the overrun from which actual overrun in cost and time was analysed. All Procuring Agencies were contacted and instructed to update their justifications for the overruns and their contribution to causing the overrun were analysed.

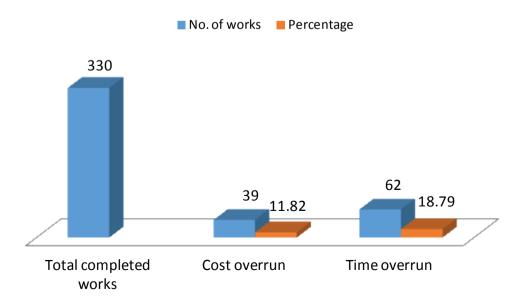
Cost Overrun after Desktop Monitoring

From the previous table on cost overrun, out of 330 works, considering only cost implications caused by change in design, the actual cost overrun was analysed to be evident only in 39 works amounting to a percentage of 11.82%.

Time Overrun after Desktop Monitoring

Similary, the actual time overrun was evident only in 18.79% of the total works equivalent to 62 out of 330 works considering that only the works with change in design and with delays by the contractor were taken into account.

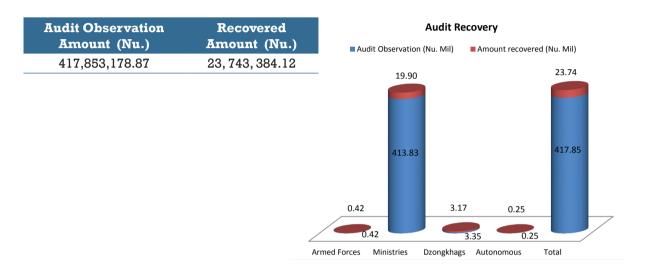
ToR and CoR after Desktop monitoring



Audit Recoveries

Since signing a Memorandum of Understanding (MoU) between Construction Development Board and Royal Audit Authority (RAA) for enhanced professionalism and to strengthen the accountability of construction projects, the process to hold contractors and consultancies accountable for audit observations has been put into practice.

The following table indicates the overall amount recovered from contractors after resolutions of audit observations between 2017-2019.



For details of Audit observations and recovery, refer Annexure 6

Preliminary perception survey on construction quality

To understand the perception of contractors on the quality of construction and their awareness level on quality mechanism and standard process in projects with regard to quality, a preliminary survey on construction was conducted by Construction Dvelopment Board during the mandatory Refreshers Course. Past consultations with contractors indicated that most contractors were not aware of the mechanisms put forth in contract documents nor were bothered to inculcate quality policies, quality assurance and other mechanisms that are required as part of their company policies and were solely driven by enforcement of the procuring agencies and dependent on the procuring agencies' interpretation of quality work.

A total of 11 questions including 10 multiple subjective questions and 1 objective list was provided to the survey participants.

Sample Size

The sample size for the survey was conducted based on Judgemental Sampling or Purposive Sampling considering all participants represent Large and Medium contractors and the objective of the survey is to understand contractor's perception of quality in construction. The formula for calculation of the sample size and the different variables involved is given in Annexure 3.

For the population size, of 514 Large and Medium contractors, considering a confidence level of 85% and a margin of error of 10%, the sample size calculated is 48.

48 participants representing Large and Medium Contractors were surveyed during the Refresher's Course, the details of which are indicated in the tables and graphs below.

Age	18	3-24	25	5-31	32	2-38	39	-45	46 A	bove	То	tal
Gender	F	М	F	М	F	М	F	М	F	М	F	М
Numbers	2	4	8	15	0	5	0	6	1	7	11	37

Data Interpretation keys

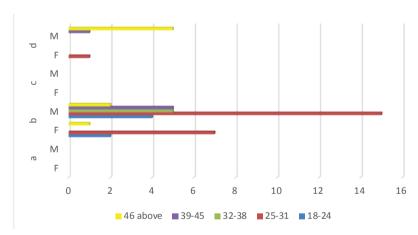
F - Female

M - Male

a, b, c, d - Questionnairres options

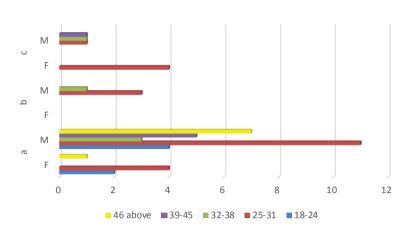
18-24, 46 and above - Age groups

Question 1. What does Quality mean to you?



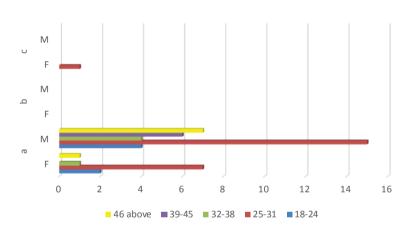
- a. Completed work that draws the highest price
- b. Completed work that conforms to required standards, specification, time and cost
- c. Completed work that fulfills intended function
- d. Completed work that fulfills client's satisfaction

Question 2. Is Quality suffering in Bhutanese construction projects?



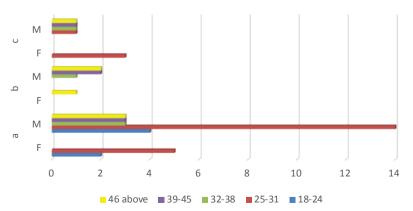
- a. Yes
- b. No
- c. Not sure

Question 3. Is Quality management important for construction projects?



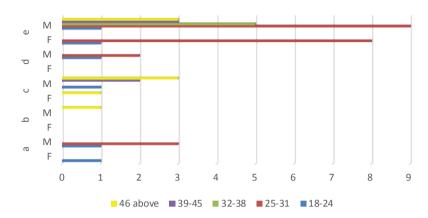
- a. Yes
- b. No
- c. Not sure

Question 4. Is Quality management spelled out and regulated by the contract (included in the PRR, SBD and regulated by the procuring agencies)?



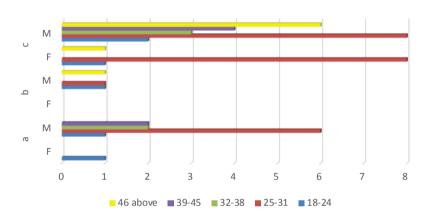
- a. Yes
- b. No
- c. I dont' know

Question 5. What is the main problem of Quality management in construction projects? (Tick the most problematic)



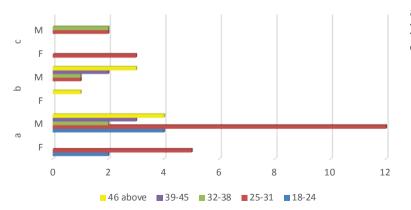
- a. No commitment from construction firm
- b. No regulation from procuring agencyc
- c. Discrepancies in drawing and specifications
- d. Unreasonable time of project
- e. Low quotation of tender

Question 6. Should Quality management strategies be spelled out in the contract and drawn by the procuring agencies?



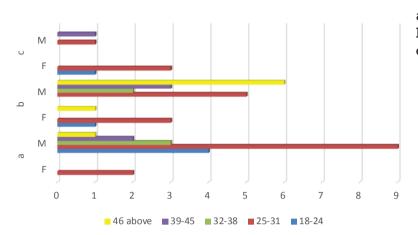
- a. Yes
- b. No. Construction Firms should have their own Quality Plans
- Both Construction Firms and Procuring Agencies should have quality plans

Question 7.Does your firm have a planned Quality control, Quality Assurance and management at your project sites?



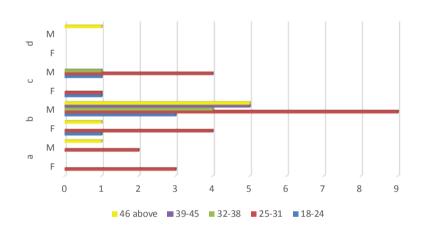
- a. Yes
- b. No
- c. Not Sure

Question 8. Do you have a Quality manager in your construction firm?



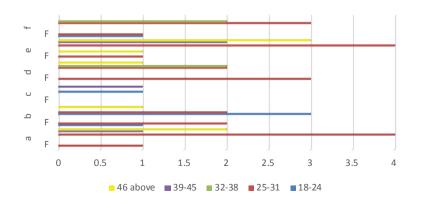
- a. Yes
- b. No
- c. Not Sure

Question 9. Who is most responsible for quality management in your firm?



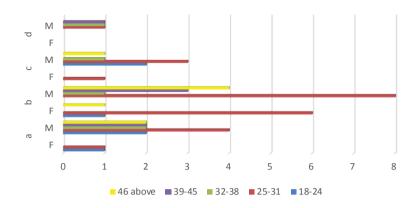
- a. Project Manager
- b. Project Engineer
- c. Site Supervisor
- d. Skilled Worker

Question 10. Which line of work does quality suffer most in construction projects?



- a. Structural components do not meet specifications
- b. Finishing
- c. Electrical and mechanical fittings
- d. Plumbing and water supply
- e. Roads
- f. Sewer line, sewerage and drainage

Question 11. Which is the most effective quality control mechanism for construction projects?



- a. Quality integrity of construction firm/
 Reputation of construction firm
- b. Stringent regulation by client/procuring agency
- c. Only required tests conducted
- d. Defect liability of one year

Observations and Recommendations

- 1. Create awareness on Competitive Bidding as most senior contractors still conform to think client satisfaction is the basis for quality
- 2. Incentives for Performing contractors for example Quality Assurance plans in place and in implementation
- 3. Frequent inspection from responsible agencies at construction site
- 4. Avoid awarding project to lowest bidder
- 5. Proper ground work by the procuring agency must be carried out like accurate estimate(realistic), proper survey, specification in details and detail drawings should be provided
- 6. Establish quality control mechanisms from third party as the survey indicates PA should regulate for better quality control
- 7. Construction firms responses of having quality assurance plans is contradictory to monitoring report

Preliminary Perception Survey on Construction Waste

Similarly, to understand the perception of contractors on the construction waste and their awareness level on waste management, a survey was conducted using the same principles of the early preliminary perception study. During 2017-2018, an analysis report contributed by the Construction Development Board to Kuensel entitled "Insight into the Construction Industry of Bhutan" indicated that construction waste was becoming a menace especially with waste from private constructions that are haphazardly disposed in undesignated areas.

The study aims to find perception of participating contractors on the waste and current mechanisms that are in place to manage waste from construction sites.

A total of 10 questions including 7 multiple subjective questions and 3 objective list was provided to the survey participants.

Sample Size

The sample size for the survey was conducted based on Judgemental Sampling or Purposive Sampling considering all participants represent Large and Medium contractors and the objective of the survey is to understand contractor's perception of quality in construction. The same participants that participated in the Construction Quality survey were interviewed and participated in the questionairres.

The formula for calculation of the sample size and the different variables involved is given in Annexure .

For the population size of 514 Large and Medium contractors, considering a confidence level of 85% and a margin of error of 10%, the sample size calculated is 48.

48 participants representing Large and Medium Contractors were surveyed during the Refresher's Course, the details of which are indicated in the tables and graphs below.

Age	18-2	4	25-3	1	32-3	88	39-4	1 5	46 Ab	ove	Tot	al
Gender	F	M	F	M	F	M	F	M	F	M	F	M
Numbers	2	4	8	15	0	5	0	6	1	7	11	37

Data Interpretation keys

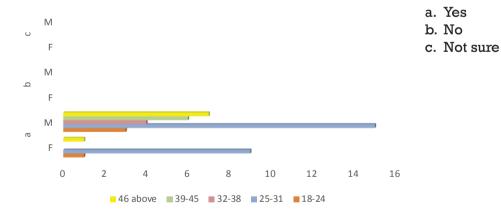
F - Female

M - Male

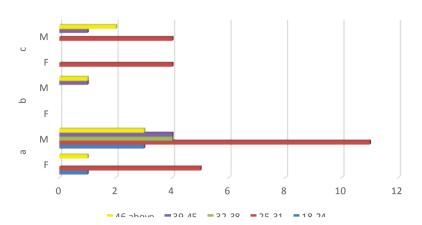
a, b, c, d - Questionnairres options

18-24, 46 and above - Age groups

Question 1. Is waste management important for construction projects?

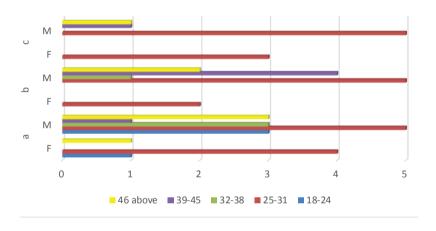


Question 2. Are you aware of the Waste Management Act?



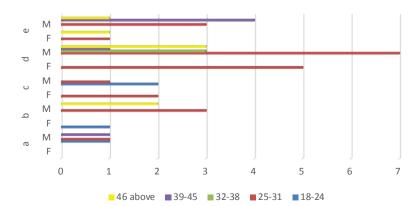
- a. Yes
- b. No
- c. I don't know (although I have heard about it)

Question 3. Is waste management spelled out and regulated by the contract (included in the PRR, SBD and regulated by the procuring agencies)



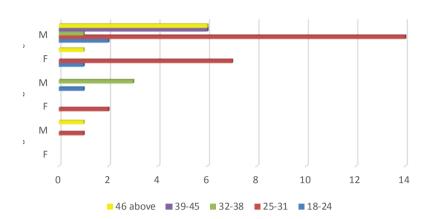
- a. Yes
- b. No
- c. I don't know

Question 4. What is the issue of implementing waste management in construction project sites? (Tick the most problematic)



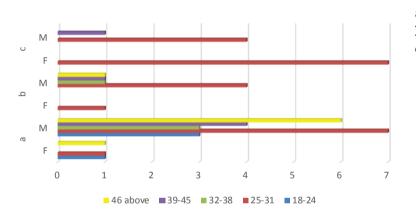
- a. No commitment from construction firm
- b. No regulation from procuring agency
- c. No monitoring from National Environment Commission
- d. No proper strategies for disposal
- e. Not spelled as per contract

Question 5. Should waste management strategies be spelled out in the contract?



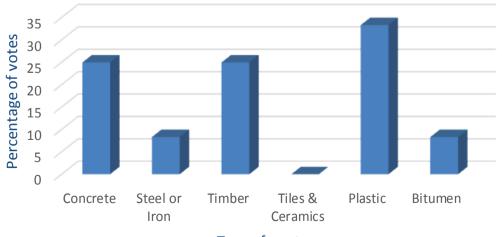
- a. Not Important
- b. Keep as it is
- c. Very important

Question 6. Does your firm have a waste management plan at your project sites?



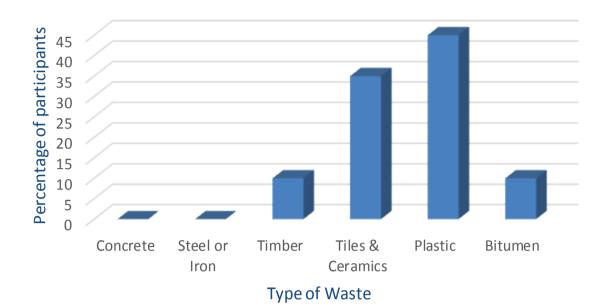
- a. Yes
- b. No
- c. Not sure

Question 7. What are the common wastes found at construction project sites? Please rank.

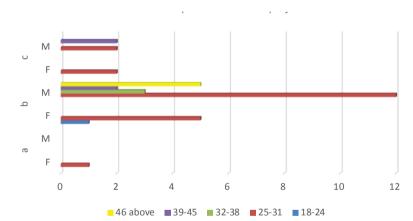


Type of waste

Question 8. Which of the above ranked materials cannot be reused (or has to be disposed)?

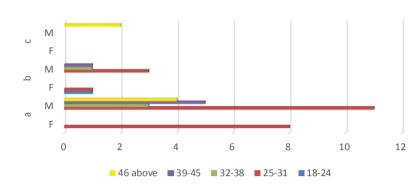


Question 9. What method is used for the disposal of the highest rated non-reusable waste at your construction project sites?



- a. Haphazard Disposal
- b. Disposed to areas designated by Local governments/procuring agencies/ Municipalities
- c. Firm's own disposal strategies including incineration

Question 9. Apart from the waste produced from materials at project sites, what other significant source is identified? Tick the most significant that requires waste management strategies



- a. From humans
 (including workers,
 professionals, site offices
 and site residential
 establishment)
- b. From vehicles, equipments and machineries
- c. No other source

Observations

- 1. Create awareness on waste management act do's or donts, as survey indicates significant number being unaware
- 2. The survey indicated that majority think there are no proper strategy for disposal of construction waste and also not spelled out in contract
- 3. About 15% indicated they did not have waste management plans at site with another 23% unaware of any plans
- 4. Plastic is perceived to be the most produced non reusable waste produced at site, followed by tiles and ceramics. It is recommended to strategize disposal of such wastes as the survey indicated dependence on disposal strategies of local government and municipalities and procuring agencies for disposal of such waste.

GALLERY OF EVENTS

Events between July 1st 2018 to June 30, 2019



(Left) The CDB team reviewed and deliberated on the enhancement of the CDA Bill. 28th September 2018.

(Right) Khadhar ceremony of the newly elected Minister for Works and Human SetItlement, His Excellency Zhabtog Lyonpo, Tshering. His Excellency is the Chairperson of the Construction Development Board







(Above) Construction Development Board and Construction Association of Bhutan attended the 44th IFAWCA convention in Kuala Lumpur, Malaysia 16th November 2018. The 44th IFAWPCA Convention hosted by Master Builders Association Malaysia (MBAM) brings the theme strategic alliance with Innovation & Human Capital as its core message; three components essential for the continued growth of the Construction Industry



(Above) Appointment of two new Chiefs for Construction Regulatory Division and Construction Services Division 2nd January 2019. Khadhar ceremony with the newly elected Zhabtog Lyonpo, Chairman, CDB



(Above) Director with new Chief Engineers 2nd January, 2019



(Left) Meeting with
Construction Development
Corporation Limited
(CDCL) 9th January 2019.
The meeting discussed
collaboration avenues
especially in employment
of skilled Bhutanese
workforce. CDCL also
presented the details of
the Township Development
project in Toorsa,
Phuentsholing

(Right) 69th Board
Meeting, 29th January
2019. CDB board meetings
highlight discussions on
pertinent matters in the
construction industry
for policy interventions
and development of
the construction sector.
The 69th Board Meeting
endorsed the registration of
all engineers with CDB.







(Above Right) Beginning the process to register surveyors and spatial science professionals with the Institute of Survey and Spatial Science of Bhutan 11th February, 2019. The registration procedures will enhance professionalism and streamline access to employment opportunities and delivery of quality work.

(Above Left) Meeting with RAA for collaboration and coordination 25th February, 2019 to strenghten accountability of construction stakeholders, and inculcate sense of ownership

and responsibility



(Right) Yeshi Phuntsho, Legal Officer awarded the outstanding employee of the year 2017-2018.



(Left) e-Tool and CiNET training for interested participants and focal person(s) in College of Science and Technology 28th March, 2019. The focal persons are responsible for conduct of evaluation on e-Tool, for update of works and project information. The details of e-Tool focal persons in various procuring agencies can be found in Annexure 5.

(Right) Class in session. e-Tool and CiNET training for interested participants and focal persons in College of Science and Technology 28th March, 2019





(Left) Refresher's Course March 2019. Picture of one of 11 batches of training conducted at the College of Science and Technology.



(Right) An interactive Project Management and Scheduling Class during the Mandatory Refresher's Course.





(Left and Above) AM with PM Session with the Honourable Prime Minister of Bhutan, Lyonchen Dr. Lotay Tshering 16th April, 2019. Discussion on CDB's role in the construction industry highlighting constraints of human resource, mobility and office space were put forward. His Excellency recommended strenghtening monitoring reach through human resource development.





(Above) Induction Course for Aspiring Contractors held from 15th to 23rd April 2019 at the NRDCL Hall, Thimphu. One of 6 batches.

(Inset) Participant from Sakteng



(Left) Industrial site visit to Bhutan Plastic Industry, Pasakha Industrial Estate. 3rd May 2019. Industrial site visits are crucial for keeping abreast to new products, new developments, new technology and industrial information



(Right) Industrial site visit to Fiber Reinforced Resin Factory, Toorsa, Phuentsholing. 3rd May 2019



(Right) Industrial site visit to Bhutan Ecolite Factory, Pasakha Industrial Estate. 3rd May 2019

(Right) Honourable
Minister for Economic
Affairs, Lyonpo Loknath
Sharma gracing the Third
Bhutan Construction
Fair organized by the
Construction Association of
Bhutan in collaboration with
Construction Development
Board 10-13th May, 2019





(Left) A still from the Heavy Earth Moving Equipment Display at the Third Bhutan Construction Fair 10-13th May 2019. The fair is an exposition of construction materials, products, equipments and technology conducted annually.

(Right) Mr. Thinlay Gyamtsho, President, Construction Association of Bhutan (CAB) is re-elected as the president of CAB during the Annual General Meeting held alongside the Third Bhutan Construction Fair. The association is a CSO and an important partner to the professionalization of contractors. The President of CAB is one of two private sector representatives to the Construction Development Board





(Above) Presentation on construction management and monitoring by Director, CDB during Annual General Meeting of Contractors 11th May 2019



(Left) Executive members of the Construction Association of Bhutan awarded certificates during the Annual General Meeting



(Above) Construction Development Board in the seminar for "Clean Construction System" in Seoul. South Korea. 24th May 2019.

The Korean Clean Construction System (CCS) is an anti-corruption tool that aims to enhance transparency and integrity in the public construction sector by providing information of construction projects on platforms accessible by the general public. The system won the prestigious UN Public Service Award in 2013





(Above) Review of module for Refresher's and Induction Training Course for Module 3 in collaboration with College of Science and Technology June 15, 2019



(Above) Poster for registration of engineers June 15th, 2019 beginning the process for registration of engineers in CDB to enhance professionalism and accountability in construction.





(Above Left) In house ICT training for non-IT staff led by the ICT Section in familiarisation to using office tools, G- suite and CDB online systems.

(Above Left) Construction firm licence renewal in process

Annexure

Annexure 1. Contractors downgraded

	Name of the Firm	CDB	Class	Administration Taken	Dzongkhag	Date
1	Samphel Dhendup Construction Company Pvt. Ltd	2266	L	Downgrade from L to M	Punakha	3/15/2019
2	M.T.K Construction Private Limited	1634	L	Downgrade from L to M	Wangdue	3/15/2019
3	BIKY Construction pvt Ltd	5340	L	Downgrade from L to M	Wangdue	3/15/2019
4	Thinley Rabten Construction	4998	М	Downgrade from M to S	Bumthang	3/22/2019
5	Banga Construction	5424	М	Downgrade from M to S	Bumthang	3/22/2019
6	Tsen-Druk construction	7689	М	Downgrade from M to S	Bumthang	3/22/2019
7	Namsel Buddha Construction	2330	М	Downgrade from M to S	Lhuentse	3/26/2019
8	Samphel Dendrup Construction	5410	М	Downgrade from M to S	Lhuentse	3/26/2019
9	Dhenzang Construction	7913	L	Downgraded from L to M	Mongar	4/2/2019
10	Cheney Construction	2370	L	Downgraded from L to M	Trashigang	4/8/2019
11	Tashi Deyjung Construction	1630	М	Downgrade from M to S	Trashigang	4/8/2019
12	Tenzin Wangmo	3348	М	Downgrade from M to S	Trashigang	4/8/2019
13	Gongthung Construction	3912	М	Downgrade from M to S	Trashigang	4/8/2019
14	Arjun Construction Pvt Ltd	2377	L	Downgraded from L to M	Sarpang	5/6/2019
15	-	1899	L	Downgraded from L to M	Sarpang	5/6/2019
16	P.T construction Pvt Ltd	4946	L	Downgraded from L to M	Sarpang	5/6/2019
17	Khuju Construction	4193	М	Downgrade from M to S	Sarpang	5/6/2019
18	MKR construction	4799	М	Downgrade from M to S	Sarpang	5/6/2019
19	Dangkhar Construction	3908	М	Downgrade from M to S	Zhemgang	5/27/2019
20	Ugyen Construction	1078	М	Downgrade from M to S	Pema Gatshel	5/27/2019
21	Dorji Construction	1190	М	Downgrade from M to S	Pema Gatshel	5/27/2019
22	Nima Dhendup Construction	1777	M	Downgrade from M to S	Pema Gatshel	5/27/2019
23	Rinzin Lhamo Construction	3146	М	Downgrade from M to S	Pema Gatshel	5/27/2019
24	Doejay Construction	3347	М	Downgrade from M to S	Pema Gatshel	5/27/2019
25	Peljor Lhendup Construction Pvt Ltd	6712	L	Downgrade from L to M	Pema Gatshel	5/27/2019
26	TEE TEE Construction	1891	M	Downgrade from M to S	S/ Jongkhar	5/31/2019
27	SANGAY DORJI Construction	7222	М	Downgrade from M to S	S/ Jongkhar	5/31/2019
28	Good Will Construction	1547	М	Downgraded from M to S	Chukha	6/28/2019
29	Norzang Construction	4076	М	Downgraded from M to S	Chukha	6/28/2019
30	Norjun Construction	6280	М	Downgraded from M to S	Chukha	6/28/2019
31	Tadhun Wangpo Construction	8277	М	Downgraded from M to S	Chukha	6/28/2019
32	Tashi Rabtenling Construction	8082	M	Downgraded from M to S	Chukha	6/28/2019
33	Druksel Construction	6050	M	Downgraded from M to S	Samtse	6/28/2019
34	2Q Engineering works Private Ltd	4074	L	Downgraded from L to M	Paro	6/28/2019
35	Kuenga Construction	1380	L	Downgraded from L to M	Paro	6/28/2019
36	Drukter Builders	4151	M	Downgraded from M to S	Наа	6/28/2019
37	Ricky Construction	1902	М	Downgraded from M to S	Наа	6/28/2019
38	K.T construction Private Limited	2213	L	Downgraded from L to M	Thimphu	7/18/2019
39	Kencho Dorji Construction Private Limited	1043	L	Downgraded from L to M	Thimphu	7/18/2019
40	K.P Construction	1095	M	Downgraded from M to S	Thimphu	7/18/2019
41	Namgay Construction	1434	L	Downgraded from L to M	Thimphu	7/18/2019
42	Chhundu Builders Private Limited	7002	L	Downgraded from L to M	Thimphu	7/18/2019
43	Passang Construction	2689	M	Downgraded from M to S	Thimphu	7/18/2019
44	Tshentop Construction	3921	M	Downgraded from M to s	Thimphu	7/18/2019
45	Sonam Ninjey Construction	6714	M	Downgraded from M to S	Thimphu	7/18/2019
46	Druk National Builders	7241	M	Downgraded from M to S	Thimphu	7/18/2019
47	Tshenden Construction	8133	M	Downgraded from M to S	Thimphu	7/18/2019
48	Dagaps Construction	8188	M	Downgraded from M to S	Thimphu	7/18/2019

Annexure 2. Contractors (Reprimand letter issued or suspended)

	Name of the Firm	CDB	Class	Administration Taken	Dzongkhag	Date
1	TASHI DELEK Construction	3151	M	letter for compliance	Punakha	3/15/2019
2	LINGMU Construction	3542	M	Temporarily Suspended	Punakha	3/15/2019
3	NGAWANG SENAM C.T.S Construction	6632	M	letter for compliance	Punakha	3/15/2019
4	CHADO T Construction	7399	M	Temporarily Suspended	Punakha	3/15/2019
5	KuenphenLharek Construction	8273	M	Temporarily Suspended	Punakha	3/15/2019
6	YEZHIN NOR TERAL CONSTRUCTION	8297	M	Letter for compliance	Punakha	3/15/2019
7	DK Construction	4102	M	Letter for compliance	Punakha	3/15/2019
8	Lotus Private Limited	5814	L	Letter for compliance	Wangdue	3/15/2019
9	P.K Construction	1814	M	Temporarily Suspended	Wangdue	3/15/2019
10	P.GYELTSHEN Construction	7829	M	Letter for compliance	Wangdue	3/15/2019
11	RingdrelConstruction	4637	L	Letter for compliance	Mongar	4/2/2019
12	CTP Construction	6149	M	Letter for compliance	Mongar	4/2/2019
13	K&K construction	1753	M	Letter for compliance	Trashigang	4/8/2019
14	Sangdag Construction	2455	M	Letter for compliance	Trashigang	4/8/2019
15	Paegyel Construction	3543	M	Letter for compliance	Trashigang	4/8/2019
16	Jam Nying Gar construction	3948	M	Letter for compliance	Trashigang	4/8/2019
17	Peljor Lhendup Construction Pvt Ltd	6712	L	Letter for compliance	Trashigang	4/8/2019
18	Nehemia construction	6528	M	letter for compliance	Tsirang	5/6/2019
19	Kencho Tshering Construction Pvt Ltd	1677	L	Temporarily Suspended	Sarpang	5/6/2019
20	Raven Builders & Company Pvt Ltd	2356	L	Temporarily Suspended	Sarpang	5/6/2019
21	Phuntsho Phuensum Construction Pvt Ltd	6700	L	Temporarily Suspended	Sarpang	5/6/2019
22	Tashi Norphel builders	4693	L	Temporarily Suspended	Sarpang	5/6/2019
23	Galing Builders	5958	M	Temporarily Suspended	Sarpang	5/6/2019
24	Peldan Jamtsho Construction	6119	M	Temporarily Suspended	Sarpang	5/6/2019
25	Layja Tobjay Construction	8224	M	Temporarily Suspended	Sarpang	5/6/2019
26	C.N construction	3512	L	Temporarily Suspended	Sarpang	5/6/2019
27	H.R construction	6216	М	Letter for compliance	Sarpang	5/6/2019
28	UPC construction	7093	L	Letter for compliance	Sarpang	5/6/2019
29	PST construction	4181	L	Letter for compliance	Sarpang	5/6/2019
30	Tenzin Wangchuck Construction	3296	М	Suspended for 3 months	Trongsa	5/15/2019
31	Ningtop Construction	3574	М	Letter for compliance	Trongsa	5/15/2019
32	P.GYELTSHEN Construction	7829	М	Suspended for 3 months	Trongsa	5/15/2019
33	Sonam Jorden Construction	4285	М	Letter for compliance	Trongsa	5/15/2019
34	Zangchong KJZ private Ltd	7644	L	Temporarily Suspended	Zhemgang	5/27/2019
35	Rinchen Construction	1818	М	Letter for compliance	Zhemgang	5/27/2019
36	Kezang Norbu Construction	2418	М	Letter for compliance	Zhemgang	5/27/2019
37	Dhamdhen Construction	3329	L	Letter for compliance	Zhemgang	5/27/2019
38	Druk Bartseri Builders	5492	М	Temporarily Suspended	Pema Gatshel	5/27/2019
39	Tenzin Dorji Construction	1673	М	Letter for compliance	Pema Gatshel	5/27/2019
40	TENZIN DORJI Construction	1673	М	Letter for compliance	Samdrup Jongkhar	5/31/2019
41	SHINGJOGTANG Construction	2324	М	Letter for compliance	Samdrup Jongkhar	5/31/2019
42	Kuenphen Rabten Builders	8139	М	Temporarily Suspended	Samdrup Jongkhar	5/31/2019
43	Kencho Dorji Construction Private Limited	1043	L	Letter for compliance	Chukha	6/28/2019
44	Druk Gyelyong Construction	1817	L	Temporarily Suspended	Chukha	6/28/2019
45	K.T construction Private Limited	2213	L	Letter for compliance	Chukha	6/28/2019
46	Phuensum Construction	2381	М	Letter for compliance	Chukha	6/28/2019
47	Guardian Construction Private Limited	5747	М	Temporarily Suspended	Chukha	6/28/2019
48	Ghasel Builders	2800	М	Letter for compliance	Chukha	6/28/2019
49	Yarpharla Construction	1719	М	Letter for compliance	Samtse	6/28/2019

	Name of the Firm	CDB	Class	Administration Taken	Dzongkhag	Date
50	Gado Construction	2202	M	Letter for compliance	Samtse	6/28/2019
51	Tshentop Construction	3921	M	Letter for compliance	Paro	6/28/2019
52	Wangchuk T construction	8317	M	Suspended for 3 months	Paro	6/28/2019
53	Tshering Construction	1467	M	Letter for compliance	Наа	6/28/2019
54	Daysang Construction	1959	M	Letter for compliance	Наа	6/28/2019
55	Samten Construction	2226	M	Letter for compliance	Наа	6/28/2019
56	Sangay Construction Private Limited	2298	L	Letter for compliance	Наа	6/28/2019
57	The Empire Construction Company private Limited	2206	L	Letter for compliance	Thimphu	7/18/2019
58	Pelden Construction Private Limited	2250	L	Letter for compliance	Thimphu	7/18/2019
59	Diamond Construction Private Limited	2304	L	Temporarily Suspended	Thimphu	7/18/2019
60	Yangchenma Private Limited	3481	L	Temporarily Suspended	Thimphu	7/18/2019
61	Gangkhar Puensum Construction Pvt Ltd	7094	L	Temporarily Suspended	Thimphu	7/18/2019
62	Druk Zhenphen Engineering	7424	L	Temporarily Suspended	Thimphu	7/18/2019
63	Jangchup Builders Pvt ltd	7809	L	Temporarily Suspended	Thimphu	7/18/2019
64	Rinzin Dorji Construction	1099	M	Letter for compliance	Thimphu	7/18/2019
65	Chogyel Construction	1816	M	Temporarily Suspended	Thimphu	7/18/2019
66	Paegyel Construction	3543	M	Temporarily Suspended	Thimphu	7/18/2019
67	Karma Builders	3762	M	Temporarily Suspended	Thimphu	7/18/2019
68	Phyentshog Rabgayl Construction	3853	M	Letter for compliance	Thimphu	7/18/2019
69	Druk Dhoedjung Construction	4560	M	Letter for compliance	Thimphu	7/18/2019
70	Shakshing Goenpa Construction	6494	M	Temporarily Suspended	Thimphu	7/18/2019
71	Samplel Construction	7800	M	Temporarily Suspended	Thimphu	7/18/2019
72	Namsay Tsherim Construction	8067	M	Temporarily Suspended	Thimphu	7/18/2019

NOTE:

- 1. Downgraded firms are allowed to participate in competitive bids in downgraded class.
- 2. Downgraded firms are allowed to upgrade only after completion of downgradation period and upon fulfillment of registration requirements.
- 3. Suspended firms are not be allowed to avail any services during suspension period.
- 4. Suspended firms shall remain suspended until reinstated by CDB.
- 5. Upon completion of suspension period, suspended firms may apply for lifting of suspension upon fulfillment of requirements.

Annexure 3. Formula and variables for sample size calculation

Sample size =
$$\frac{\frac{z^2 \times p (1-p)}{e^2}}{1 + (\frac{z^2 \times p (1-p)}{e^2 N})}$$

N= Population Size

e= Margin of Error (percentage in decimal form)

z= Z Score

Z Score is the number of Standard Deviations a given proportion is away from the mean. To find the right Z Score to use, refer the table below

Desired confidence level	z-score
80%	1.28
85%	1.44
90%	1.65
95%	1.96
99%	2.58

Annexure 4. Valid Non- Bhutanese construction firms registered with CDB

Firm	Country	Category	Class
Optech Engineering Pvt. Ltd.	India	W3	Large
Schneider Electric Infrstructure Limited	India	W4	Large
Mech Industry	India	W3	Large
Trilok Infrocon(India) Pvt. Limited	India	W3	Large
Lama Construction co.pvt.ltd	Nepal	W1 W3	Large
Offshore Infrstructure Limited	India	W3	Large
Afcons Infrastructure Limited	India	W3	Large
Technofab - Vishwa	India	W3	Large
Santalal and Brothers	India	W1	Large
Merx Exponere Media Pvt. Ltd.	India	W4	Large
M/s Shivam Transcon Pvt. Ltd	India	W1	Large
Pritam Singn & Son Pvt. Ltd.	India	W3	Large
TUNDI Construction Private Limited	Nepal	W1 W3	Large
Marushin Shitaka Construction Co. Limited	Japan	W1 W3 W4	Large

Annexure 5. Active e-Tool and CiNET users and focal person(s)

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Type of user	Name of Agency	Name
Procuring Agency (Etool)	Regional Corporate Office, Mongar	Jigme Wangdi
Procuring Agency (Etool)	Bhutan Agro Industries Ltd	Jambay Dorji
Procuring Agency (Etool)	Bhutan Agro Industries Ltd	Sonam Choten
Procuring Agency (Etool)	Bhutan Agro Industries Ltd	Shrowan Pradhan
Procuring Agency (Etool)	Dophuchen Dungkhag	Kumar Sharma
Procuring Agency (Etool)	Dophuchen Dungkhag	Tashi Tobgay
Procuring Agency (Etool)	Dophchen Gewog	Minjur Dorjee
Procuring Agency (Etool)	Department of Human Resource	Thaye Choden Dorji
Procuring Agency (Etool)	Gaeddu College of Business Studies	Nim Dorji
Procuring Agency (Etool)	Dumtoe Gewog	Karma Tshawang
Procuring Agency (Etool)	Department of Medical Supplies &	Sangay Tenzin
Procuring Agency (Etool)	Renewable Energy Department,Thimphu	Karma Cheki
Procuring Agency (Etool)	Bhutan Youth Development Fund	Guna Raj Neopany
Procuring Agency (Etool)	Bhutan Youth Development Fund	Kinley Tenzin
Procuring Agency (Etool)	Bhutan Infocomm & Media Authority	Tenzin Dorji
Procuring Agency (Etool)	Anti-Corruption Commission of Bhutan	Ugyen Dorji
Procuring Agency (Etool)	Anti-Corruption Commission of Bhutan	Anti Corruption
Procuring Agency (Etool)	Anti-Corruption Commission of Bhutan	Thinley Wangdi
Procuring Agency (Etool)	Anti-Corruption Commission of Bhutan	Ugyen Gyeltshen
Procuring Agency (Etool)	Bridge Division, DoR	Bishnu Dhital
Procuring Agency (Etool)	Bridge Division, DoR	Karma Wangdi
Procuring Agency (Etool)	Bridge Division, DoR	NgawangThinley
Procuring Agency (Etool)	Bridge Division, DoR	Shivalal Achary
Procuring Agency (Etool)	Bhutan Electricity Authority	Rinchen Dorji
Procuring Agency (Etool)	Bhutan Ferro Alloys Limited	Jamba Yeshi
Procuring Agency (Etool)	Bhutan Football Federation	Kinzang Wangdi
Procuring Agency (Etool)	Bhutan Hydropower Services Ltd.	Sonam Tobgay
Procuring Agency (Etool)	Bhutan Taekwondo Federation	Y. Tharchen
Procuring Agency (Etool)	Bank of Bhutan	Tenzin Gyeltshen
Procuring Agency (Etool)	Bhutan Olympic Committee	Dorji Tenzin
Procuring Agency (Etool)	Bhutan Olympic Committee	Sanjay Pradhan
Procuring Agency (Etool)	BPC, Customer Services Department	Mr. Yeshi Nedup
Procuring Agency (Etool)	BPC, Transmission Construction Dept	Pratika Bhujel
Procuring Agency (Etool)	BPC, Transmission Department	Rinzin Dorji
Procuring Agency (Etool)	Bhutan Telecom	Jangchu Dorji
Procuring Agency (Etool)	Bumthang Dzongkhag Administration	Tharchen
Procuring Agency (Etool)	Bumthang Dzongkhag Administration	Dawa Demo
Procuring Agency (Etool)	Bumthang Dzongkhag Administration	Tshewang Penjor
Procuring Agency (Etool)	Bumthang Dzongkhag Administration	Tshering Tashi
Procuring Agency (Etool)	Bumthang Dzongkhag Administration	Thinley Zamtsho

Type of user	Name of Agency	Name
Procuring Agency (Etool)	Construction Development Board	Ambar Mongar
Procuring Agency (Etool)	Construction Development Board	Arjun Subba
Procuring Agency (Etool)	Chukha Dzongkhag	Ngawang Dorji
Procuring Agency (Etool)	Chukha Dzongkhag	Tshering Zom
Procuring Agency (Etool)	Chukha Dzongkhag	Namgay Phuntsho
Procuring Agency (Etool)	Chukha Dzongkhag	Sangay Dorji
Procuring Agency (Etool)	Chukha Dzongkhag	Lobzang Norbu
Procuring Agency (Etool)	Chukha Dzongkhag	Basant Kumar Rai
Procuring Agency (Etool)	Chukha Dzongkhag	Chhimi Dorji
Procuring Agency (Etool)	Chukha Dzongkhag	Dewas Biswa
Procuring Agency (Etool)	Chukha Dzongkhag	Jigme Choden
Procuring Agency (Etool)	Chukha Dzongkhag	Jyoti Gurung
Procuring Agency (Etool)	Chukha Dzongkhag	Mr. Karma
Procuring Agency (Etool)	Chukha Dzongkhag	Kezang Tobgay
Procuring Agency (Etool)	Chukha Dzongkhag	Ms. Rupa Gurung
Procuring Agency (Etool)	Chukha Dzongkhag	Sangay Wangmo
Procuring Agency (Etool)	Chukha Dzongkhag	Sonam Choden
Procuring Agency (Etool)	Chukha Dzongkhag	Mr. Sonam Jamts
Procuring Agency (Etool)	Chukha Dzongkhag	Tashe Penden
Procuring Agency (Etool)	Chukha Dzongkhag	Tashi Wangchuk
Procuring Agency (Etool)	Chukha Dzongkhag	Tshering Chophel
Procuring Agency (Etool)	College of Natural Resources	Sangay Deki
Procuring Agency (Etool)	College of Natural Resources	Dorji Wangda
Procuring Agency (Etool)	College of Science & Technology	Karma Tempa
Procuring Agency (Etool)	College of Science & Technology	Ugyen
Procuring Agency (Etool)	Dagana Dzongkhag Administration	Sonam Thinley
Procuring Agency (Etool)	Dagana Dzongkhag Administration	Ganesh Shyam Pradhan
Procuring Agency (Etool)	Dagana Dzongkhag Administration	Karma Tenzin
Procuring Agency (Etool)	Dagana Dzongkhag Administration	Tshering Pelden
Procuring Agency (Etool)	DANTAK	Awashesh Lal Sr
Procuring Agency (Etool)	Dungsam Cement Corporation Ltd.	Chimi Wangchuk
Procuring Agency (Etool)	Department of Cottage & Small Industry	Kezang Phuntsho
Procuring Agency (Etool)	Department of Culture	Dechen Wangmo
Procuring Agency (Etool)	Department of Culture	Dorji
Procuring Agency (Etool)	Department of Culture	Pema
Procuring Agency (Etool)	Department of Forests and Park Services, Samtse	Yashoda Mongar
Procuring Agency (Etool)	Department of Forests and Park Services, Tsirang	Tendoo
Procuring Agency (Etool)	Department of Forest and Park Service, Zhemgang	Sonam Phuntsho
Procuring Agency (Etool)	Dept Geology & Mines	Tashi Phuntsho
Procuring Agency (Etool)	DHI Infra Ltd.	Kapil Pradhan
Procuring Agency (Etool)	DHI Infra Ltd.	Karma

Type of user	Name of Agency	Name
Procuring Agency (Etool)	DHI Infra Ltd.	Karma Geyley
Procuring Agency (Etool)	DHI Infra Ltd.	Kritika Neopane
Procuring Agency (Etool)	DHI Infra Ltd.	Singye
Procuring Agency (Etool)	DHI Infra Ltd.	Sonam Jamtsho
Procuring Agency (Etool)	DHI Infra Ltd.	Tshering Dupchu
Procuring Agency (Etool)	Dagachu Hydro Power Corporation Limited	Karma Namgay Sherpa
Procuring Agency (Etool)	Dagachu Hydro Power Corporation Limited	Karma Pelden
Procuring Agency (Etool)	Department of Technical Education, MoLHR	Yeshey Choden
Procuring Agency (Etool)	Department of National Properites	Chendu Zangpo
Procuring Agency (Etool)	Department of National Properites	Chenzom
Procuring Agency (Etool)	Department of National Properites	Karma Yedon
Procuring Agency (Etool)	Department of National Properites	Tandin Gyem
Procuring Agency (Etool)	Dept of Agriculture	Nima Dorji
Procuring Agency (Etool)	Dept of Agriculture	Nima Dorji
Procuring Agency (Etool)	Dept of Agriculture	D.S Tamang
Procuring Agency (Etool)	Dept of Agriculture	Tshering
Procuring Agency (Etool)	Dept of Agriculture	Yeshey Lhendup
Procuring Agency (Etool)	Dept. of Civil Aviation	Gyem Dorji
Procuring Agency (Etool)	Dept. of Civil Aviation	Pelden Lhamo
Procuring Agency (Etool)	Dept. of Civil Aviation	Pem Tshering
Procuring Agency (Etool)	Dept. of Civil Aviation	Tashi Gyeltshen
Procuring Agency (Etool)	Dept. of Civil Aviation	Tshering Dekar
Procuring Agency (Etool)	Dept. of Industry	Kushyog Subba
Procuring Agency (Etool)	Dept. of Industry	Pema Dendup
Procuring Agency (Etool)	Dept. of Industry	Thinley
Procuring Agency (Etool)	Dept. of Industry	Daba
Procuring Agency (Etool)	Dept. of Industry	Sonam Wangchuk
Procuring Agency (Etool)	Dept. of Industry	Karma Yangki
Procuring Agency (Etool)	Dept. of Industry	Sonam Zangmo
Procuring Agency (Etool)	Dept. of Industry	Dawa Norbu
Procuring Agency (Etool)	Dept. of Industry	Tshering Wangdi
Procuring Agency (Etool)	Dept. of LiveStocks	Meena
Procuring Agency (Etool)	Department of Roads	Koncho Tempel
Procuring Agency (Etool)	Department of Roads	Tenzin
Procuring Agency (Etool)	Department of Roads	Tshewang Dorji
Procuring Agency (Etool)	DoR Lobesa	Ngawang Peday
Procuring Agency (Etool)	DoR Lingmethang	Sonam Tenzin
Procuring Agency (Etool)	DoR Phuentsholing	Chemi Lham
Procuring Agency (Etool)	DoR Phuentsholing	Jigme Choidup
Procuring Agency (Etool)	DoR Sarpang	Sonam Thinley
Procuring Agency (Etool)	DoR Sarpang	Sonam Jamtsho

Type of user	Name of Agency	Name
Procuring Agency (Etool)	DoR SamdrupJongkhar	Gopal Subba
Procuring Agency (Etool)	DoR Trashigang	Cheki Wangchuk
Procuring Agency (Etool)	DoR Trashigang	Chencho Zam
Procuring Agency (Etool)	DoR Trashigang	Kuenzang Dhendup
Procuring Agency (Etool)	DoR Thimphu	Ratna Kumari Sanyasi
Procuring Agency (Etool)	DoR Thimphu	Choki Wangmo
Procuring Agency (Etool)	DoR Thimphu	Drakpa Wangdi
Procuring Agency (Etool)	DOR Trongsa	Thinley Dorji
Procuring Agency (Etool)	DOR Trongsa	R.L Gautam
Procuring Agency (Etool)	DoR Zhemgang	Tshewang Rinzin
Procuring Agency (Etool)	Dept. of Public Health	Karma
Procuring Agency (Etool)	Dratshang Lhentshog	Ugyen Namgay
Procuring Agency (Etool)	Dept. of Revenue & Customs	Sonam Rinchen
Procuring Agency (Etool)	Department of Renewable Energy	Choten Duba
Procuring Agency (Etool)	Department of Engineering Services	parsuram rai
Procuring Agency (Etool)	Department of Engineering Services	Karma Euthra
Procuring Agency (Etool)	Department of Engineering Services	Gem Tshering
Procuring Agency (Etool)	Department of Engineering Services	Niran Rai
Procuring Agency (Etool)	Department of Engineering Services	Om Nath Giri
Procuring Agency (Etool)	Department of Engineering Services	Sangay Pemo
Procuring Agency (Etool)	Department of Engineering Services	Sonam Yangdhen
Procuring Agency (Etool)	Department of Engineering Services	Tashi Drukpa
Procuring Agency (Etool)	Department of Engineering Services	Yadav Lal Bhatt
Procuring Agency (Etool)	Dungsam Cement PA	Jamyang Phuntsho
Procuring Agency (Etool)	Election Commission of Bhutan	K.D Tshering
Procuring Agency (Etool)	FCB	Chime Tshewang
Procuring Agency (Etool)	Gelephu Municial Corporation	Tenzin Pema
Procuring Agency (Etool)	Gelephu Municial Corporation	Ramesh Pradhan
Procuring Agency (Etool)	Gasa Dzongkhag Administration	Damcho Wangchuk
Procuring Agency (Etool)	Gyelposhing-Nanglam Road Project, DoR	Jambay Tenzin
Procuring Agency (Etool)	Gelephug Referral Hospital	Karma Chophel
Procuring Agency (Etool)	Gelephug Referral Hospital	Pema Dorji
Procuring Agency (Etool)	Haa Dzongkhag Administration	Dorji Gyeltshen
Procuring Agency (Etool)	Haa Dzongkhag Administration	Kuenley Gyeltsh
Procuring Agency (Etool)	Haa Dzongkhag Administration	Sonam Jamtsho
Procuring Agency (Etool)	Haa Dzongkhag Administration	Tashi Gyeltshen
Procuring Agency (Etool)	Hindu Dharma Samudaya of Bhutan	Dipendra Giri
Procuring Agency (Etool)	Health Infrastructure Development Division	Jigme Tenzin
Procuring Agency (Etool)	Health Infrastructure Development Division	Jampel Dorji
Procuring Agency (Etool)	Health Infrastructure Development Division	Gyembo
Procuring Agency (Etool)	Health Infrastructure Development Division	Karma
Procuring Agency (Etool)	Health Infrastructure Development Division	Tsheten Dorji

Type of user	Name of Agency	Name
Procuring Agency (Etool)	Department of Hydromet Services	Dema Yangzom
Procuring Agency (Etool)	Department of Hydromet Services	Pema Wangdi
Procuring Agency (Etool)	JDWNRH	Dawa Tshering
Procuring Agency (Etool)	JICA Bhutan	Hidetaka Sakabe
Procuring Agency (Etool)	Jigme Namgyel Engineering College	Choten Dorji
Procuring Agency (Etool)	Koufuku International Pvt. Ltd	Ugyen Phuntsho
Procuring Agency (Etool)	Lhuntse Dzongkhag Administration	Karma Wangdi
Procuring Agency (Etool)	Lhuntse Dzongkhag Administration	Jamyang Chophel
Procuring Agency (Etool)	Lhuntse Dzongkhag Administration	Karma Thinley
Procuring Agency (Etool)	Lhuntse Dzongkhag Administration	Sachen Limbu
Procuring Agency (Etool)	Lhuntse Dzongkhag Administration	Tashi Gyeltshen
Procuring Agency (Etool)	Secretariat, MoEA	Yeshi Choda
Procuring Agency (Etool)	Secretariat, MoF	Karma Tshering
Procuring Agency (Etool)	Secretariat, MoF	Sangay Dorji
Procuring Agency (Etool)	Secretariat, MoF	Sherab Phuntsho
Procuring Agency (Etool)	Secretariat, MoH	Cheku Wangchuk
Procuring Agency (Etool)	Secretariat, MoH	Rinzin Bida
Procuring Agency (Etool)	Secretariat, MoH	Saha Bir Gurung
Procuring Agency (Etool)	Secretariat, MoH	Tshering Dupchu
Procuring Agency (Etool)	Secretariat, MoHCA	Karma
Procuring Agency (Etool)	Secretariat, MoHCA	Karma Tenn
Procuring Agency (Etool)	Secretariat, MoHCA	Tshewang Dorji
Procuring Agency (Etool)	AFD, MoIC	Sonam Jamtsho
Procuring Agency (Etool)	Mongar Dzongkhag Administration	Dhendup Tshering
Procuring Agency (Etool)	Mongar Dzongkhag Administration	Amber Bdr Pradhan
Procuring Agency (Etool)	Mongar Dzongkhag Administration	Tashi Choezang
Procuring Agency (Etool)	Mongar Dzongkhag Administration	Karma Wangmo
Procuring Agency (Etool)	Mongar Dzongkhag Administration	Ram Bdr Darjee
Procuring Agency (Etool)	Mongar Dzongkhag Administration	Prem Bdr Ghalle
Procuring Agency (Etool)	Mongar Referral Hospital	Nagendra Gurung
Procuring Agency (Etool)	Secretariat, MoWHS	Jenisha Suberi
Procuring Agency (Etool)	Secretariat, MoWHS	Pema Eden
Procuring Agency (Etool)	Secretariat, MoWHS	Sonam Dorji
Procuring Agency (Etool)	National Environment Commission	Rinzin Namgay
Procuring Agency (Etool)	National Housing Development Corporation	Tshering Lhadon
Procuring Agency (Etool)	National Jersey Breeding Center DoL	Tashi Dhendup
Procuring Agency (Etool)	National Museum of Bhutan	Dorji Wangchuk
Procuring Agency (Etool)	National Museum of Bhutan	Dorji Wangchuk
Procuring Agency (Etool)	National Pension & Provident Fund	Sangay Thinley
Procuring Agency (Etool)	National Pension & Provident Fund	Sonam Nyenda
Procuring Agency (Etool)	National Pension & Provident Fund	Pema Chheda
Procuring Agency (Etool)	National Pension & Provident Fund	Parmakhar Sharm

Type of user	Name of Agency	Name
Procuring Agency (Etool)	National Pension & Provident Fund	Sunil Pradhan
Procuring Agency (Etool)	National Pension & Provident Fund	Tshering Gyeltshen
Procuring Agency (Etool)	NRDCL	Jigme Wangchuk
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Kinzang Gyeltshen
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Tshering Delker
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Karma Tenzin (B)
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Tsheltrim Zangmo
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Sonam Jamtsho
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Sonam Norbu
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Kuenzang Wangchuk
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Karma Druptho
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Tsheltrim
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Dawa Tshering
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Karma Duba
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Netem Dorji
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Karma Tenzin
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Lungten Thinley
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Rinzin Dorji
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Samten Choeda
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Tashi Dorji
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Tshewang Jurmey
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Samten Choeda
Procuring Agency (Etool)	Pema Gatshel Dzongkhag Administration	Kinley Wangdi
Procuring Agency (Etool)	Paro Dzongkhag Administration	Jigme Lhendup
Procuring Agency (Etool)	Paro Dzongkhag Administration	Chane Zangmo
Procuring Agency (Etool)	Paro Dzongkhag Administration	Tshering Yangzom
Procuring Agency (Etool)	Paro Dzongkhag Administration	Kumar Subba
Procuring Agency (Etool)	Paro Dzongkhag Administration	Thinley Wangchuk
Procuring Agency (Etool)	Paro Dzongkhag Administration	Pema Ihendup
Procuring Agency (Etool)	Paro Dzongkhag Administration	Sangay Wangmo
Procuring Agency (Etool)	Paro Dzongkhag Administration	Rinchen Tshering
Procuring Agency (Etool)	Paro Dzongkhag Administration	Tshering Pelmo
Procuring Agency (Etool)	Paro Dzongkhag Administration	Nima Rabsel
Procuring Agency (Etool)	Paro Dzongkhag Administration	Phubchu
Procuring Agency (Etool)	Paro Dzongkhag Administration	Tashi
Procuring Agency (Etool)	Paro Dzongkhag Administration	Choki Lengkong
Procuring Agency (Etool)	Paro Dzongkhag Administration	Ugyen Uden
Procuring Agency (Etool)	Phuentsholing City Corporation	Karma Tenzin
Procuring Agency (Etool)	Phuentsholing City Corporation	Buddhiman
Procuring Agency (Etool)	Phuentsholing City Corporation	Lobzang
Procuring Agency (Etool)	Phuentsholing City Corporation	Palden Choida

Type of user	Name of Agency	Name
Procuring Agency (Etool)	Phuentsholing City Corporation	Sonam Tshewang
Procuring Agency (Etool)	Phuentsholing City Corporation	Pema Lhendup
Procuring Agency (Etool)	Paro College of Eductaion	Chimi Dem
Procuring Agency (Etool)	Phuentsholing Dungkhag	Yonten Norbu
Procuring Agency (Etool)	Punakha Dzongkhag Administration	Tobgay
Procuring Agency (Etool)	Punakha Dzongkhag Administration	T Denka
Procuring Agency (Etool)	Royal Audit Authoriy	Namgay Dorjee
Procuring Agency (Etool)	RBA	Jigme Dorji
Procuring Agency (Etool)	RBA	Tashi Phuntsho
Procuring Agency (Etool)	RBA	Tshering Yuden
Procuring Agency (Etool)	RBA	Major Ugyen Phu
Procuring Agency (Etool)	RBG	Karma Tshering
Procuring Agency (Etool)	RBG	Kinga Wangdi
Procuring Agency (Etool)	RBP	Karma Chhedup
Procuring Agency (Etool)	RBP	Tshering Phunts
Procuring Agency (Etool)	Royal Court of Justice	Yezer Dema
Procuring Agency (Etool)	RICBL Thimphu	Kinzang Jigme
Procuring Agency (Etool)	Royal Institute of Law	Karma
Procuring Agency (Etool)	Royal Institute of Management	Bhim Prasad Neo
Procuring Agency (Etool)	Royal Institute of Management	Jigme Loday
Procuring Agency (Etool)	Renewable Natural Resources Research and Development	Tashi Wangdi
Procuring Agency (Etool)	RNRRDC, Bajo	Sangay Gyeltshe
Procuring Agency (Etool)	RNRRDC, Bajo	Sangay Wangdi
Procuring Agency (Etool)	RNRRDC, Bajo	Thinley Gyamtsho
Procuring Agency (Etool)	Renewable Natural Resources Research and Development	Kin Dorji
Procuring Agency (Etool)	RSTA	Karma Namgyal
Procuring Agency (Etool)	RSTA	Sonam Wangmo
Procuring Agency (Etool)	RSTA	Ugyen Norbu
Procuring Agency (Etool)	Royal University of Bhutan	Dorji Thinley
Procuring Agency (Etool)	Royal University of Bhutan	Raju Gurung
Procuring Agency (Etool)	Samdrup Jonkar	Jigme Thinley
Procuring Agency (Etool)	Samdrup Jonkar	Kezang Jamtsho
Procuring Agency (Etool)	Samdrup Jonkar	Sangay Wangchuk
Procuring Agency (Etool)	Samdrup Jonkar	Tashi Phuntsho
Procuring Agency (Etool)	Samtse Dzongkhag Administration	Tashi Penjor
Procuring Agency (Etool)	Samtse Dzongkhag Administration	Kelzang
Procuring Agency (Etool)	Samtse Dzongkhag Administration	Sita Gurung
Procuring Agency (Etool)	Samtse Dzongkhag Administration	Tshering wangchuk
Procuring Agency (Etool)	Sarpang Dzongkhag Administration	Kezang Dorji
Procuring Agency (Etool)	Sarpang Dzongkhag Administration	Sandeep Chhetri

Type of user	Name of Agency	Name
Procuring Agency (Etool)	Sarpang Dzongkhag Administration	Sigyal Wangchuk
Procuring Agency (Etool)	Sarpang Dzongkhag Administration	Ugyen Phuntsho
Procuring Agency (Etool)	Samdrup Jonkhar Thromde	Tashi Choden
Procuring Agency (Etool)	Samdrup Jonkhar Thromde	Sonam Dema
Procuring Agency (Etool)	Samdrup Jonkhar Thromde	Yeshey Dorjee
Procuring Agency (Etool)	Department of Forest and Park services, S/Jonkhar	Sonam Tshomo
Procuring Agency (Etool)	School Planning and Building Division	Diwakar Lama
Procuring Agency (Etool)	School Planning and Building Division	Lalit Kumar Gurung
Procuring Agency (Etool)	SQCA	Jigme Tenzin
Procuring Agency (Etool)	STCBL Phuentsholing	Sugan Pradhan
Procuring Agency (Etool)	Supreme Court of Bhutan	Tshering Pelmo
Procuring Agency (Etool)	Supreme Court of Bhutan	Wangmo
Procuring Agency (Etool)	Trashigang Dzongkhag Administration	Yeshi Peldon
Procuring Agency (Etool)	Trashigang Dzongkhag Administration	Namgang Lhamo
Procuring Agency (Etool)	Trashigang Dzongkhag Administration	Sonam Tenzin
Procuring Agency (Etool)	Trashigang Dzongkhag Administration	Tshering Tenzin
Procuring Agency (Etool)	Trashi Yangtse	Tshering Wangchuk
Procuring Agency (Etool)	Trashi Yangtse	Dechen Choden
Procuring Agency (Etool)	Trashi Yangtse	Chador Phuntsho
Procuring Agency (Etool)	Trashi Yangtse	Jigme Tshewang
Procuring Agency (Etool)	Tourism Council of Bhutan	Pema Tenzin
Procuring Agency (Etool)	Thimphu District Municipality	Thimphu Distric
Procuring Agency (Etool)	Department of Forest and Park services, Trashigang	Kinzang Gyeltshen
Procuring Agency (Etool)	Department of Forest & Park Services, Thimphu	Phenden Gyamtsho
Procuring Agency (Etool)	Thimphu Dzongkhag Administration	Karma
Procuring Agency (Etool)	Thimphu Dzongkhag Administration	Tshewang Samdup
Procuring Agency (Etool)	Dept of Trade	Tshering Pem
Procuring Agency (Etool)	Dept of Trade	Zecko
Procuring Agency (Etool)	Trongsa Dzongkhag Administration	Dorji Phuentsho
Procuring Agency (Etool)	Trongsa Dzongkhag Administration	Kencho Wangmo
Procuring Agency (Etool)	Trongsa Dzongkhag Administration	Phuntsho Gayley
Procuring Agency (Etool)	Trongsa Dzongkhag Administration	Sangay Dorji
Procuring Agency (Etool)	Trongsa Dzongkhag Administration	Tobgay
Procuring Agency (Etool)	Tsirang Dzongkhag Administration	Prem Ghallay
Procuring Agency (Etool)	Tsirang Dzongkhag Administration	Bhima Monger
Procuring Agency (Etool)	Tsirang Dzongkhag Administration	Tshering Tenzin
Procuring Agency (Etool)	Tsirang Dzongkhag Administration	Padam Bdr Rai
Procuring Agency (Etool)	Tsirang Dzongkhag Administration	Bishnu Acharja
Procuring Agency (Etool)	Tsirang Dzongkhag Administration	Tshering Dorji
Procuring Agency (Etool)	University of Medical Sciences of Bhutan	Mr. Karma Dhendu
Procuring Agency (Etool)	UWICE, Bumthang	Bhim Bdr Pradha

Type of user	Name of Agency	Name
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Tshering Chopel
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Tashi Wangchuk
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Tashi Dema
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Chimi Wangmo
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Goverdhan Gurung
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Tandin Zangmo
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Zeko Tashi
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Singye Dema
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Tashi Yangzom
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Singay Dorji
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Tashi Wangchuk
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Nidup Tshering
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Rohit Kumar Pradhan
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Tashi Norbu Sherpa
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Karma Lhaden
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Choki Wangdi
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Ngawang Dorji
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Phub Gyem
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Chimi Wangmo
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Tshering Wangdi
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Dhan Bir Rana
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Purna Bdr Mongar
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Kezang Chophel
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Phub Dorji
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Sangay Lhamo
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Singye Wangchuk
Procuring Agency (Etool)	Wangdue Dzongkhag Administration	Puena Bdr Mongar
Procuring Agency (Etool)	Zhemgang Dzongkhag Administration	Kintu
Procuring Agency (Etool)	Zhemgang Dzongkhag Administration	Tshewang Choden
Procuring Agency (Etool)	Zhemgang Dzongkhag Administration	Tek Bdr Gurung
Procuring Agency (Etool)	Zhemgang Dzongkhag Administration	Thukar
Procuring Agency (Etool)	Denchukha Gewog	Sonam Dorji
Procuring Agency (Etool)	The Royal Academy Construction Project	Sonam Tobgay
Procuring Agency (Etool)	Bhutan Civil Aviation Authority	Mindu Wangdi
Procuring Agency (Etool)	Bhutan Livestock Development Corporation Limited	Thinley Norbu
Procuring Agency (Etool)	Tashichholing Gewog	Kezang Jigme
Procuring Agency (Etool)	Norbugang Gewog	Sonam Choden
Procuring Agency (Etool)	Headquarters, WING 10	Sonam Penjor
Procuring Agency (Etool)	Pemaling Gewog	Sonam Dorji
Procuring Agency (Etool)	Regional Corporate Office, Gelephu	Kinley Peldon
Procuring Agency (Etool)	Center for Bhutan Studies and GNH	Sangay Wangdi

Type of user	Name of Agency	Name
Procuring Agency (Etool)	Namgaychholing Gewog	Kinley Tshering
Procuring Agency (Etool)	Ugyentse Gewog	Kinley Wangdi
Procuring Agency (Etool)	Department of Survey and Mapping	Ritesh Gurung
Procuring Agency (Etool)	Tendru Gewog	Tobgay
Procuring Agency (Etool)	Norgaygang Gewog	Yeshi Rangdrel
Procuring Agency (Etool)	Sherubtse College	D.B. Ghalley
Procuring Agency (Etool)	JSW LAW	Phub Bidha
Procuring Agency (Etool)	College of Language and Culture Studies	Tshewang
Procuring Agency (Etool)	Regional Corporate Office, Wangdue	Preki
Procuring Agency (Etool)	Regional Corporate Office, Wangdue	Kinley Yangzom
Procuring Agency (Etool)	Film Association of Bhutan	Nima Zangmo
Procuring Agency (Etool)	Sangngachholing Gewog	Sherab Zangpo
Procuring Agency (Etool)	Tashichholing Dungkhag	Yoenten Norbu
Procuring Agency (Etool)	Tading Gewog	Rinchen Dorji
Procuring Agency (Etool)	Agency for Promotion of Indigenous Crafts	Kezang
Procuring Agency (Etool)	Phuntshopelri Gewog	Sangay Penjor
Procuring Agency (CiNet)	Bhutan Agro Industries Ltd	sonam choten
Procuring Agency (CiNet)	Bhutan Agro Industries Ltd	Shrowan Pradhan
Procuring Agency (CiNet)	Department of Hydropower and Power System	Jambay Lhundup
Procuring Agency (CiNet)	Anti-Corruption Commission of Bhutan	Tshering Phuntsho
Procuring Agency (CiNet)	Basochu Hydropower Plant	Choney Dukpa
Procuring Agency (CiNet)	Basochu Hydropower Plant	Karma Pelden
Procuring Agency (CiNet)	Basochu Project Authority	Basochu Hydropower Plant
Procuring Agency (CiNet)	BBS	Bhutan Broadcasting Service
Procuring Agency (CiNet)	BDFC	bdb
Procuring Agency (CiNet)	Bhutan Ferro Alloys Limited	Jamba Yeshi
Procuring Agency (CiNet)	Bhutan Hydropower Services Ltd.	Sangay Pema
Procuring Agency (CiNet)	Bhutan National Bank	Sangay Wangdi
Procuring Agency (CiNet)	Bank of Bhutan	Sherab Dorji
Procuring Agency (CiNet)	Bhutan Power Corporation	Kuenzang
Procuring Agency (CiNet)	Bhutan Power Corporation	Tenzin
Procuring Agency (CiNet)	Bhutan Power Corporation	Tshewang Pelden
Procuring Agency (CiNet)	Bhutan Power Corporation	Phuntsho Choden
Procuring Agency (CiNet)	Bhutan Power Corporation	Sangay Dorji
Procuring Agency (CiNet)	Bhutan Power Corporation	Jamyang Choden Thinley
Procuring Agency (CiNet)	Bhutan Power Corporation	Sherab Gyamtsho Sherpa
Procuring Agency (CiNet)	Bhutan Power Corporation	Pema Yangchen
Procuring Agency (CiNet)	Bhutan Power Corporation	Deepa Thapa
Procuring Agency (CiNet)	BPC, Engineering Design and Contract Department	Subhadra Siwakoti
Procuring Agency (CiNet)	BPC,Rural Electrification Department	Norbu Dorji
Procuring Agency (CiNet)	BPC, Transmission Construction Dept	Karma Lhamo

Type of user	Name of Agency	Name
Procuring Agency (CiNet)	BPC, Transmission Construction Dept	Pratika Bhujel
Procuring Agency (CiNet)	BPC, Transmission Department	Wangmo Ghalley
Procuring Agency (CiNet)	BPC, Transmission Department	Jigme Wangchuk
Procuring Agency (CiNet)	BPC, Transmission Department	Tara Nedhi Pokhrel
Procuring Agency (CiNet)	BPC, Transmission Department	Birkha Bahadur Subba
Procuring Agency (CiNet)	BPC, Transmission Department	Sonam Wangchuk
Procuring Agency (CiNet)	BPC, Transmission Department	Pelden Wangchuk
Procuring Agency (CiNet)	BPC, Transmission Department	Rinzin Dorji
Procuring Agency (CiNet)	Construction Assocaition of Bhutan	CAB
Procuring Agency (CiNet)	Construction Development Corporation Ltd.	Dorji Tshering
Procuring Agency (CiNet)	Chukha Hydro Plant	Kuenzang Dorji
Procuring Agency (CiNet)	Chukha Dzongkhag	Sonam Jamtsho
Procuring Agency (CiNet)	DANTAK	Awadesh
Procuring Agency (CiNet)	Department of Air Transport	Pelden Lhamo
Procuring Agency (CiNet)	Dungsam Cement Corporation Ltd.	Chimi Wangchuk
Procuring Agency (CiNet)	Druk Green	Druk Green
Procuring Agency (CiNet)	Druk Green	Passang Wangmo
Procuring Agency (CiNet)	Druk Green	Deki Lhamo
Procuring Agency (CiNet)	Dagachu Hydro Power Corporation Limited	Karma Namgay Sherpa
Procuring Agency (CiNet)	Department of Technical Education, MoLHR	Yeshey Choden
Procuring Agency (CiNet)	Dept of Agriculture	Karma Gyeltshen
Procuring Agency (CiNet)	Dept. of Civil Aviation	Pelden Lhamo
Procuring Agency (CiNet)	Dept. of Industry	Pema Dendup
Procuring Agency (CiNet)	Dept. of Industry	Thinley
Procuring Agency (CiNet)	Dept. of Industry	sonam wangchuk
Procuring Agency (CiNet)	Dept. of Industry	Rinchen NIdup
Procuring Agency (CiNet)	Dept. of Industry	sonam zangmo
Procuring Agency (CiNet)	Dept. of Industry	tshering Wangdi
Procuring Agency (CiNet)	DoR Thimphu	Drakpa Wangdi
Procuring Agency (CiNet)	Dungsam Polymers Limited	Jamyang Phuntsho
Procuring Agency (CiNet)	Druk Air	Sangay Dawa
Procuring Agency (CiNet)	FCB	Chime Tshewang
Procuring Agency (CiNet)	Financial Institutions Training Institute	Sugan Pradhan
Procuring Agency (CiNet)	Health Infrastructure Development Division	Jigme Tenzin
Procuring Agency (CiNet)	Health Infrastructure Development Division	Jampel Dorji
Procuring Agency (CiNet)	Kholongchhu Hydro Energy Ltd	Dilip Khandal
Procuring Agency (CiNet)	Kholongchhu Hydro Energy Ltd	Tshewang Lhendup
Procuring Agency (CiNet)	Kurichu Hydro Project	Phuntsho wangmo
Procuring Agency (CiNet)	Mangdechhu Hydroelectic Project Authority	Dungkarla
Procuring Agency (CiNet)	NRDCL	NRDCL
Procuring Agency (CiNet)	NRDCL	Bhim Mani Pradhan

Type of user	Name of Agency	Name
Procuring Agency (CiNet)	Phuentsholing City Corporation	Nakchung
Procuring Agency (CiNet)	Phuentsholing City Corporation	Tshewang
Procuring Agency (CiNet)	Phuentsholing City Corporation	Bikash Sharma
Procuring Agency (CiNet)	PHPA	Kezang Thinley
Procuring Agency (CiNet)	PHPA	Sonam Tshomo
Procuring Agency (CiNet)	PHPA II	Choden
Procuring Agency (CiNet)	RICBL Phuentsholing	RICBL Phuentsholing
Procuring Agency (CiNet)	RICBL Thimphu	Kinzang Jigme
Procuring Agency (CiNet)	RICBL Thimphu	RICBL Thimphu
Procuring Agency (CiNet)	Road Network Project II(DoR)	Sonam Yangzom
Procuring Agency (CiNet)	Royal Thimphu Collage	Royal Thimphu College
Procuring Agency (CiNet)	School Planning and Building Division	Lalit Kumar Gurung
Procuring Agency (CiNet)	STCBL Phuentsholing	State Trading Corporation of Bhutan
Procuring Agency (CiNet)	Trashi Yangtse	Jigme Tshewang
Procuring Agency (CiNet)	Thimphu District Municipality	Ugyen Wangmo
Procuring Agency (CiNet)	Tangsibji Hydro Enery Ltd	Tangsibji Hydro Energy Ltd
Procuring Agency (CiNet)	Tala Hydropower Plant	DK Khandal
Procuring Agency (CiNet)	Tala Hydropower Plant	THPCivil
Procuring Agency (CiNet)	Tala Hydropower Plant	Tshering
Procuring Agency (CiNet)	Thimphu Tech Park	Tshering Cigay Dorji
Procuring Agency (CiNet)	The Royal Academy Construction Project	Sonam Tobgay
Procuring Agency (CiNet)	Bhutan Livestock Development Corporation Limited	Thinley Norbu
Procuring Agency (CiNet)	Regional Revenue and Customs Office,Samdrup Jongkhar	Pema Jamtsho
Procuring Agency (CiNet)	JSW LAW	Phub Bidha
Procuring Agency (CiNet)	Regional Corporate Office, Wangdue	Kinley Yangzom

Annexure 6. Audit Observation and recoveries details- Ministries

	Name of Firm	CDB No.	Agency	Audited period	Audit Observation	Amount Recovered
1	M/s Phunsum Builders Pvt.Ltd.	2474	MoE	1/7/17-30/6/18	26,951.21	26,951.21
2	M/s Progressive Research & Consultancy Services	101	DOAT,MoIC	1/7/17-30/6/18	410,381.12	410,381.12
3	M/s Yangchenma Pvt.Ltd.	3481	MoE	1/7/17-30/6/18	18,256.32	18,256.32
4	M/s Kharsa Const. Pvt.Ltd.	2348	MoE	1/7/17-30/6/18	20,000.00	18,600.00
5	M/s Yangchenma Pvt.Ltd.	3481	MoE	1/7/17-30/6/18	65,735.00	62,240.00
6	M/s Kharsa Const. Pvt.Ltd.	2348	MoE	1/7/17-30/6/18	5,81,400.00	2,78,998.96
7	M/s T. Tobgyel Const. Pvt. Ltd.	2586	DoCRC, MoHCA	1/7/16-30/6/18	4,06,836.00	4,06,836.00
8	M/s Jamtsho Const.	2145	RRCO, MoF	1/7/17-30/6/18	154,313.22	154,313.22
9	M/s Jamtsho Const.	2145	RRCO,MoF	1/7/17-30/6/18	646,142.40	646,142.40
10	M/s E. W Const. Pvt.Ltd.	2319	DES,MoWHS	1/7/17-30/6/18	17,278,058.84	17,278,058.84
11	M/s Tangpa Const.	3040	RRCO,MoF	1/7/17-30/6/18	23,340.24	0.00
12	M/s Jamtsho Const.	2145	RRCO,MoF	1/7/17-30/6/18	136,350.00	0.00
13	M/s Nima Const. Pvt. Ltd.	1590	DES,MoWHS	1/7/17-30/6/18	115,063.00	115,063.00
14	M/s Nima Const. Pvt. Ltd.	1590	DES,MoWHS	1/7/17-30/6/18	695,738.44	221,351.50
15	M/s Green Star Builders	4163	RRCO,MoF	1/7/17-30/6/18	91,592.00	93,158.17
16	M/s Rinpong Builders	7393	FAPP,MoAF	1/7/17-30/6/18	216,000.00	0.00
17	M/s Green Star Builders	4163	RRCO,MoF	1/7/17-30/6/18	15,851.37	16,122.36
18	M/s Nima Const. Pvt. Ltd.	1590	DES,MoWHS	1/7/17-30/6/18	2,613,954.85	0.00
19	M/s Rainbow Const. Pvt.Ltd.	5228	RRCO,MoF	1/7/17-30/6/18	11,767.65	11,767.65
20	M/s S L Const. Pvt. Ltd.	3966	DES,MoWHS	1/7/17-30/6/18	194,935,859.90	0.00
21	M/s Nima Const. Pvt. Ltd.	1590	DES,MoWHS	1/7/17-30/6/18	194,935,859.90	0.00
22	M/s Bhutan Builders Pvt.Ltd.	2151	DES,MoWHS	1/7/17-30/6/18	104,880.00	104,880.00
23	M/s Mindu Const. Pvt.Ltd.	1081	МоН	1/7/17-30/6/18	301,805.97	301,805.97
24	M/s Mindu Const. Pvt.Ltd.	1081	МоН	1/7/17-30/6/18	220,698.16	220,698.16
25	M/s Tshentop Const. Pvt.Ltd.	3921	MoHCA	1/7/17-30/6/18	586,615.16	0.00
26	M/s Gyaltshen Consultancy	108	DOAT,MoIC	1/7/17-30/6/18	92,965.40	92,965.40
27	M/s Gyaltshen Consultancy	108	DOAT,MoIC	1/7/17-30/6/18	21,598.50	21,598.50
28	M/s Gyaltshen Consultancy	108	DOAT,MoIC	1/7/17-30/6/18	27,083.70	27,083.70
29	M/s Shakshing Goenpa Const.	6494	DoT,MoEA	1/7/15-30/6/18	59,147.36	58,240.42
						19,899,677.94

Annexure 6. Audit Observation and recoveries details- Dzongkhags

	Name of Firm	CDB No.	Agency	Audited period	Audit Observation	Amount Recovered
1	M/s Sangay Const. Pvt. Ltd.	2298	Haa Dzo. Adm.	1/7/17-30/6/18	1,79,936.50	1,79,936.50
2	M/s Sangay Const. Pvt. Ltd .	2298	Haa Dzo. Adm.	1/7/17-30/6/18	106,348.39	106,348.39
3	M/s Sangay Const. Pvt. Ltd .	2298	Haa Dzo. Adm.	1/7/17-30/6/18	192602.71.00	192602.71.00
4	M/s G.D Const.	4497	Paro Dzo. Adm.	1/7/17-30/6/18	533,996.50	533,996.50
5	M/s Shangphula Const.	3555	T/Yangtse Dzo.Adm.	1/7/17-30/6/18	598,328.80	598,328.80
6	M/s Tshangla Const.	6414	P/Gatshel Nganglam	1/7/17-30/6/18	947,588.00	947,588.00
7	M/s Kuenga Const.	1380	Paro Dzo. Adm.	1/7/17-30/6/18	450,959.10	450,959.10
8	M/s G.D Const.	4497	Paro Dzo. Adm.	1/7/17-30/6/18	227,790.90	227,790.90
9	M/s Tshering Const.	1467	Haa Dzo. Adm.	1/7/17-30/6/18	27,031.19	27,031.19
10	M/s Tshering Const.	1467	Haa Dzo. Adm.	1/7/17-30/6/18	86,739.20	86,739.20
11	M/s Ghising Const.	7841	Dagana Dzo.Adm.	1/7/17-30/6/18	4,40,000	0
12	M/s Tashi Phuntshum Const.	3469	Haa. Dzo.Adm.	1/7/17-30/6/18	34,638.66	34,638.66
13	M/s Tse-Phug Const.	2578	Paro Dzo. Adm.	1/7/17-30/6/18	184,082.91	0.00
14	M/s Passang Const. Pvt. Ltd.	2061	Nganglam, P/Gatshel	1/7/17-30/6/18	154,932.88	154,932.88
					3,352,436.53	3,168,353.62

Annexure 6. Audit Observation and recoveries details- Armed Forces

	Name of Firm	CDB No.	Agency	Audited period	Audit Observation	Amount Recovered
1	M/s Rinzin Const. Pvt.Ltd.	2118	Royal Bhutan Police	1/7/18-30/6/19	25,460.60	25,460.60
2	M/s Rinzin Const. Pvt.Ltd.	2118	Royal Bhutan Police	1/7/18-30/6/19	106,404.45	106,404.45
3	M/s Rinzin Const. Pvt.Ltd.	2118	Royal Bhutan Police	1/7/18-30/6/19	31,080.00	31,080.00
4	M/s Rinzin Const. Pvt.Ltd.	2118	Royal Bhutan Police	1/7/18-30/6/19	229,576.00	229,576.00
5	M/s Khulal Const.	4683	Royal Bhutan Police	1/7/17-30/6/18	28,570.00	29,189.93
					421,091.05	421,710.98

Annexure 6. Audit Observation and recoveries details- Autonomous

	Name of Firm	CDB No.	Agency	Audited period	Audit Observation	Amount Recovered
1	M/s Langten Const.	3405	Thimphu Thromde	1/7/17-30/6/18	147,821.58	147,821.58
2	M/s Langten Const.	3405	Thimphu Thromde	1/7/17-30/6/18	23,680.00	23,680.00
3	M/s Langten Const.	3405	Thimphu Thromde	1/7/17-30/6/18	5,940	5,940
4	M/s Dawa Builders	7137	Faculty of Traditional Medicine	1/7/15-30/6/18	72,200.00	72,200.00
5	M/s Dawa Builders	7137	Faculty of Traditional Medicine	1/7/15-30/6/18	4,000.00	4,000.00
					253,641.58	253,641.58