The Project for Promotion of Nepal National Building Code Compliance for Safer Building Construction (NBCC)

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[Project Introduction]

In Nepal, there are National Building Code (NBC) and Building By-Laws (BBL). If you build a house in compliance with them, the house will be earthquake resistant. When you build a house, you have to submit drawings and other necessary documents to the municipality and get a building permit. The municipality carefully checks whether the drawings comply with the NBC and BBL or not. Therefore, if you build a house according to the approved drawings, your house meets the NBC and BBL which makes an earthquake-resistant house.

However, we can see houses are constructed without following the approved drawings while some building owners build their houses without getting a building permit from the municipality. Buildings that are not constructed as per the approved design & drawings can be more damaged during an earthquake and may endanger the neighbors' houses.

To improve this situation, the Ministry of Urban Development (MOUD) started the NBCC Project with the support of JICA (Organization of the Japanese government). The NBCC Project aims to increase the construction of earthquake-resistant houses by improving the procedure for applying for construction permits to municipalities

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[1. Introduction of the Incentive mechanism]

The rapid urbanization of Nepal has raised concerns about ensuring the safety and resilience of buildings against natural disasters such as earthquakes. Despite the existence of the NBC and efforts to strengthen building regulations, compliance levels remain low, resulting in a prevalence of non-engineered or poorly constructed structures. To improve this situation, the NBCC Project has supported NBC compliance practices through updating the Building Construction Working Procedure (BCWP), enhancing the e-BPS (Building Permit System), and training for those involved in building construction.

Meeting with municipal Engineers

While compliance with regulations like the NBC and the BCWP is mandate, enforcement alone cannot ensure full compliance. Building owners, contractors, and supervision consultants often face financial, procedural, and technical hurdles

in following to these standards. Therefore, the project has studied incentive system from other countries and has developed a mechanism to appropriately introduce such system in Nepal. If there is an attractive incentive system, people must be willingly complying with NBC, and BBL.

As a first step, the project has focused on increasing the value of skilled work performed by construction professionals, and proposed a system in which municipalities can evaluate them on compliance and quality of work. Based on the results of the evaluation in each building construction project, municipalities recognize excellent construction professionals, including contractors and supervision consultants with certificates and its information is disclosed. These performance, evaluation and recognition are made accessible to the public by using municipality's website, helping building owners choose qualified professionals.

The enhanced e-BPS ensures that processes such as performance evaluations and incentive administration are seamlessly integrated into a digital framework, promoting transparency and efficiency. The project is currently trying to pilot this system and will continue to consult with other stakeholders to add additional incentives moving forward.

Performance evaluation testing at Tokha municipality

【 2. Achievement of the Project 】

2-1 Implementation of BCWP

In this project, the BCWP has been updated for NBC compliance—such as design checking, inspection, and completion certification—and guidance has been provided for its implementation in 7 pilot municipalities. Issues are planned to be identified during the trial operation, and the BCWP will be updated accordingly to make it a "model" In the future, it is expected that official procedures will be followed by the Government of Nepal and that the BCWP will be deployed nationwide as the official standard. All seven pilot municipalities have begun implementing the project following approval from their municipal assembly.

2-2 Training record

The project established a training mechanism for the introduction of updated BCWP and enhanced e-BPS. To provide more people with access to training opportunities, we have conducted training in a cascade method. In the first stage, master Training of Trainers (Master TOT) was conducted to develop master trainers (personnel who would become instructors for the training of trainers). The second stage is Training of Trainers (TOT) to train personnel who would become instructors for the third stage training. In the third stage, the instructors trained at the second stage conduct training for those who belong to their organizations, in non-pilot municipalities and so forth.

Training for municipal officers, registered designers, and supervision consultants

was completed in all 7 pilot municipalities during the second stage. At the same time, On-the-Job Training (OJT) was also given in the pilot municipalities while the Training of Trainers (TOT) was conducted. During this training, designers and supervision consultants practiced how to fill out the checklists, take photos for inspection reports, and use the e-BPS system. On-the-job training was also conducted for the municipal engineer at mahalaxmi municipality. From the third stage onward, training has been provided by the Nepalese side, DUDBC, to municipal officers, registered engineers, and others in non-pilot municipalities within the Kathmandu Valley.

The Department of Urban Development and Building Construction (DUDBC) jointly organised the training with Nepal Engineers Association and Society of Nepalese architects (SONA). To make it more effective, DUDBC plans to work with other related organizations for future trainings. The project is also helping DUDBC to improve its training plan and material management system, so it can continue the trainings even after the project ends.

Finally, sincere gratitude is expressed to all those who contributed to the success of the training, including DUDBC, mayors, municipal officers, and engineers. Special thanks are extended to the participants, whose active engagement and thoughtful feedback were appreciated and used to improve the training. After the completion of the Project, the training program will continue to be conducted by DUDBC. It is our hope that the training will help participants better understand the updated BCWP and improved e-BPS, leading to the construction of safer buildings.

Some glimpses of the training

Master TOT (Lecture Session)

Master TOT (Practical Training Session)

Master TOT (Awarding Certificates)

TOT at Tarkeshwor municipality

TOT, Non Pilot municipalities

OJT in Dakshinkali municipality

Details of Training Activities

SN	Training Details	Events	Number of Participants
1	**Master TOT**		
	Master TOT (Basic Training)	**4**	**95**
	Master TOT (Level up Training)	**3**	**55**
2	**Training at different level mobilizing master trainers (TOT)**		
	TOT in Pilot Municipalities	**13**	**322**
	Follow-up Training	**2**	**82**
3	**OJT in pilot municipalities**	**6**	**170**
4	**Training Conducted on non pilot municipalities**	**9**	**265**
	Total	**37**	**989**

2-3 Views from Engineers of Pilot municipalities

Suban maharjan
Mahalaxmi municipality

The updated Building Construction Working Procedure (BCWP) is a significant step toward improving construction quality and safety. It strengthens public communication, ensures better compliance with building codes, and clearly defines stakeholder roles. However, challenges such as a lack of technical manpower and public awareness persist. To encourage adherence, financial incentives for building owners and awareness campaigns are essential. Implementing these measures will lead to safer, more resilient structures and a well-informed public.

Lokendra Acharya
Tokha municipality

The implementation of e-BPS has significantly improved access to essential data, streamlining the workflow at our workstations. Supervision consultants now provide stepwise updates on ongoing construction, offering valuable insights to clients and stakeholders. While this is a good change from conventional practices, switching from traditional ways is still challenging. To enhance construction quality, there is a need for increased training for designers, building owners, supervision consultants, and contractors. Additionally, strengthening cube test and laboratory facilities with support from local governments will further ensure safe buildings.

Suraj Gurung
Dakshinkali municipality

The updated Building Construction Working Procedure (BCWP) has improved construction safety by ensuring proper material use, testing, and supervision. The mandatory four-stage inspections make designers, supervision consultants, and contractors more accountable.

However, challenges remain, including financial strain on municipalities, increased costs for building owners, and limited material testing labs.

To improve implementation, key recommendations include establishing municipal testing labs, introducing monitoring system by DUDBC, raising awareness among political leaders, aligning BCWP with existing laws, and consider allowing local builders to construct simple Ready to use buildings without requiring a contractor. These steps will ensure a more efficient and practical application of BCWP.

Activities implemented in pilot municipalities.

S. N	Name of municipality	Orientation for Building Owners	TOT for municipal Engineers	TOT for Supervision Consultant & Designer	Workshop for elected members	OJT for Designer
1	Lalitpur Metropolitan City		✓	✓		✓
2	Tokha Municipality	✓	✓	✓	✓	✓
3	Mahalaxmi Municipality		✓	✓		✓
4	Tarkeshwor Municipality		✓	✓		✓
5	Suryabinayak Municipality	✓	✓	✓	✓	
6	Dakshinkali Municipality	✓	✓	✓	✓	✓
7	Bagmati Rural Municipality		✓			

【 3. Recent Project Events 】

- A one-day workshop on e-BPS, roles and responsibilities of municipal engineer as per updated BCWP were conducted at Bagamati Rural municipality on 15th November 2024.
- Two days' workshop on e-BPS, roles and responsibilities of designer and supervision consultant as per updated BCWP were conducted at Lalitpur metropolitan City from 20th to 21st of November, 2024.
- A one-day workshop on e-BPS, roles and responsibilities of municipal engineer as per updated BCWP were conducted at Lalitpur metropolitan City on 22nd November 2024.
- Follow up training on e-BPS, roles and responsibilities of designer, supervision consultant and municipal engineer as per updated BCWP were conducted at Tokha municipality on 2nd of January, 2025.

- A one-day workshop on e-BPS, roles and responsibilities of designer and supervision consultant as per updated BCWP were conducted at Suryabinayak municipality on 20th of January, 2025.
- A one-day workshop on e-BPS, roles and responsibilities of municipal engineer as per updated BCWP were conducted at Suryabinayak municipality on 21st of January, 2025.
- 5th Joint Coordinating Committee (JCC) meeting was held on 2nd February, 2025.
- Two days' workshop on e-BPS, roles and responsibilities of municipal engineer as per updated BCWP were conducted at mahalaxmi municipality from 20th to 21st of March, 2025.
- Follow up Training on E-BPS roles and responsibilities of designer and supervision consultant and municipal engineer as per updated BCWP were conducted at Mahalaxmi Municipality on 4th of April, 2025.

Technical support from NBCC project.

- Two days' workshop on NBC, e-BPS and updated BCWP for municipal technical person from non-pilot municipalities of Kathmandu valley were conducted at DUDBC from 19th to 20th of December, 2024.
- Two days' training on updated BCWP and e-BPS for civil engineers and architects conducted at Nepal Engineers' Association in three events from 4th of March to 10th of March, 2025. The training was jointly organised by DUDBC and NEA
- Two days' training on updated BCWP and e-BPS for architects conducted at DUDBC from 5th to 6th May, 2025. The training was jointly organized by DUDBC and Society of Nepalese Architects (SONA).

【 4. Introduction of the Project members 】

In this newsletter, we introduce some members and staff of the project.

Takahito AKAZAWA (Japanese expert)

He is responsible for housing policy and housing finance.

Spending time in Nepal surrounded by the rich nature and kind people is a very special experience for me!

Incentive mechanisms are crucial in motivating stakeholders to voluntarily comply with rules and regulations.

Jeevan Bhattarai

He is responsible for incentive mechanism.

Please visit the Project Website
You can access to the page after the registration.
https://sites.google.com/view/nbcctraining/home

Registration *Website* *BCWP Video*

Implemented by ministry of Urban Development
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