

# Licentiate Surveyor System in Nepal

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Nepal entered into licentiate surveyor system on 4 February 2008. Nepal Government Survey Department provided "Surveying & Mapping License" for the first time to twenty seven eligible Surveyors amidst a function. So this is a historic event for the land surveyors of Nepal and landmark for the Department of Surveys as well.

If we recall the history of land surveying and surveyor's name in Nepal, parcel estimation with eye examination survey work was started in 1623 AD. Later on it was improved to measuring by bamboo rod. At that time the designation 'Chhyatrakar' was given for those who would measure open land and 'Takshhyakar' for built-up area. In due course, chain survey measurement system with parcel identification was started in 1852. And the Surveyor was named as 'Dangol.' They use to measure the land with the help of Chain. During 1906 military took over the work of land surveying. They started to work with the help of Trough Compass. So they were named as 'Compassay.' First Plane Table surveying was introduced in Bhaktapur in 1923, and the surveyor's name was changed to 'Amin.' They were helped by Chainman in the field for land surveying work. The name Amin was retained out for a long period, even after the implementation of revolutionary Land Reform Programme in Nepal in 1964. At that time cadastral survey system was improved and the supervisor was named as Settlement Officer. After the implementation of geodetic control point system in 1970 and establishment of topographical survey branch in 1972, various names had been emerged for the surveyors; such as Basic Surveyor, Assistant Surveyor, Surveyor, Inspector, Team Leader, Field Computer, Signalman, EDM Operator, Cartographer, Photogrammetrist, Aerial Photographer, GPS Operator etc. The supervisors were named as Survey Officer, Senior Survey Officer, Chief Survey Officer, Deputy Director General, Director General etc. These names are existed in these days as well. In short, basically they all belong to the designation of 'Surveyors'.

## Who is a Surveyor?

It is necessary to know who is a surveyor and what does he do? A Surveyor carries out the survey and measurement of land and related objects. He uses to draw and establish land related data on paper and digital form as well. In the changing context of the world with the development of modern scientific technique, improved equipment and instrument; surveyor must have broader activities in relation to land surveying, measurement and creation of land data. In fact, surveyors are fact finders and providers of opinion and advice because they collect, process and establish data, which are generated from the actual field work.

The code of conduct provided by the Survey Department along with the license says- 'Licentiate Surveyors' are those, who have obtained license (permission) under the Article 26 of Land (Survey & Measurement) Regulations- 2001. At the same time, the Regulation has defined as- 'License' should be understood as letter of permission to work for survey and mapping in accordance with the Article 26 of the Regulations.

The International Federation of Surveyors (FIG) has defined- "A surveyor is a professional person with the academic qualifications and technical expertise to practice the science of measurement, to assemble and assess land and geographic related information; to use that information for the purpose of planning and implementing the efficient administration of the land, the sea and structures thereon; and to instigate the advancement and development of such practices." Practice of the surveyor's profession may involve one or more of the allocated activities which may occur either on, above or below the surface of the land or the sea and may be carried out in association with other professionals. In the application of these activities

surveyors take into account the relevant legal, economic, environmental and social aspects affecting each project.

## Licensing system

Licensing of the professionals is not a new phenomenon in the world. The first regulation of this type was contained in the code of laws of Hammurahi of Babylon in the eighteen century BC. But the code was something like 'eye for an eye and tooth for a tooth.' For example, a builder constructed a house that collapsed and killed owner; the builder would be killed. If the collapse caused the death of the owner's son, the builder's son would be killed and so on.

Regarding the licenses to the Surveyors and Engineers, it was started in 1907 in Wyoming. George Washington and Abraham Lincoln of the United States of America had possessed Surveyor's Licenses. Today surveying professionals of the developed countries of the world must obtain licenses before they practice land surveying and mapping. Singapore, Malaysia, Sri Lanka, Japan etc in the continent of Asia has introduced the system of licensing / registration of the surveyors. Now Nepal is also a country of licentiate surveyors. However, Nepal had started to issue license for the Lawyers on 29 October 1956 and Medical Doctors in 1964

## Elements of a surveyor

It may be relevant to mention the elements of a surveyor in the context of licensed surveyor system. Surveyors and professional people have four basic elements i.e. education, organization, experience and exclusion. Education means obtaining of formal school degree and the completion of as many surveying courses as possible. Also it can be self-education and continuing professional development (CPD) for improvement of personal qualifications and skills by handling tasks and duties through a lifelong process of learning.

Organization means participation in a professional organization and membership of professional Associations, such as Nepal Institution of Chartered Surveyors, Nepal Surveyors Association, Royal Institution of Chartered Surveyors etc. Membership of such organizations may lead the surveyors towards obtaining the recognition and status of a true professional man. Experience is obtained over the years, undertaking specific tasks and it will be as a gradual transformation of knowledge with the solution of problems.

Exclusion is regarded as to avoid, unfit and unworthy activities which are restricted by the code of ethics or code of professional conduct. One has to bear in mind that there is always a possibility to be expelled from the registered licensed surveyor, if he/she had unethical behaviour and incompetence on the code of conduct.

In the bygone days land surveying was generally said to include the determination of area of tract of land, the surveying needed for preparing descriptions of land establishing or re-establishing land boundaries and the preparation of plots for land tracts and sub-divisions. In course of time with the development of new technology and equipment.

## Licensing in Nepal

Licentiate survey system in Nepal is a need according to the pace of time. Because so many modern techniques and activities on surveying, mapping and creation of digital database are not untouchable to Nepal in the global perspective. And Nepalese mapping and geo-informatics system must have been adopted in relation to other countries, especially the SAARC nations. On the other hand, maps and digital data concerning to it, must be accurate, exact, standard, reliable and up-to-date. Licentiate system may help to develop further the mapping activities and establishment of digital database in Nepal according to the norms and standard set by the government.

The other fact is that in the developing world, especially the third world countries, government organizations may not cover all the developmental activities to be carried out, as per increasing demand of the society. In this context, the government organizations set forth the norms, standard and specifications and private sectors work accordingly. And government agencies supervise the quality of work. So it is a kind of co-operation and compliment to each other to develop the overall standard of the nation. This is applicable also in the field of mapping for development.

In this perspective, Survey Department has issued the surveying and mapping license on the recommendation of the Assessment Committee, formed under the Rule 27 of Land (Survey & Measurement) Regulations- 2001. It is mentioned in the recommendation that it should have to carry out the mapping and updating of parcels, engineering surveying, topographic surveying and mapping (except base maps of Nepal) and thematic surveying and mapping related activities by the Licentiate Surveyor. It has

been mentioned the conditions of the Land (Survey & Measurement) Act-1963 and its Regulations-2001, while Survey Department provided the license. These terms and conditions are the code of conduct to the Licentiate Surveyors of Nepal.

### **Code of conduct**

A professional surveyor must follow the code of conduct to make the mapping profession respectful, disciplined, reliable, and trust worthy. It is necessary to fit the Nepalese surveyor professionals into national and international level as per universally accepted standard in the context of increasing globalization and borderless opportunities. At the same time, it should be based on the statement of ethical principle and model code of professional conduct of International Federation of Surveyors (FIG). In the context of all these basic principles, some of the important conditions as 'code of conduct' provided along with the license (certificate) by Survey Department are as follows:

### ***Ethical principles***

#### **1. Honesty and integrity:**

- Surveyors must cultivate professional obligations to society and promote the surveying profession to clients and public.
- Measures accurately, record and interpret all data based on facts and figures with caution.
- Standard must be maintained within the limit of permissible error. Surveyors must clarify to the client, the possible percentage of correctness of his work.

#### **2. Independence:**

- Surveyors must work hard in relation to existing laws. Work must be carried out with legal submission and full dedication.
- He must be diligent, impartial, unquestionable and competent in his work, though no one can be perfect one hundred percent. He should not incline to any person or institution. Impartial and unbiased advice must be provided to the client or employer.
- He maintains the highest standard of honesty and integrity in ensuring that the information and data he provides are true and complete.

#### **3. Care and competence:**

- Surveyors work should be consistent in relation to knowledge and skill. Expertise should be

utilized for the development of community.

- He should not accept assignment those are outside the scope of his professional competency.

#### **4. Duty:**

- Surveyor maintains confidentiality about private information of his current and former clients / employers / the public, unless to make disclosure by the law or client's permission.
- He avoids conflicts of interests and recognizes the interest of the public.
- Attention should be given to environmental aspect for all activities.
- Public interest should be identified in the context of services provided to the clients and employers.
- He must conduct work with due attention to the rights of all clients with the maximum capability.

### **Professional code of conduct**

#### **1. Generally, the licentiate surveyor must:**

- Exercise impartial, independent and professional judgment.
- Not to accept assignment those are outside the scope of his professional competency.
- He must increase skill and knowledge with the continuity of professional development.
- He may employ the expertise of others when his knowledge and ability are inadequate for addressing specific issues.

#### **2. Surveyor as an employer:**

- Surveyors must be responsible on the work done by sub-ordinates.
- He must help to employees who are working under him, for their technical and professional development.
- Working environment and reasonable remuneration must be ensured for the employees.
- He should generate the sense of responsibility of surveying professionals, in addition to the honesty and reliability of employees.

#### **3. When dealing with clients:**

- Surveyors must not to show professional weakness.

- He should pre-inform to the customers, if there may be the possibility of disputes and conflicts.
- He must be careful with doubtful person or organization.
- He does not receive remuneration for one project from multiple sources without the knowledge of the parties involved.
- He maintains the highest honesty and trust worthiness, with whom they come into contact, directly or indirectly.

#### **4. While providing professional services:**

- Remuneration must be fixed on the basis of technical complication, level of responsibility and liability of services.
- Unofficial fees should not be imposed on account of the services provided.
- Detail breakdown of the fee should be provided, if the client requests.
- No maps, report and document should be certified, except it is prepared directly under own supervision and direction.

#### **5. Surveyor as a member of professional institution:**

- Licentiate surveyor must not employ who are under qualification.
- If he has some information on illegal activity done by others, he has to furnish that information to the professional institutions.
- No certification should be done to those, who are below standard in academic qualification, experience and character.
- He must enhance survey professionalism to all clients, customers and general people.

#### **6. As a professional practitioner:**

- Surveyors must not express misleading statements in advertisement and commercial media.
- He must not disturb the prestige of surveying professionals directly or indirectly.
- He must not interfere and displace the work of other surveyors, who are in agreement with other customers.
- Branch offices should not be opened without the direction and management of responsible surveyors.

#### **7. Surveyor as a resource manager:**

- Environmental context should be addressed with sufficient understanding, hard working and honesty.
- He must have knowledge on various aspects of environment and principle of sustainable development.
- If the project has an effect on environmental impact, it must include its assessment, planning and management.
- Encouragement should be provided, if the exercises to environment conservation are in favour of the welfare of society.

#### **Formation of institution**

Nepal Institution of Chartered Surveyors (NICS) has been formed on 4 February 2008. It has been registered officially in the Government District Administration Office, Kathmandu on 9 May 2008. It is an institution of licensed surveyors of Nepal who have obtained license under the Article 11 (E) of Land (Survey & Measurement) Act- 1963. This institution has been registered for the well being of Chartered Surveyors, to make homogeneous in their works and to protect and expand their professional rights and welfare. NICS is dedicated and determined to follow up the code of conduct, norms, standard and specification set by the concerned government department and organization. However, main objectives of NICS are as follows:

1. To work for the professional rights and welfare in accordance with the professional ethical principle and code of conduct.
2. To help to attend the allocated accuracy of the work for all types of survey and maps.
3. Be ready for the services of nation and people.
4. To help to update and certify as necessary, the survey and maps prepared by various agencies and organizations.
5. To help to prepare maps and data in co-operation with Survey Department, various government and non-government organizations.
6. To help to perform accurate mapping works, for government, non-government and private organizations and agencies.
7. To extend help for the valuation of land and housing.
8. To assist to prepare cadastral, thematic, topographic,

engineering maps (except base maps) for the planning and evaluation of new programmes and housing development projects.

9. To help to generate employment and to create the condition of self employment.
10. To perform and to make performed activities for the welfare of the members of NICS.
11. To organize various seminar, conference, symposium and publish research papers.
12. To work jointly with national and international organizations, who have similar nature and objectives and obtain their membership, as necessary.

### **Last item**

Each and every qualified surveyor should have been desirous to be a Licentiate Surveyor. Because he will be identified as legally appropriate person to perform the duty. Next, registration provides a person appreciated as a professional in the community. His work will be recognized as per standard set by the concerned government authorities. In fact, registration raises the status of a surveyor as a true professional. As a result, licentiate surveyor may be offered the job rather than an unregistered one. In this perspective, government departments and organizations should

encourage the surveyor to be licentiated, so that they may provide services to the client, customer and general people in a legal and scientific manner with standard format. In addition, licentiate surveyor must hold the membership of Nepal Institution of Chartered Surveyors for the professional rights, welfare and duty. If the professionals be united, their voice for their welfare will be heard by the concerned authorities.

### **Reference**

1. *FIG Publications No. 2, FIG Bureau, Helsinki, Finland. 1991.*
2. *FIG Publications No. 17, FIG Bureau, London, U.K, September 1998,*
3. *Surveyors, Nepal Surveyors Association, Kathmandu, Nepal, November 2003.*
4. *Cadastré 2014, Jurg Kaufmann, Daniel Steudler, FIG Commission 7, Switzerland, July 1998.*
5. *Boundary of Nepal (in vernacular), Buddhi Narayan Shrestha, Bhumichitra Co. Kathmandu, 2000.*



## ***Price of some of the publications of Survey Department***

1. *List of Geographical Names volume I to V - NRs 600/- for each volume.*
2. *Nepalese Journal on Geoinformatics - NRs 100/-*
3. *The Population and Socio-economic Atlas of Nepal (Hard Copy) NRs. 2,500 (In Nepal), € 200 (Out side Nepal)*
4. *The Population and Socio-economic Atlas of Nepal (CD Version) NRs. 250/-*