

ROYAL GOVERNMENT OF BHUTAN

MINISTRY OF WORKS AND HUMAN SETTLEMENT



National Construction Industry Policy

2020

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ABBREVIATIONS

| | |
|-------|--|
| BSB | Bhutan Standards Bureau |
| CAB | Construction Association of Bhutan |
| CDB | Construction Development Board |
| FDI | Foreign Direct Investment |
| FYP | Five Year Plan |
| GDP | Gross Domestic Product |
| GNH | Gross National Happiness |
| GNHC | Gross National Happiness Commission |
| MoAF | Ministry of Agriculture and Forests |
| MoEA | Ministry of Economic Affairs |
| MoF | Ministry of Finance |
| MoHCA | Ministry of Home and Cultural Affairs |
| MoLHR | Ministry of Labour and Human Resources |
| MoWHS | Ministry of Works and Human Settlement |
| NECS | National Environment Commission Secretariat |
| NRDCL | Natural Resource Development Corporation Limited |
| NSB | National Statistical Bureau |
| PPP | Public Private Partnership |
| PRR | Procurement Rules and Regulations |
| QAP | Quality Assurance Plan |
| RMA | Royal Monetary Authority |
| RGoB | Royal Government of Bhutan |
| SOP | Standard Operating Procedure |
| SQCA | Standard and Quality Control Authority |
| TVET | Technical and Vocational Education and Training |

DEFINITIONS

Authority: Construction Development Board (CDB) shall be herein after referred as the Authority

Certified Builders: Builders certified by The Authority

Certified Engineers: Engineers certified by the Engineering Council

Construction Cost Index: is a measure of changes in the average retail prices of a market basket of goods and services purchased by construction industry.

Construction Industry: an economic sector which handles manufacturing, trading and services related to building, maintaining, and repairing structures.

Construction Professional: will refer to all engineers, architects and urban planners involved in construction industry.

Council: refers to Engineering Council of Bhutan, which shall certify, regulate and ensure professional development of engineers, architects, and urban planners.

Environmental Management Plan: is a plan for mitigating or minimizing all negative environmental impacts anticipated in the construction project and monitoring the implementation of the mitigation measures.

Green Technologies: refers to environmentally friendly solutions resulting in more energy efficient and sustainable infrastructure that have reduced carbon footprint and impact on the environment.

Infrastructure/Public Infrastructure: means any physical facilities and systems that directly or indirectly assist in the provision of services necessary to perform societal or institutional function.

Ministry: refers to the Ministry of works and Human Settlement

Procuring Agency: private or public entity, which enters into a contract with a supplier, service provider or contractor for procurement of goods, services or execution of works.

Public Private Partnership: means a commercial transaction that is of benefit to the government in terms of its plans and policies, between an institution and a private partner in terms of which the private partner:

1. performs an institutional function on behalf of an institution by designing, constructing, financing, operating and/ or maintaining infrastructure facilities; and/or
2. assumes the use of public property for its own commercial purposes; and
3. assumes optimal financial, technical, operational and/or environmental risks in connection with the performance of the institutional function and/or use of the public property, in terms of the PPP Agreement; and
4. receives compensation for performing the institutional function or from utilizing the public property provided it meets the prescribed quality and quantity standards in terms of the PPP Agreement

Quality Assurance Plan is a document, prepared by project teams, to ensure the final products are of the utmost quality. QAP entails all the details of materials and process to achieve the specified quality.

Traditional buildings: refers to structures, built in design and style using the construction techniques, skills and materials that are indigenous and traditional Bhutanese

Traditional Zohs: refers to traditional skilled carpenters and masons

TVET: refers to all technical and vocational education and training institutes that are recognized and approved by concerned Ministry/Agency.

TVET Graduates: refers to all graduates of TVET institutes as well as skilled craftsperson accredited by concerned Ministry/Agency.

1 Introduction

The construction industry plays an important role in the national economy. In 2016, the contribution from construction sector to the Gross Domestic Product (GDP) was 16.28%¹. In the 11FYP 60% of the total outlay was allocated for procurement, out of which 80% accounts for procurement of construction works. The construction sector had a huge share of 63 %². As of December 2019, the number of contractor registered with CDB stood at 2,528 of which 184 are Large, 330 are Medium and 2014 are Small contractors³. Given the highest potential to generate wealth, employment and sustainable growth within the framework of GNH, the construction industry has been identified as one of the priority sector in the revised Economic Development Policy 2016.

The Ministry of Works and Human Settlement has initiated several reforms to streamline several policies, rules and regulations, and procedures to enhance and promote quality construction in the country. However, the enforcement of these provisions has been weak and ineffective. Accordingly, the progress of construction industry in terms of professionalism still remains poor despite the growth of investment in construction of infrastructure. It is also known that public works do not have good reputation when it comes to building quality infrastructure. The reasons are poor professional execution and supervision of construction works, and inadequate expertise in project planning and management, in both public and private sectors. In addition, there are environmental issues associated with the growth of industry. The unstable geological condition of the country, coupled

¹National Statistical Bureau, Statistical Year Book 2017

²National Budget Financial Year 2017-2018 Report, MoF

³CDB

with rampant infrastructure development is recognised by many as one of the causes of environmental degradation in the country.

Corresponding to the contribution of construction industry to the national economy is the increasing number of job opportunities. These jobs are, however, taken up mostly by the foreign workers. In 2015, the ratio of foreign workers to Bhutanese workers employed by construction industry was 9:1⁴. Annually about 690 TVET graduates enter job market from the four TVET institutes, which is not adequate to meet the requirements of the construction industry. This has led to a huge outflow of money through various payments like labour wages, and procurement of imported materials. Annually, the RMA remits Ngultrum 7 billion in Indian currency as payments for the foreign workers and Ngultrum 5.76 billion for the construction materials.

There are many ICT applications available that contribute to professionalizing and enhancing the productivity in construction industry. Promotion of these applications in the construction industry will definitely support transforming the industry. The government has also adopted various strategies for sustainable construction such as green building concept, energy efficient technologies, disaster and climate resilient differently abled friendly construction. However, many of these environment friendly concepts/best practices are not implemented, primarily because there are no incentives provided by the government.

In the absence of code of good practices, and overarching guiding policy or regulatory agency, the professional growth of construction industry has suffered over the years. The current scenario of the construction industry demands a clear policy direction from the

⁴MOLHR Annual Report 2014-2015

government to address issues and guide development of a socially and ecologically sustainable construction industry in the country. Aware of this need, the proposal to develop an inclusive National Construction Industry Policy is an initiative of the Ministry of Works and Human Settlement (MoWHS).

2 Vision

A dynamic, competitive and sustainable construction industry.

3 Mission

To create an enabling environment for vibrant and green construction industry through innovation, standardization and regulation.

4 Guiding Principles

This policy is founded on the fundamentals of the Constitution of Kingdom of Bhutan and shall strive to promote conditions that will enable the pursuit of Gross National Happiness. This policy shall contribute to achieving economic self-reliance and promote open and progressive economy, encouraging and fostering private sector development through fair market competition and prevention of commercial monopolies.

The guiding principles used for formulation of the policy for the construction industry are to:

- i. Promote economic self-reliance
- ii. Minimize negative environmental impacts and achieve sustainable development
- iii. Enhance competitiveness and transparency in the industry
- iv. Promote private sector development and employment
- v. Develop social capital

- vi. Establish the functions and priorities of government in relation to the construction industry

5 Policy Objectives

The National Construction Industry Policy is developed through analysis of various sectorial reports and data, and bilateral consultations with major stakeholders. Two National Consultative Workshops were held on 31st January and 24th May 2018.

The objectives of this policy are to:

1. Professionalize construction sector with special focus on skills and knowledge enhancement and management
2. Improve quality of construction through research and innovations
3. Promote best practices through enforcement and regulation by forging partnership among stakeholders
4. To develop construction industry as inclusive employment generating sector
5. Promote green growth and sustainable financing
6. Improve service delivery and coordination through strengthened institutional mechanism

6 Policy Statements

6.1 Professionalize Construction Sector

The construction industry needs to adopt efficient system and enhanced capability of the human resources to improve productivity, accountability and overall development of the construction sector. To achieve this objective, the following measures shall be pursued:

- i. The Ministry to establish Engineering Council hereafter referred as “The Council” to register, regulate, and professionalize construction professionals in the country.
- ii. Promote the use of appropriate IT based systems in planning and designing, estimating and cost control, documentation and communication, project management and contract administration in the construction industry.
- iii. The Authority along with the relevant agencies to develop and conduct regular courses to enhance project management, bid price formulation and other relevant skills in both public and private agencies.
- iv. MoLHR in collaboration with relevant agencies to conduct need assessment for human resource development of the construction industry and the formulation of its human resource master plan.
- v. Encourage construction and consulting firms to invest in human resource development programs with focus on skills development and knowledge sharing.
- vi. Promote collaboration with the renowned regional and/or international agencies/institutes to learn and share best practices including green technologies in the construction industries.
- vii. The Authority to register and regulate specialized firms including plumbing, electrification, masonry and carpentry to encourage lawful subcontracting of specialized works/trades by the prime contractors of major public works.

- viii. All relevant agencies to develop “Standard Operating Procedure” for construction project planning and design, quality check, work safety, and supervision and monitoring.
- ix. The Authority and CAB to promote environment friendly mechanization in the industry including labour saving devices and equipment.

6.2 Improve Quality of Construction

Quality management is to ensure efforts to achieve required level of quality in infrastructure which are well-planned and organized. Achieving acceptable levels of quality in the construction industry has long been a problem.

To deliver infrastructure of acceptable quality, it is important to strengthen the monitoring system, and ensure certification of products and required infrastructure facilities are in place. The following measures shall be pursued:

- i. The Authority to develop “Code of Conduct and Ethics” for contractors and consultants and The Council to develop “Code of Conduct and Ethics” for construction professionals.
- ii. Construction Industry to promote research and development in collaboration with the Royal University of Bhutan and other regional and international accredited institutes
- iii. The Ministry to develop guidelines for quality assurance and worksite safety.
- iv. All relevant agencies to ensure universal access to all public infrastructure in concurrence to the relevant government guidelines.

- v. Procuring agencies to develop strategies for operation and maintenance for utility services to ensure durability and sustainability of the infrastructure.
- vi. BSB in collaboration with relevant agencies to develop or adopt national standards and code of practice applicable to construction industry including certification of materials and products.
- vii. The Ministry to facilitate establishment of material testing laboratories at appropriate locations.
- viii. Procuring agencies to ensure execution of Quality Assurance Plan and Environmental Management Plan for all public works including restoration of damaged local areas and public amenities.
- ix. Contractors to submit monthly expenditure plan, in their proposal for disbursement and effective utilization of mobilization advance fund.
- x. Procuring agencies to ensure construction of public buildings by certified builders and supervision of works by certified engineers
- xi. All relevant agencies to ensure construction of private buildings are supervised by certified engineers

6.3 Promote Enforcement and Regulation

To promote best practices through enhanced enforcement and regulations by forging partnership among stakeholders, the following policy measures shall be pursued:

- i. The Authority to institute mechanism to regulate and enforce strict compliance of the regulation, quality and standards in construction industry.
- ii. All relevant agencies to ensure incorporation of traditional architecture which means urban places with modern traditional architecture and rural villages and identified places/locations with age old traditional architecture as per the existing regulations, standards and guidelines.
- iii. The Ministry in partnership with relevant agencies to update regularly the Bhutan Schedule of Rates based on the construction cost index compiled by NSB.
- iv. Procuring agencies to ensure that the contract is administered and managed as per the terms and conditions of the contract.
- v. BSB to enhance the scope of product conformity assessment through continuous information sharing and building public awareness and registration and deregistration of construction products.

6.4 Inclusive Employment Generating Sector

Construction industry has made huge contribution to national economy. Likewise, the industry has equal potential to create attractive opportunities for promotion of national employment. To develop construction industry as inclusive employment generating sector, the following policy measures shall be pursued

- i. The Ministry and procuring agencies shall include employment generation at the core of construction planning and programs to address the employment needs of the country, particularly women and youth.

- ii. MoLHR/TVET Agency to increase TVET graduates numbers, and upgrade skills and certification of skilled workers to meet the requirements of the construction industry.
- iii. MoLHR to institute an inventory and certification of traditional *Zohs*.
- iv. MoLHR/TVET Agency to create a platform to bring together the industry and academia to address skill mismatch.
- v. MoLHR to promote entrepreneurship among skilled worker in construction industry through appropriate programs.
- vi. Procuring agencies to ensure only certified construction personnel are engaged as skilled craftsperson in infrastructure construction.
- vii. All employers to enhance occupational health and safety standards and practices.
- viii. The Authority and MoLHR to ensure that contractors and builders institute work-safety insurance for all employed in the construction industry.
- ix. MoLHR to initiate and propose periodic revision of minimum wage for skilled and unskilled workforce for the construction sector.

6.5 Promote Green Growth & Sustainable Financing

Strategies for greener growth need to be tailored to fit specific country circumstances. To promote green growth and sustainable financing in the construction industry, the following policy measures shall be pursued:

- i. Provide incentives to adopt construction standards that take into account energy efficiency, environment friendly and new traditional buildings using traditional materials and resilient traditional construction techniques.
- ii. Provide incentives to local manufacturers that provide environmentally friendly and energy efficient materials and also help minimize imports of construction materials in manufacturing industry.
- iii. Encourage and promote use of certified and locally manufactured materials.
- iv. Encourage procuring agencies to embrace environment friendly construction techniques.
- v. Encourage and promote use of locally grown timber species or alternative materials for timber such as bamboo in the construction industry.
- vi. MoHCA in collaboration with the Ministry to promote sustainable traditional construction materials, techniques and special skills in the context of retrofitting, conservation and construction of traditional buildings.
- vii. All government agencies undertaking infrastructure development work to promote integrated service ducts.
- viii. Promote private sector participation in financing of construction and maintenance of infrastructure projects through the arrangements of PPP.
- ix. Promote FDI in construction projects and encourage firms involved in design and construction of specialized and mega

projects to engage local contractors/firm for skill and technology transfer.

6.6 Strengthening Institutional Mechanism

There are many agencies contributing or overseeing some or the other aspects of construction industry, but are working in compartments and in their comfort zone. The goal of developing construction industry is not collective. In order to improve service delivery and coordination among all stakeholders, the following policy measures shall be pursued:

- i. The government shall formally mandate CDB, herein after referred to as “The Authority”, as regulatory agency with the mandates that would include but are not limited to the following:
 - a. Register, certify and issue license of contractors and consultants
 - b. Carry out compliance audit of agencies on quality and construction safety
 - c. Carry out capacity building of contractors and consultants
- ii. The Ministry in collaboration with relevant agencies shall draft necessary legal instruments to enforce provision of the policy.
- iii. The Ministry as sector agency shall develop measures to improve coordination among stakeholders in the construction industry.
- iv. Local Governments shall issue planning and construction approval/permit for all building construction in their jurisdiction and shall ensure strict compliance

- v. Ministry of Finance to review Procurement Rules and Regulations from time to time, through establishment of Multi-Sectorial TaskForce. (The High Level Committee approving the changes in procurement system shall have representation from relevant stakeholders.)
- vi. The agencies concerned to review community contracting system for systemic changes to achieve the objective of having the community build their own skills and competencies in various trades.
- vii. Construction sector being multi-disciplinary, involving various stakeholders, the roles and responsibilities of agencies shall be clearly defined as below:

MoWHS: Shall be the apex ministry responsible for policy, legal instruments, strategy, standards, guidelines and oversee their compliance relating to the construction sector

MoF: Shall review the procurement system and appropriate funds as deemed required

MoHCA: Shall ensure protection and promotion of Bhutanese architectural and structural tradition related to Dzongs, Lakhangs and other spiritual sites.

MoLHR: Shall provide timely policy directions to the relevant HRD agencies to address mismatch of skills and enhance employability of workforce.

MoEA: Shall explore manufacturing of construction materials by local manufactures, import substitution and develop minerals for supply to local industries. It shall also ensure that construction

practices comply with Alternative Renewable Energy Policy and National Energy Efficiency and Conservation Policy.

MoAF: Shall review the policies and practices of timber allocation and surface collection to ensure optimal utilization of resources

NECS: Shall monitor the compliance of construction project to environment plans.

BSB: Shall provide efficient services including development or adoption of national standards, testing and certification of all construction materials and products; and promotion of Management Systems Certification.

TVET Agency: Shall work closely with MoWHS and Construction Industry to promote work placement, apprenticeship and internship programs to enhance employability.

NRDCL: Shall supply natural raw materials including timber, fine and coarse aggregates etc. at reasonable price by establishing regional depots. Furthermore, NRDCL will have to ensure the quality of materials supplied by establishing basic material testing facility at source.

CAB: Shall create conducive environment for increased registration of contractors.

Private Sector: Create employment opportunities and produce local materials with quality to meet the market demand.

7 Relevant Policies and Legal Instruments

In preparation of this policy, the following Acts, Policies and Rules and Regulations have been referred and adhered to.

Bhutan Standards Act 2010 emphasizes on fostering and promotion of standards and standardization activities as a means of advancing the national economy, safety and welfare of the public, protecting our natural environment and promoting industrial efficiency. For construction industry, there are various standards and code of practices that has to be developed to professionalize and improve quality of construction.

National Environment Protection Act 2007, asserts that, “the people and the Government in succession shall perpetually strive to consider and adopt its developmental policies, plans and programs in harmony with the environmental principles.”

Forest and Nature Conservation Act of Bhutan 1995 provides for the protection and sustainable use of forests, wildlife and related natural resources of Bhutan for the benefit of present and future generations. Through this Act and its associated rules and regulations, supply of basic construction materials such as timber, sand and boulders are assured. Moreover, this legislation ensures the harvesting of timber and non-wood forest products are sustainable.

Labour and Employment Act of Bhutan 2007 applies to matters relating to labour and employment in the country. This legislation protects the interest of employees in the private sector. With all the provision enshrined, this Act can be instrumental in providing gainful employment to Bhutanese in our construction industry.

Public Finance Act 2007 regulates the financial management of the government in order to promote the effective and efficient use of public resources, strengthen accountability and provide statutory authority and control for sound and sustainable fiscal policy.

The Road Act of Bhutan 2013, set standards for road construction, and establishes clear delineation of roles and responsibilities of governmental bodies and road users. Department of Roads is conferred authority necessary to enable them to perform their functions in relation to construction, maintenance, safety and management of roads. It also promotes and regulates private sector participation in development and management of road infrastructure.

The Contract Act of Kingdom of Bhutan 2013 serves the purpose of regulating contracts and their performance to ensure the rights of people concerning contractual transactions. The Act will be more meaningful in future when private agencies begin procuring services of contractors for construction of properties.

Economic Development Policy 2016, as the guiding document for economic development, has prescribed necessary measures for development of construction industry. Some of the policy measures have been advocated, most remain to be strategized and adopted. The National Construction Industry Policy should absorb these measures and provide strategies for adoption of the policy measures.

8 Monitoring and Evaluation

MoWHS shall take the overall responsibility to coordinate, monitor, evaluate and review the implementation of the National Construction Industry Policy. A monitoring and evaluation system will be developed by MoWHS to support the effective implementation of Policy's goals and objectives. The following process is recommended for monitoring the implementation of this Policy:

- i. All agencies shall design strategies with milestones to ensure effective implementation of the policies relevant to their sectors

- ii. The policies shall guide the relevant agencies in designing their Annual Plan and Five Year Plan
- iii. All relevant agencies shall secure necessary funds and resources to support the various strategies identified
- iv. GNHC and ministries concerned may consider evaluating the achievements of construction industry as part of its evaluation program.

9 Policy Review and Amendments

This policy shall be reviewed and revised as and when deemed necessary by the RGoB. The policy will come into force with effect from _____ [enter day/month/year]. In the event of conflict of interpretation of any part of this policy, the Ministry of Works and Human Settlement (MoWHS) shall, on behalf of the RGoB, be the final and binding authority.