

The Development of Vietnamese Codes and Standards in Construction

Dr. Nguyen Ngoc Ba

Deputy Director of Center for Standardization in Construction
Vietnam Institute for Building Science and Technology (IBST)
Ministry of Construction

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Introduction

- Total Area: 329,562 sq. km
- Population: 84.4 million
- GDP: \$43.75 billion (2005)
- GDP grow rate: ~8%
- Infrastructure:
underdeveloped



Overview of Vietnamese Construction Standards System

- National Standards: ~ 7500
- Construction Standards: ~ 1300

History of Construction Standards System

- USSR based standards
- Mandatory basis
- Towards ISO, BS, UBC, ASTM, etc.
- Voluntary basis

1961

1990

present

Subsidized
economy

Market
economy

Structure of Vietnamese Construction Standards System

Level	Code	Field	Issue	Example
National	TCVN	General specifications, Production standards (cements, tiles, reinforcement, etc.)	MOST	TCVN 3992:1985
	TCXD, TCXDVN	Other fields (design, construction, planning, etc.)	MoC	TCXD 238:1999 TCXDVN 375:2006
Branch	22 TCN	Transportation construction	MT	22 TCN 45:79
	14 TCN	Agriculture construction	MARD	14 TCN 63:2002

Company standards: Used within company only

Building codes (regulations)

- Vietnamese Building code - Volume I (1996), Volumes II, III (1997);
- Vietnamese Plumbing code (1999).
- Building code of construction accessibility for people with disabilities (2002);
- Energy Efficiency Building code (2005);

Standards development of MoC

- Management of Standards Development: Department of Science and Technology (DST)
- Standards Preparation: Any organizations.

Mainly:

- Vietnam Institute for Building Science and Technology (IBST),
- Institute of Architectural Research, and
- Institute for Science and Technology of Building Materials.

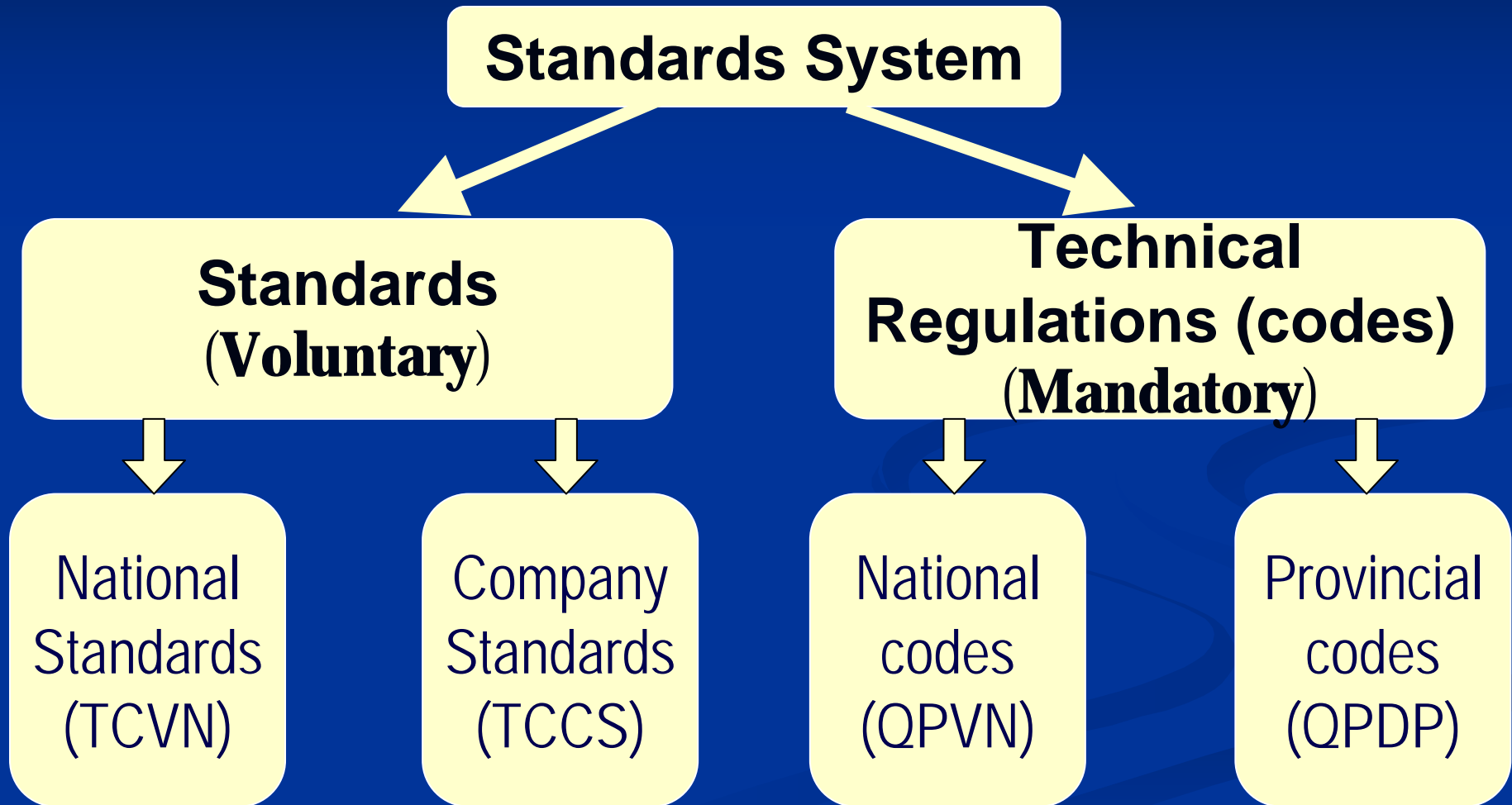
Work
Group



IBST's current standards development procedure

- Add an additional step to the current procedure:
Invitation for public comments on 2nd draft (<http://www.ibst.vn>)

Law on Standards and Technical Regulations



Law on Standards and Technical Regulations

■ Standards:

- Prepared by **National Standards Technical Committees - TCVN/TC**
- Approved and issued by **Ministry of Science and Technology (MOST)**

■ Technical regulations:

- Prepared and issued by **relevant ministries**

Law on Standards and Technical Regulations



Regulation on application of foreign construction standards to construction activities in Vietnam

Foreign construction standards can be applied to projects in Vietnam provided that they:

- are effective national standards, regional standards, or international standards;
- comply with VBC and other mandatory codes;
- comply with principles set out in this Regulation;
- are approved by the Investor / Owner.

Principles for application of foreign construction standards

- To ensure that construction works and products be made and they:
 - a) are safe for human use, for the works and adjacent works;
 - b) meet Vietnam's regulations on ecological safety and environmental protection;
 - c) yield econo-technical efficiency.
- To ensure synchronism and feasibility in construction process, from designing, construction to acceptance of works, and in the work entirely.
- To compulsorily use input data related to Vietnam's particular conditions stipulated in mandatory construction standards in the following domains:
 - a) Natural and climatic conditions;
 - b) Geological and hydrological conditions;
 - c) Classification of seismic zones and seismic degrees.



Regulation on application of foreign construction standards to construction activities in Vietnam

■ Projects funded by the State Budget

- Vietnamese standards must be applied if available;
- Foreign standards can be applied in special circumstances, they must be approved by Ministry of Construction or relevant ministries for projects under their respective authorities.

Harmonization of design codes in the Asian region

- Current situation in application of design codes in Vietnam
 - Local design codes: Still based on Russian system.
 - Overseas design codes: BS system (change to Eurocodes), US system (UBC, IBC, ACI, AASHTO), Japanese system, Chinese system.
- Consequence: Waste of time, lack of in-depth knowledge and skill, communication problems.

Harmonization of design codes in the Asian region

- Orientation of Vietnamese design codes:
Adoption of Eurocodes
- Initial steps:
 - The first code based on Eurocode 8: TCXDVN 375:2006 "Design code for earthquake resistant of structures" was approved and issued in October 2006
 - Design codes based on Eurocode 2 and Eurocode 3 are being developed.

Harmonization of design codes in the Asian region

■ Proposed approaches:

- (1) Develop a new Asian design codes system
- (2) Develop ISO design codes system
- (3) Adopt Eurocodes system
- (4) Adopt advance design codes systems:
Eurocodes, Japanese codes, Chinese codes,
etc.

Thank you!