

NEED TO REGULATE CIVIL ENGG PROFESSION IN KARNATAKA STATE

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Profession of Civil Engineering touches every aspect of life one can think of, be it Housing, Infrastructure, Water resources, Railways, Ports & harbours, Agriculture, Industry, Highways & Roads, Water supply, Sanitation, Environment, etc. Civil Engineering is oldest & largest Basic Profession, necessary for the human living.

- Civil Engineering is oldest & largest Basic Profession, necessary for the human living. The profession is responsible for creating comfortable, healthy & safe living of human lives across the world, from time immemorial.
- It is the Civil Engrs who create quality & affordable housing for all sections of the society, from lower & middle income to higher income groups.
- Building & Infrastructure being the core profession of Civil Engg, the negligence of this profession will be catastrophic to the society in many folds if the problems are not attended immediately.

(I) STATISTICAL DATA ABOUT CIVIL ENGINEERING INDUSTRY

As per Ministry of Statistics & Programme Implementation (www.mospi.nic.in) :

- In India there are **179 million houses in rural area** & **90 million houses in urban areas**.
- There are **2% High rise (G+4 & above) buildings** & **98% Low rise (Below G+4 storeys)**
- Another data says 65% of cement consumption is from **Building Construction** & **only 35% is from Infrastructure**.
- The use of **RMC is only about 10% of total concrete** produced
- Another reliable report also says **75% of RMC customers are from Individual house building sector** & remaining only 25% are from Bulk Segments; like Constn Companies , Developers & Builders)

(II) PROBLEMS ARISING OUT OF UNREGULATED CIVIL ENGG PROFESSION:

Unlike other professions like Lawyers, Doctors, Nursing, CA's, CS's, Dentists, Architects, Journalists, etc, Civil Engg profession is neither recognised nor regulated by any State or Central Act or Law. Obviously Quacks are encroaching the construction field at the cost of public safety & money. There are many issues that have arisen out of this situation today & can be put in following categories:-

1. SOCIETAL PROBLEMS OF INFERIOR ROADS & INFRASTRUCTURE
2. UNECONOMICAL & UNSAFE BUILDINGS DUE TO UN-REGULATED PROFESSION AFFECTING **LOWER & MIDDLE INCOME** GROUP BUILDINGS. (Which contribute 98% of the buildings, www.mospi.nic.in)

3. FRAMING OF BYE-LAWS TO THE **DISADVANTAGE OF MIDDLE & LOW CLASS SECTIONS** OF THE SOCIETY
4. DEMORALISING THIS VITAL PROFESSION BY ALLOWING NON-CIVIL ENGINEERS TO THE JOBS OF CIVIL ENGRS.
5. CREATING SHORTAGE OF COMPETENT CIVIL ENGRS IN FUTURE DUE TO THE DIMINISHED INTAKE OF PASSIONATE STUDENTS IN ACADEMIC INSTITUTIONS.

(III) FINDINGS OF BENGALURU BUILDING COLLAPSES DURING 2021 RAINS:

- (i) Most of the building collapsed belonged to **Low & Middle income** group
- (ii) All the buildings were of Low Rise category, (G, G+1, G+3, etc) & most of which belonged to the weaker sections of the society.
- (iii) These Buildings were constructed by quacks/unqualified persons with NO Civil Engineering Qualifications/ knowledge
- (iv) No RESPONSIBILITY can be bestowed or sought from from these quacks
- (v) No Mechanism to fix "Professional Responsibility" in the existing laws about any of these building or infrastructure failures.

(IV) FINDINGS OF BHUJ EARTH-QUAKE ON 26, JAN- 2001

7.9 intensity EQ struck Bhuj, Gujarat, on 26th January 2001, killing 20,000 people and more than 1,00,000 people lost their homes. (It is the buildings that kill people, not the earthquake).

Surprising findings of the investigation of the Expert Team include :-

- Major collapsed buildings(85%) were of Low-rise buildings (Up-to G+4)
- Almost all the collapsed buildings did not have the involvement of Civil Engineers in Construction, Design & Maintainance.
- No-Profession could be held responsible due to absence of Professional Regulation of Civil Engrs.

(Even the recent Turkey EQ has the same results as in Bhuj due to the EQ more detrimental to low-rise buildings than the high-rise ones)

(V) RTI'S CONFIRMS UNPROFESSIONALISM PRACTICE IN GOVERNMENT CONSTRUCTION DEPARTMENTS.

Various RTI's taken from various departments reveal that government recruits, promotes & nurtures quackery in the construction related departments (knowingly or unknowingly). Few RTI's findings:-

1. Non-Civil Engineers are still doing the work of Civil Engineers including supervision in many departments.
2. Non-Civil engineers hold the post of Civil Engineers (Quacks?) like High way Engr, Bridge Engr, etc as in-chargers.

3. Municipal administration (Engineers in that ULB's) are not aware of provisions of National Building Code of India provisions.

(In one of the RTI it is stated that Civil/ Structural Engineers are not issuing the Stability Certificates; but other professionals are authorised to issue these stability certificates).

(VI) FEW MYTHS EXISTING IN BYE-LAWS & PUBLIC DELIVERY SYSTEM GUIDE LINES:

- (a) According to the existing building Bye-laws, **EQ affects only the high rise Buildings**. Mandatory involvement of professionals required for high rise buildings/ houses (which comprises just 2-3% of the buildings only).
- (b) Where as no such mandatory involvement of required (Structural &/safety) professionals for 98% of (low-rise) buildings predominantly belonging to middle & lower income group.
- (c) **Building Permits are subject to scrutiny by Non-Technical Administrators!**
- (d) No Practicing Civil Engrs involvement is required in advisory boards of govt agencies, but other practicing profession's advisory is mandatory.
- (e) Stability Certificates can be authorised to be given by other than Civil (Structural) Engrs!
- (f) **No-Subject expertise required in govt departments!** (Ex: Surveyor, GTE, Sanitary/ Plumbing Engr, Service Engr, Bridge Engr, High way Engr, Structural Engr, Env Engr, Town Planning Engr, Irrigation Engr, PMC, QS, Hydraulics Engr, Port Engr, etc)
- (g) **Technical Bid can have Financial Components** in tendering process!

As per the independent survey by ACCE(I) & various Engg Colleges, nearly **95% of Buildings are under violation**.

Many of the bye-law provisions with regards to FAR, Road widths, Building heights, Parking floor height, etc, are **not practically implementable** & ultimately leading to violation as well as unsafe buildings.

(VII) LEGAL STATUS OF CIVIL ENGINEERS

- i. Civil Engrs are neither recognised in India nor abroad
- ii. No Single point of Registration for consultation, Contracts & other construction activities; Either within the State or within the Country
- iii. No Industry involvement in the framing of Academic Affairs of the Civil Engg curriculum due to absence of Council (similar to other professions). This has resulted in very weak curriculum for the course & fresh Civil Engrs are becoming unemployable.

- iv. Likely to lose the equal standi with other other professions if the existing curriculum continues (in the court of law)
- v. Law being the state govt subject, incorporating the BIS/NBC provisions lies with state government.
- vi. As ULB's/ state are not adopting and making mandatory of these BIS/NBC provisions, many issues with regards to professional & constructional nature are arising out of this situation, in addition to the quality of construction, to the disadvantage of Civil Engrs.

(VIII) SUMMARY OF SYSTEM FAILURE & NON-REGULATION

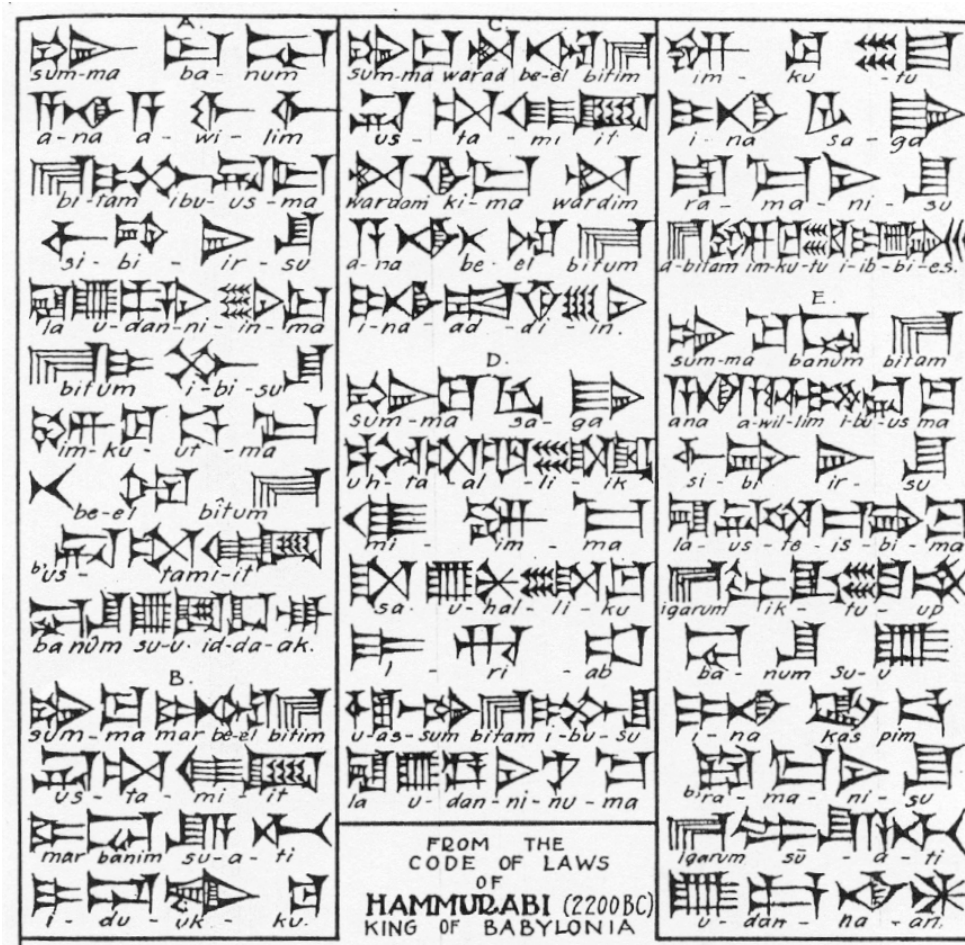
- (1) Absence of Mandatory involvement of Civil Engineering professionals in construction
- (2) Rampant Encroachment by Non-Civil Engg people (Quacks) in construction of buildings & infrastructure projects
- (3) Govt/Department Civil Engineers turning Incompetent due to system problem
- (4) Non-adherence to BIS-Codal (NBC-2016) provisions
- (5) Absence of mandatory up-skilling programmes in Govt & private professionals
- (6) Unprofessional practice in Govt departments/ organisations as well in Private sector
- (7) Absence of mandatory design of low rise buildings, which comprise 98% of the total buildings/houses (Bhuj & Turkey EQ experiences)
- (8) No mechanism to hold a professional responsible for professional failures
- (9) Non-Documentation of the causes for failure, that could have created awareness amongst the professionals
- (10) Absence of single point registration

(IX) REGULATION & RESPONSIBILITY :

Since prehistoric times the responsibility of this profession was existing in the form of

CODE OF KING HAMMURABI, KING OF BABYLONIA DURING 2200BC. The code says

- > If a builder builds a house for a man and do not make its construction firm and the house which he has built collapse and cause the death of the owner of house – the builder shall be put to death
- > If it cause the death of the son of the owner of the house – they shall put to death a son of that builder
- > If it cause the death of a slave of the owner of the house – he shall give to the owner of the house a slave of equal value



- > If it destroy property, he shall restore whatever it destroyed, and because he did not make the house which he built firm and it collapsed, he shall rebuild the house which collapsed at his own expense
 - > If a builder builds a house for a man and do not make its construction meet the requirements and a wall fall in, that builder shall strengthen the wall at his own expense
- Translated by R.F. Harper

(X) RECOGNITION & REGULATION OF CIVIL ENGG PROFESSION WORLD WIDE:-

This regulation of profession by an “act”, was resolved in the World Trade Organisation’s GATT-Resolution in its 2001-Summit.

All the countries were to establish a mechanism by which every profession is well recognised & registered for the ease of doing business across the globe, to ensure equality in the

profession and shall be easy to get professional recognition



across the world

SI #	Country	Year	SI #	Country	Year
1	USA	1934	17	Italy	2007
2	France	1934	18	Australia	2010
3	Philippines	1950	19	Germany	2010
4	Turkiye	1954	20	Mexico	2010
5	Germany	1965	21	Brazil	2010
6	Pakistan	1976	22	Sweden	2010
7	England (UK)	1981	23	Spain	2010
8	Bangla Desh	1989*	24	Belgium	2010
9	Canada	1990	25	Russia	2012
10	Singapore	1991	26	APEC Countries	2012
11	China	1994*	27	European Union	2013
12	South Africa	2000	28	Indonesia	2014
13	Hong-Kong	2001	29	Sri Lanka	2017
14	Japan	2001	30	Mexico	2018
15	New-Zealand	2002	31	Indonesia	2019
16	Costa-Rica	2003			

Following are some of the countries who have recognised & regulated the Civil Engineering profession by forming a Statutory Body.

Having realised the importance of Civil Engg/Construction sector's impact on the growth of their country's economy, many advanced countries passed an Act to regulate this profession. Realising the need to have recognised professionals in different countries for "Ease of Doing Business" across the globe, World Trade Organisation's GATT-resolution in 2001-Summit advised the countries to form Statutory Bodies for regulating all professions.

(XI) RECOGNITION & REGULATION OF OTHER PROFESSIONS IN INDIA

Government of India & certain other states in the country, realising the need & importance of regulating the professions for the positive growth of society & its economy, enacted appropriate laws & formed required statutory bodies(councils). Following are some of the professions that have been regulated.

SI N	ACTS	Professions	Year
1	Indian Nursing Act	Nurses	1947
2	The Dentist Act	Dentists	1948
3	Indian Pharmacist's Act	Pharmacists	1948
4	Chartered Accountants Act	Ch Accountants	1949
5	The Indian Medical Council Act	Allopathic Doctors	1956
6	Cost & Works Accountants Act	Accountants	1959
7	The Advocates act-(Lawyers-Bar Council)	Lawyers	1961
8	Architects Act	Architects	1972
9	The Company Secretaries Act (Company Secretaries)	Company Secretaries	1980
10	Gujarat State Professional Civil Engineers Act	Gujrat Civil Engrs	2006
11	National Commission for Indian System of Medicine Act (Ayurveda & Unani)	Ayurvedic & Unani	2020
12	The Prasar Bharathi Act	Journalists	1990

(XII) CONTRIBUTION OF CIVIL ENGG INDUSTRY TO INDIAN ECONOMY

Following are the highlights depicting the invaluable contribution of Civil Engg to the economy of India. The data presented is the actual information published by Ministry of Statistics & Programme Implementation (MOSPI) on its web site "<https://www.mospi.gov.in>" & other similar publications.

- 50% of the planned outlay(Cap Exp) goes to construction alone in every budget of Central Govt.
- In 2023-24 Union Budget, FM has allocated Rs 10L Cr for Construction (Cap Exp for housing & infrastructure)
- Nearly double this amount will flow by the private sector in housing & real estate if GDP contributions are taken into account.

ACTIONS REQUIRED ON PRIORITY BY GOVERNMENT OF KARNATAKA:

All the facts mentioned above, calls for an urgent need for the Government of Karnataka to prioritise enacting of “**Karnataka State Professional Civil Engineers Act**” immediately with no further loss of time.

About **5-Lakh Civil Engg fraternity of Karnataka** continuously requesting for the enactment of “**KARNATAKA STATE PROFESSIONAL CIVIL ENGINEER’S ACT**”, applicable to all the Civil Engineering fraternity on top priority.