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Bulletin of The Nepal Geotechnical Society



An Official Publication of
The Nepal Geotechnical Society
Published twice a year
by
Publication and Homepage
Committee (PHC)

Editorial Board:

Dinesh Raj Shiwakoti,	Chief Editor
Tara Nidhi Lohani,	Editor
Tara Nidhi Bhattarai,	Editor
Sushil Kumar Chaudhary,	Editor

Cover Page

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Front Page Picture

The picture was contributed by a Japanese tourist. The picture, taken from the Namche Bazaar in Autumn 2000, shows a high altitude landslide, located not very far from the Mount Everest. One-storied buildings seen in the picture have been constructed utilizing mostly the locally available materials and technology.

Editorial

It is our great pleasure to announce the first official electronic Bulletin of the Nepal Geotechnical Society in this new millennium Year 2001. The Society is devoting itself for the development of the geotechnical profession in Nepal since its establishment in 1994. In recent days, the Society is receiving wide attention from the members living in Nepal as well as abroad. The addition of more than a dozen members within past few months is one such example. Recognition of the Nepal Geotechnical Society as a national representative from the two well-known international societies, namely, International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE) and International Society of Rock Mechanics (ISRM), has obviously adorned its capabilities. While the regular activities of the Society and its international association has been increasing day by day, the Society did not yet have good platform to disclose its activities and achievements to the members as well as other interested persons/institutions. It was because of this reason that the "Publication and Homepage Committee (PHC)" of the Society was formed last year, which has, since its formation, been working towards launching a Bulletin of the Society that bridges all the gaps and also enhances its activities. Today, as a result of wide cooperation and good wishes from the Society members, present editorial board- which is also functioning as PHC- could bring out this small piece into picture as an initial step. The publication has been named as "Bulletin of the Nepal Geotechnical Society" and is scheduled to be published twice a year in electronic form. Though this electronic issue is first of its kind, we would like to refer our readers to the society's earlier Newsletter named "Geohimal" that was published in 1996 (Baisakh 2053 B.S.). It is because of various technical reasons that we could not continue that Newsletter and finally have appeared again with this electronic publication. With the increase in geotechnical activities and expertise in different fields by Nepalese geotechnical experts, the need of launching full-fledged hard copy of

“Journal of Nepal Geotechnical Society” is also being thought of. As the Society already has many capable and experienced professionals to perform the technical duties, we firmly believe that the true realization of this plan is not so far away.

The Bulletin will cover all aspect of news and publication associated with the Society. Before the realization of the Journal, this will also serve the platform for technical publications of the Society as well. The introduction of our experts and their specialties as well as the inclusion of the views from world famous geotechnical professionals will be additional dimensions covered. In this very first issue, we have included introduction of the Society, membership information, abstract of papers submitted by using national quota through the Society, activity reports, upcoming international events and notices of the Society. Being the first issue of its kind, goodwill messages from the President of ISSMGE and Vice-president of ISSMGE for Asia as well as from the Society’s President and Secretary General are also included.

The Editorial Board will be happy to receive feedbacks from readers so that subsequent issues could be continually refined and wider area of interest could be covered. In our future endeavor, we are expecting full cooperation and help from the Society members. For further information, contribution and comments related to the Bulletin, please feel free to contact us at ngs-pub@yahoogroups.com.

For the Editorial Board

Dr. T. N. Lohani



Goodwill Messages

Message from the President of ISSMGE

It is with great pleasure to hear that the Nepal Geotechnical Society has decided to publish its Bulletin which has come into existence by efforts of many Nepalese engineers. This media of communication will serve as a forum for publication of newsletter and technical articles.



This is a clear evidence of the Nepal Geotechnical Society having become a mature entity where members can communicate and exchange information for mutual benefit. The publication of the Bulletin will strengthen the tie amongst engineers and make activities more vibrant and rewarding to all members.

I sincerely wish that this attempt will become a stepstone for advancement of Geotechnical engineering in the Nepal Society at the start of the 21st century. I also wish all members of the Nepal Society prosperity and well-being.

December 19, 2000

A handwritten signature in black ink that reads "Kenji Ishihara". The signature is written in a cursive, slightly slanted style.

(Kenji Ishihara)

*President, International Society for Soil Mechanics and
Geotechnical Engineering (ISSMGE)*

Message from the Vice President of ISSMGE

I am very pleased to hear that the Nepal Geotechnical Society is publishing bulletins which include newsletters and technical articles. I would like to convey my sincere congratulations on the publication of the first bulletin on behalf of the International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE).



By doing this, the Nepal Geotechnical Society established in 1994 has made great progress in the field of geotechnical engineering in the Asian region.

Needless to say, publishing of technical articles is considered to be an essential activity for a society in exchanging ideas and knowledge related to their discipline. Through your bulletin, unique problems and solutions will be informed to the outside world as well as to your own members, drawing together many interests in related engineering issues. Therefore, frequent publications of high-quality technical papers, featuring your local issues, are highly encouraged.

Your Society is not only a Member Society of ISSMGE, but also one of ISRM, which means that you are dealing with both soil and rock as engineering materials. This kind of integrated approach is most desirable since all construction is built on or in ground that is composed of natural soil and rock; Rock, having become a major engineering material in modern construction technology. In particular, the topography of Nepal is dominated by high mountains,

which provides unique engineering problems – landslides, avalanches, tunneling technology, and dam construction - emphasizing the importance of the application of rock mechanics. I am sure that your technical articles related to your unique problems will draw great interest around the world.

In this regard I am hopeful that the many valuable papers which may be published in forthcoming bulletins of your publications will be of great success in the future. Finally, I would like to express my gratitude to the editor for his efforts in publishing quality technical articles.

Professor Sang-Kyu Kim
Vice-President (Asia), ISSMGE

Message from the President of the NGS

I am delighted to share my thoughts with fellow colleagues of Nepal Geotechnical Society (NGS) on occasion of this heartening initiative of the publication committee to begin the publication of NGS Bulletin. This has been made possible through the untiring perseverance



and diligence of our colleagues in the committee, in spite of their responsibilities and busy schedules involved with their regular work. We are thankful to their hard work in initiating the publication of the bulletin, which I am sure would serve as a very resolute venue for professional interchange reflecting the intellectual aspirations of the members of Nepal Geotechnical Society. Let me

begin by congratulating all the colleagues for their endeavor.

Nepal Geotechnical Society has been in existence for about seven years now, and our pace of growth towards achieving the eminence and extensiveness of the professional society we all aspire for has not been brisk. However, I sincerely believe that the modest but rational initiatives we are able to take would add up to those essential small building blocks indispensable in achieving our aspirations. Of course, the most important challenge would be to put our initiatives in a sustainable footing and to ensure continuity under various limitations we are and would be facing. Conversely, some of our initiatives may even work towards alleviating our limitations primarily stemming from limited membership. Publication of the bulletin may contribute in this line by demonstrating one of the creative potentials of Nepal Geotechnical Society. Obviously, the bulletin will also serve the broader purpose of advancing professional practice in Nepal, fostering research and new ideas, and enhancing international professional interaction, thus helping to keep the professional goals of Nepal Geotechnical Society in focus. On the occasion of launching the publication of NGS Bulletin, let us once again reaffirm our solemn allegiance and commitment as the professional society to the growth and development of geotechnical profession in Nepal.

Lastly, let me take the opportunity to express my best wishes to the publication committee for all the success in its endeavor to maintain the quality standard and continuity of the bulletin. All the very best,

Prof. Madan B. Karkee
President, Nepal Geotechnical Society

Message from the Secretary General of the NGS

As we move toward a new millennium, Nepal Geotechnical Society has become a professional society with youthful dynamism and promising prospects, with challenging tasks and concurrent aims in addressing geotechnical needs of Nepal.



As a land of diverse topography, elevating from 70m to 8800m, Nepal faces a challenging task of meticulously adopting the theories of sedimentary deposits to residual formations, colluvium deposits to fragmented rocks, for enhancing the activities of construction industries and thus helping in uplifting the socioeconomic and cultural developments in Nepal.

As we move on practicing the soil and rock mechanics techniques in Nepal, we will also respect the principles and philosophy of other professional organizations with the aim of co-existence in harmony and fostering own professionalism in Nepal.

Our practice may be in Nepal but our actions may be in line with Regional and Global geotechnical needs; “ACTING LOCALLY BUT THINKING GLOBALLY” in order to harmonize the achievements of Nepal Geotechnical Society in this progressing ERA of globalization.

Dec, 28, 2000

Dr. Sukh Gurung

Secretary General, Nepal Geotechnical Society

About the Society

Background

The Nepal Geotechnical Society (NGS) is an autonomous non-profit professional society established in Nepal since 1994. Since its establishment, the Society is strengthening day by day with the expansion of its activities both inside and outside the national boundaries. In the coming days, the NGS strives to be a premier organization for a wide range of geo-professionals in Nepal.

Mission and Goals

The mission of the NGS is to integrate the talents and perspectives of individual geo-professionals to advance the state-of-the-art and the state-of-the-practice of the geo-profession and to provide leadership on educational, professional, and public policy issues. The NGS aims:

- To make the NGS better representative of all practicing geo-professionals through membership growth, both inside and outside the national boundary.
- To collaborate with local, national and international geo-professional organizations.
- To enhance and promote the status of the geo-professions as rewarding career opportunities.

- To be a leader in the development and dissemination of information supporting high quality practice.
- To put maximum effort in encouraging and publishing geo-related researches.
- To promote and incorporate the necessary geo-related educational programs in Nepal.
- To develop the NGS Code of Ethics and to promote the environment for its implementation in the country.
- To provide leadership on geo-related public policy issues.
- To recognize and reward achievements that further expand the NGS Vision, Mission, and Goals.
- To build the NGS' organizational and financial strength.

NGS Governance

The NGS is governed by an executive committee formed as per its written constitution. The committee runs various day-to-day activities smoothly and takes important decisions through coordination and consultation with its members. The executive committee consists of a president, a vice-president, a general secretary, a joint secretary, a treasurer and six members. The executive committee is elected for two-year terms by the NGS members through its general body meeting.

To help the NGS executive committee in various activities, it forms various committees, and sub-committees from time to time. Such committees have specified responsibility at the time of its formation and are answerable to executive committee.

International Affiliations of the NGS

The NGS is proud to be the national member society of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) and the International Society for Rock Mechanics (ISRM). The Society has been recognized as national member society of ISSMGE since 1995 and that of ISRM since 1999. It is because of this association that the NGS is shaping itself in bridging the gap between Nepalese and International geo-professionals. It is also expected that due to these association with international societies, the activities of the NGS will surely be boosted in future.

Participation by the NGS in International Events

Since its establishment, the NGS is actively participating in international events. Such international events include attending Council Meetings of ISSMGE, ISRM, and their sister organizations, and various international conferences, seminars and workshops. Prominent among them are: 14th International Conference on Soil Mechanics and Geotechnical Engineering-Germany-1997, Young Geotechnical Engineers' Conferences (International YGEC 2000- United Kingdom, Asian – YGEC 1997-Singapore, Asian YGEC 1994- Thailand), Asian Regional Conferences on Soil Mechanics and Geotechnical Engineering (1999- Korea, 1995- China). In addition, the NGS members' participation by submitting excellent papers is also well recognized.

Executive Committees

Current Executive Committee

Current NGS executive committee was formed in February 1999, which has subsequently been further extended. Currently, the NGS executive committee consists of:

President	<i>M. B. Karkee</i>
Vice-President	<i>D. R. Shiwakoti</i>
Secretary General	<i>S. B. Gurung</i>
Treasurer	<i>T. N. Lohani</i>
Executive Member	<i>K. M. Neupane</i>
Executive Member	<i>A. K. Sah</i>
Executive Member	<i>A. K. Karna</i>
Executive Member	<i>S. K. Chaudhary</i>
Executive Member	<i>G. P. Dhakal</i>
Executive Member	<i>B. R. Shahi</i>

Founding Executive Committee

The past executive committee, which was responsible for the establishment of the NGS, consisted of the following members:

President	<i>Praneshwor Pokharel</i>
Vice-President (Intl.affairs)	<i>G. Pokharel</i>
Secretary General	<i>N. Thapa</i>
Executive Member	<i>L. Sunuwar</i>
Executive Member	<i>P. S. Dhakal</i>
Executive Member	<i>Parameshwor Pokharel</i>
Executive Member	<i>S. K. Prashai</i>

Working Committees

The executive committee forms various committees each having specific responsibility, from time to time. So far, the following committees have been

formed, some of which are still functional.

Current Working Committees

Publication and Homepage Committee (PHC):

This committee is responsible to make publications of the NGS and to maintain its Homepage in the Internet. The PHC consists of

D. R. Shiwakoti, Chairman
T. N. Lohani, Member
S. K. Chaudhary, Member
T. N. Bhattarai, Member

Constitution Translation Committee (CTC):

This committee is responsible for translating the first amended constitution of the NGS from English into Nepali language. The CTC consists of

A. K. Karna, Chairman

Past Working Committees

Constitution Amendment Committee (CAC):

This committee was responsible for making the draft of the first amendment of the original constitution of the NGS. This committee completed its works successfully in September 2000, and was subsequently dissolved. The CAC consisted of

T. N. Bhattarai, Chairman
T. N. Lohani, Member
K. M. Neupane, Member

International Conference Committee (ICC):

This committee, which subsequently resigned showing personal reason, was responsible to work on the International Conference related issues. Particularly, the committee was responsible for collecting and screening

the papers of the NGS members so as to send them to the affiliated societies to fulfill the national membership quota of the NGS. This committee had performed the task of selecting the candidates for participation in YGEC2000. The ICC consisted of:

G. Pokharel, Chairman
A S. Dhakal, Member
S. Adhikari, Member

Correspondence address

All correspondences with the Society should be made in the following address:

Nepal Geotechnical Society
G. P. O. Box 20360, Kathmandu, Nepal.
Email: ngsxcom@yahoogroups.com
URL address: www.geocities.com/ngeotech

Membership Information

Any interested person and/or institute, who/ which is interested to be a member of the NGS, and is eligible for it, can acquire the membership by applying for it to the Society with required documents and by paying the specified membership fee. Also, any Nepali Geoprofessional or institute interested to be a member of the ISSMGE or the ISRM can do so, through the NGS. This section describes the benefits of being a member of the NGS and the ISSMGE/ISRM, types of the NGS memberships available and also guides you how to get the membership you desire.

Benefits of being the NGS Member

By being a member of the NGS, you can

- enjoy membership rights of the NGS
- have close contact with the related professionals residing in Nepal as well as outside.
- have access to the NGS bulletin and other books library established by the NGS.
- if you also acquire membership of international professional societies (ISSMFE, ISRM) through the NGS, you can enjoy close association of internationally known personalities and associations. International society offers its well-known and able members to work under different themes in technical committees. This is expected to boost the morale of the members. In addition to it, the members will also get chance to convey their ability internationally.

- participate in international conferences and also can be national representative of the NGS in relevant international organizations.

Membership Types

There are six types of memberships. Each type have the following specific requirements: The membership fee is decided by the Executive Committee, which may vary from time to time. The applicant will be notified immediately after the approval of membership from Executive Committee Meeting. Types of the NGS memberships are described below.

General Member

Any person with a valid Bachelors degree in engineering or geo-science or higher degree in geotechnical related fields shall be qualified for General Membership.

Life Member

Any general member, having the membership continued for 5 years, can apply for Life Membership after paying the ascertained amount of fees.

Any general member, who has paid the membership fee for at least 25 years and is 60 years old, shall automatically become Life Member of the society.

Fellow Member

Any general member, having acquired membership continuously for 5 years and having had outstanding academic or professional records, shall be eligible for a Fellow Membership. The minimum age of the applicant in such a case shall be not less than 35 years. However, any general member, having acquired membership of the society for at least 10 years, shall be considered for the fellow membership after attaining the age of 40.

**Corporate
Member**

Any corporation working in geotechnical related fields shall be qualified for corporate membership.

**Honorary
Member**

Any national or international individual who have outstanding contribution in pioneering Engineering field or leading human society may be awarded Honorary Membership of the Society. Any member of the Executive Committee revealing the professional record of the individual should put such proposal forward in any General Body meeting of the Society.

**Student
Member**

Any student admitted in the undergraduate course of Engineering or geo-science shall be eligible for Student Membership.

Application Form for Memberships

If you are interested in joining the Nepal Geotechnical Society, you may download the application form *on-line* or may request the Society to send it to you. Completed documents, along with the required fee and other required documents should be forwarded to the NGS secretariat for necessary action. If you have any questions, please feel free to contact the Society.

Technical Papers

In this issue, we are publishing the paper abstracts submitted by the members of the NGS to 11th Asian Regional Conference of ISSMGE, which was held in Seoul, in August 1998. Altogether five papers, each consisting of 4 pages, were submitted by the members of the NGS for the conference. Abstracts of the papers are given below. Names of the members of the NGS have been shown by bold letters.

Influence of microfossils on the behaviour of cohesive soil

Dinesh R. Shiwakoti & Hiroyuki Tanaka

Geotechnical Investigation Laboratory, Port and Harbour Research Institute, Yokosuka, Japan

Jacques Locat & Christine Goulet

Dept. of Geology and Geological Engineering, Laval University, Canada

Paper Abstract: In this paper, the influence of diatom microfossils on the geotechnical behaviour of cohesive soils has been investigated. Diatomite has been mixed with kaolin and Singapore clay, and the resulting soils have been subjected to the following examinations: microscopic observation, entrance pore radius distribution, index properties, compressibility and shear strength characteristics. The study shows that shear strength and compressibility characteristics of a soil increases significantly due to the presence of diatom microfossils. However, the measured values of index properties of such

soils may not reflect the true values. Skeletal/intra-skeletal pores of microfossils and water held inside such pores are responsible for the change in geotechnical behaviour of such soils.

Induced-deformation resulting from freezing and thawing: some experimental studies

K. M. Neaupane & T. Yambe

Dept. of Civil & Env. Engg, Saitama University

M. Sakai

Tokyo Gas Company, Tokyo

Paper Abstract: Comprehensive understanding of frozen ground is required for many geo-engineering problems associated with low temperature surroundings such as liquefied natural gas (LNG) in-ground storage system, slope failures and slope deterioration from natural process of freezing and thawing, ground freezing techniques to stabilize tunnels when running sand is encountered, sinking of shafts in loose soils, etc. Induced deformation, temperature distribution and interaction of the frozen ground with structures are of particular importance from engineering point of view. As a general trend, the induced-deformation decreases with the decrease in temperature as material is subjected to compression, however, below freezing level, greater dilation is observed due to expansion of pore water upon freezing. Reported are results from freezing and thawing experiments on Sirahama sandstone as a special case of coupled Thermo-Hydro-Mechanical (THM) system and the study of variation of the induced deformation resulting there from.

Limit state formulation for the vertical resistance of bored PHC nodular piles based on field load test results

Madan B. Karkee & T. Horiguchi

GEOTOP Corp., Tokyo, Japan

H. Kishida

Science University of Tokyo, Tokyo, Japan

Paper Abstract: Reliability based limit state design (LSD) format specifically applicable to the bored PHC nodular piles has been proposed. The format is based on a comprehensive database system obtained from loading tests on fully instrumented piles. For the factor of safety (FS) of 3.0 applicable to the nominal resistance in the current practice in Japan, a reliability index β of the order of more than 4 is obtained. This corresponds to a resistance factor Φ of about 0.65 and a load factor α of about 1.3 in the proposed LSD format. The log-normal distribution is found to represent closely the shape of data distribution in all the cases considered in the analysis. The extent of pile movement to be expected depending on the FS adopted is also analyzed. Based on the loading test data base system, it is found that the 95% confidence of not exceeding for the pile movement is 13mm, 9mm and 7mm for FS of 2.0, 2.5 and 3.0 respectively. The investigations undertaken illustrate the rationality of the proposed pile type and installation method specific approach to reliability based LSD format based on the loading test data base.

Behaviour of enlarged base foundations under the axially pullout condition

Sukh B. Gurung

Hiroshima University, Japan

Gyaneswor Pokharel

Public Works Research Institute, Japan

Paper Abstract: Foundations of the structures such as high-tension transmission towers or TV towers are subjected to pullout force due to the wind forces acting on the structures. Foundations of these types of structures have to support not only the pullout resistance but also the bearing pressure resulting from self-weight of the super-structure and foundation itself. While dealing with these types of structures, critical case could be for pullout forces because so far the bearing pressure is concerned; there are well-established theories and guidelines under which foundation can be designed. Usually the transmission towers are routed through the hilly terrain to avoid residential areas, where the pile driving or auguring is inconvenient. Hence, in these types of topographies shorter enlarged base piles are generally preferred over the conventional long piles on the ground of construction cost. However, mechanism of enlarged base foundation subjected to pullout force has not been well understood yet. Therefore, a series of centrifuge model tests were carried out under axisymmetric case to understand the pullout behavior of enlarged base foundation. This paper presents the numerical simulation based on an axisymmetric FE analysis to these centrifuge model tests in order to study the deformation mechanism of soil under the axisymmetric pullout condition.

G_{\max} of natural clays at normal consolidation

T. N. Lohani

Department of Civil Engineering, Yokohama National University, Japan

S. Shibuya

Graduate School of Engineering, Hokkaido University, Japan

G. Imai

Department of Civil Engineering, Yokohama National University, Japan

Paper Abstract: Characterization of G_{\max} on three different well known clays: Ariake clay, Japan, Louiseville clay, Canada and Bangkok clay, Thailand were done by using a set of reconstituted and undisturbed samples in each clay. In examining the plot of small strain shear modulus (G_{\max}) as well as $G_{\max}/f(e)$ against effective vertical stress, it was found that both of the above plots in both reconstituted and undisturbed conditions had pretty similar slope at normally consolidated portion. Though $G_{\max}/f(e)$ plots for undisturbed soils are on little higher side for the highly structured clays, the difference is not much appreciable in case of less structured Bangkok clay. For the latter type of soils, just the simple laboratory test on reconstituted soils may suffice to characterize the G_{\max} of in-situ soil in NC condition with little margin of error. The void ratio difference ($e_{\text{und}}-e_{\text{rec}}$) at any G_{\max} value, assumed to represent soil structure was found decreasing with the increase in G_{\max} and effective stress. Using the void ratio function $f(e) = e^{-1.3}$, the modulus exponent value n varied from 0.61 to as high as 0.80, very different from the ordinarily taken 0.5 value.

Activity Reports

A Note on Ist Amendment of the Constitution of the Nepal Geotechnical Society (NGS)

T. N. Bhattarai

As the name implies, the NGS was established to exchange, among others, information on research and development in Geotechnical Engineering fields in Nepal and elsewhere. At the time of its establishment, a Constitution was also promulgated by founding members to steer its activities on the basis of professional norms and values. The Constitution was embedded with eleven Articles many of which also included several Sections. Needless to say that the Constitution was based on democratic norms and it effectively paved way to start the society's mission with well-established procedural guidelines. Nevertheless, soon after it started operating in 1994, number of members increased by several folds and the expertise among the members also divers promisingly. Consequently, different thoughts and varieties of possibilities started emerging in NGS discussion forum regarding the role of NGS in national context. Particularly, many members pointed out the necessity of the Constitution amendment. They were on the opinion that the Constitution is not clear enough to maintain transparency in its decision-making procedures. Besides, it was also argued that some clauses of the Constitution prevent new members to lead the society. Further, discussions were also centered regarding how NGS could utilize the recent



advancement of information technology so as to make its operating system simple, reliable and informative. NGS executive committee (EC) duly honored these views and formed a three-member-committee to look into the matters. The committee was comprised of Dr. Sukh Gurung as the chairman and Mr. Krishna Neupane and Mr. Awadh Kishore Sha as the members. Although the committee had successfully drafted an amendment to the Constitution, due to some technical reasons it could not submit its task formally.

Just to give continuity to Dr. Gurung's team efforts, EC again constituted an another committee known as Constitution Amendment Committee (CAC) comprised of three NGS members namely, Dr. Krishna Murari Neupane, Thammasat University, Thailand, Mr. Tara Nidhi Lohani, Yokohama National University, Japan and Tara Nidhi Bhattarai, Kyushu University, Japan. CAC was entrusted to review the draft proposal submitted by Dr. Gurung's team, and to make recommendation for necessary amendments. For the purpose, CAC was given initial three months of time period with a provision of extension for another three months, if deemed necessary. The committee came into effect from March 15, 2000.

To achieve the entrusted task, CAC made studies of available Nepalese Professional Societies' Constitutions including that of relevant international societies. At the same time, NGS general members were also requested, using NGS electronic discussion forum, to provide their comments, if any, on the issue. CAC members met several times through e-mail network and discussed in detailed clause by clause till they reached a consensus. CAC then put forwarded the amendment in General Body (GB) meeting of the Society through NGS mailing list requesting them to express their views on the proposal. NGS members actively took part on the discussion and many constructive suggestions were provided with. CAC again met and accommodated some of the

views expressed in the GB meeting and put the modified amendment for final approval. The GB meeting unanimously approved the amendment.

The first amended Constitution came into effect from September 30, 2000. Among others, the Constitution is perceived to be friendly in terms of professionalism and practically effective for having some clauses that guarantee transparency in NGS activities. At this point, however, it may be justified to mention that only clauses of the Constitution may not be enough to lead the society towards its specified goals. Obviously, it is leadership's wisdom along with selfless cooperation from members that play vital role to establish the NGS in Nepal as a renowned national professional society. The task is certainly not easy, but there are good reasons to be optimistic.

Note: *Mr. T. N. Bhattarai was the Chairman of the Constitution Amendment Committee*

Participation of the Nepal Geotechnical Society in iYGEC 2000

S. K. Chaudhary

The International Young Geotechnical Engineers' Conference (iYGEC 2000) was held at the Univ. of Southampton, U. K. from 8-13 September 2000. The conference was organized by British Geotechnical Association with sponsorship from International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE) and many con-



struction and consulting firms. Two delegates were invited from each member society of ISSMGE with considerable subsidy in the registration fee, accommodation and fooding. Total of one hundred and five delegates from fifty-four countries participated in the conference. Mr. Sushil Kumar Chaudhary and Mr. Binod Tiwari represented Nepal Geotechnical Society in the conference as its delegate. Mr. Chaudhary is currently pursuing his doctoral degree at Tokyo Institute of Technology, Japan and he presented a paper titled "Anisotropy in small-strain stiffness of Toyoura sand". Mr. Tiwari is currently pursuing his doctoral degree at Niigata University, Japan and his paper was titled "Residual shear strength evaluation in the absence of sliding surface soil".

Young Geotechnical Engineers' Conferences have been organized in regional level since 1981, but this conference was the first of its kind organized in global level. This was an event to mark the beginning of a new millennium. Four keynote speakers, namely, Dr. Suzanne Lacasse from Norwegian Geotechnical Institute (NGI), Prof. R. Kerry Rowe from Queen's University in Kingston, Canada, Prof. Robert Mair from Cambridge University and Prof. Kenji Ishihara from Science University of Tokyo were invited. Dr. Lacasse delivered a lecture about developments in offshore foundation technology, behaviour of gassy soils, geohazards with landslide on seabed and risk analysis. Prof. Rowe discussed about landfill technology for waste disposal, the design of waste containment layers and associated problems. Prof. Mair talked about research and innovation in closed-face tunneling techniques in soft ground with soil conditioning and lubrication, use of compensation grouting and the prediction of settlement and behaviour of various types of foundation structures such as piles associated with tunneling under big cities. Prof. Ishihara talked about natural hazards such as debris flow and liquefaction due to earthquakes and heavy rainfall with examples from the great Niigata earthquake of 1964.



Participants of iYGEC 2000, Southampton, UK

Participants were taken in a full day field trip to the Isle of Wight and the county of Dorset. Isle of Wight is situated in English Channel and offers a lot of geological outcrops, which is otherwise difficult to find in the southern part of England. The county of Dorset is home to the famous Portland stone, which is one of the best building materials. It has been used in England for more than 300 years. Because of extensive quarrying activities, the place offers good exposure of geological formations and mass movements. The name Portland cement has come from this stone as the inventor intended to produce cement, which would give similar strength as that of the Portland stone.

Note: *Mr. S. K. Chaudhary was one of the participants of the iYGEC 2000, representing the Nepal Geotechnical Society*

Report on Nepal's participation in 11th ARC and Asian Member Societys' Council Meeting

D. R. Shiwakoti

The 11th Asian Regional Conference (ARC) of ISSMGE was held from 16th August to 19th August, 1999 in Hilton Walker Hotel, Seoul, South Korea. Several hundred specialists from around the world had participated in the conference.



Five papers had been submitted to 11th ARC from the NGS. Three geotechnical engineers from Nepal Geotechnical Society had participated in the conference: Prof. Madan B. Karkee, Dr. Sukh B. Gurung, and Dr. Dinesh R. Shiwakoti. Prof. Karkee presented his paper as a panelist, and Dr. Shiwakoti presented his paper as a discussor. Dr. Gurung served as a co-chairman of a technical session.



Asian Regional Member Societes' Council Meeting of ISSMGE in Seoul, Korea, 1998

On 19th, Council Meeting of Asian Regional Member Society of ISSMGE was held in Hilton walker hotel. Representatives from 12 countries were present in the meeting. Each country was represented by a voting representative, non-voting representative, and observer(s). Nepal was represented by Dr. Gurung as a voting member, and Dr. Shiwakoti as non-voting member. Prof. Karkee represented Nepal as an observer. ISSMGE president Professor K. Ishihara and Secretary General Professor R. N. Taylor had also attend the meeting. The following issues were discussed in the meeting:

1. Differentiating the registration fee for the 12th ARC in 2003. South Korea had made the proposal. However, the meeting did not indorse the proposal.
2. Presentation of invitation to host the 12th ARC in 2003 was done by representatives of South East Asian Geotechnical Society and Indian Geotechnical society. India and Singapore had filed the candidacy. Singapore was selected as the next venue by closed voting of seven versus five.
3. Candidacy for new vice-president for Asia: India, Pakistan and Japan introduced their nominees for the next vice-president.
4. 4th Asian Young Geotechnical Engineer's Conference in South Korea: Korean Geotechnical Society had made request to financially support the 4th AYGEC. The Japanese Geotechnical Society had given the word to partly sponsor the conference.

The Council Meeting lasted for about two hours, which was followed by a reception party.

Note: *Dr. D. R. Shiwakoti was one of the representatives of the NGS in the Council Meeting of Asian Regional Member Societies of ISSMGE, which was held during the 11th ARC in Korea in 1998.*

Members Page

A Tribute to Late Dr. Tej B. S. Pradhan

Dr. Tej B. S. Pradhan, who was a active member of the Nepal Geotechnical Society, passed away at the age of 43, in 1998, while going through a minor medical operation in a hospital in Yokohama. He is survived by his wife and a son. The Nepal Geotechnical Society expresses its deep sorrow over his sudden and untimely death.

Late Dr. T. B. S. Pradhan was born on 13th July, 1955 in Kathmandu. He received his school education and college education in Nepal, and headed to Japan at the age of 19 with a briefcase in his hand and curiosity in his mind.



Late Dr. Tej B. S. Pradhan arrived in Japan in 1974 as a Japanese Government scholar for his higher studies. He completed his undergraduate studies in Civil Engineering and Master in Geotechnical Engineering from the Kyoto University in 1979 and 1981, respectively. He worked as a research associate in Tokyo University and as a consulting engineer in a private company in Osaka, before receiving his doctoral degree in engineering in 1990 from the Kyoto University. From 1990, Dr. Pradhan worked as an associate professor at Yokohama National University until his last day.

In his professional realm, Dr. Pradhan was not only an ordinary academician, but also a brilliant combination of a lecturer, a researcher, a supervisor, and a consultant. Within his short professional career, he published several dozen technical papers in prestigious

journals and conferences/symposiums. Some of his works have served as benchmark in making technical codes of Japanese Geotechnical Society. He was honoured with the Young Researcher Incentive Award by the Japanese Geotechnical Society in 1989 for his excellent research works related to Study on the Torsional Shear Test of Sand. Dr. Pradhan was in frequent demand for lectures, short courses and workshops in international geotechnical community, and had delivered several such lectures abroad. He was also actively involved in providing consulting services to various public and private institutions.

Dr. Pradhan was earnestly involved in activities of international and national professional societies. He was a member of International Society for Soil Mechanics and Geotechnical Engineering and Japanese Geotechnical Society, in addition to being a member of the Nepal Geotechnical Society. Dr. Pradhan was working with more than a dozen geotechnical committees. He had actively participated in organizing many geotechnical conferences/symposiums. Until his last moment, Dr. Pradhan was working as a key member of the international symposium, IS-Yokohama 2000, held in Yokohama National University in September 2000.

Dr. Pradhan was one of the key persons in conceptualizing the formation of Nepal Geotechnical Society. In 1997, he had represented Nepal Geotechnical Society in the prestigious Council Meeting of ISSMGE in Germany.

In his personal life, Dr. Pradhan always believed in simplicity. In his heart, he was magnanimous. In his attitude, he was always sincere, sociable and cooperative. For all his divine qualities, he was admired by all who knew him.

Upcoming International Events

4th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics

DATES

Starts: Monday 26 March 2001
Finishes: Saturday 31 March 2001

VENUE

University of Missouri-Rolla, Rolla, USA

CONTACT

Shamsher Prakash
308 Civil Engineering, University of MO-Rolla, Rolla,
MO,65409-0030
Phone: +1 573 341 4489
Fax: +1 573 341 6553/4729
Email: prakash@novell.civil.umr.edu
URL: www.umr.edu/~conted/conf8767.html

4th Asian Young Geotechnical Engineers Conference

DATES

Starts: Monday 21 May 2001
Finishes: Wednesday 23 May 2001

VENUE

Seoul, Korea

CONTACT

Y.S. Jang
Secretary of 4th Asian YGEC
Email: ysjang@dgu.ac.kr

2001: A Geo-Odyssey

THEME	Foundations and Ground Improvement
DATES	Starts: Sunday 10 June 2001 Finishes: Wednesday 13 June 2001
VENUE	Virginia Tech, VA, USA
ABSTRACTS	By Saturday 1 April 2000
PAPERS	By Friday 1 September 2000
CONTACT	Professor J. Mike Duncan Phone: +1 540 231 5103 Fax: +1 540 231 7532 Email: jmd@vt.edu www.conted.vt.edu/geo2001.htm

Response of buildings to excavation-induced ground movements

DATES	Starts: Tuesday 17 July 2001 Finishes: Wednesday 18 July 2001
VENUE	Imperial College, London, UK
ABSTRACTS	By Saturday 30 September 2000
CONTACT	Tina Wong Phone: +44 (0)20 7222 8891 Fax: +44 (0)20 7222 1708 Email: tina.wong@ciria.org.uk www.ciria.org.uk/conferences_ground.htm

15th International Conference on Soil Mechanics and Geotechnical Engineering

DATES	Starts: Monday 27 August 2001 Finishes: Friday 31 August 2001
VENUE	Istanbul, Turkey
CONTACT	Professor Ergnn Togrol Faculty of Civil Engineering, Istanbul Technical University, 80626 Ayazaga, Istanbul Phone: +90 212 285 3747 Fax: +90 212 285 6587 Email: 3G@srv.ins.itu.edu.tr www3.itu.edu.tr/~icsmge/

Third Nepal Geological Congress

DATES	Starts: September 26, 2001 Finishes: September 28, 2001
VENUE	Kathmandu, Nepal
ABSTRACTS	Abstract by 30th May 2001
PAPERS	Full papers by 15th August, 2001
CONTACT	Mr. R. K. Aryal Nepal Geological Society P. O. Box. 231, Kathmandu, Nepal Tel: 977-1-414330(0) 977-1-471372 (R) FAX: 977-1-414806(0) E-mail: nepgeosoc@wlink.com.np http://www.geocities.com/ngsnepal/nepal_geological_society.htm

Ghent Environmental Geotechnics Specialty Conference

THEME	Underwater Geoenvironmental Issues
DATES	Starts: Monday 29 October 2001 Finishes: Wednesday 31 October 2001
VENUE	Ghent, Belgium
ABSTRACTS	By Friday 15 December 2000
PAPERS	By Tuesday 15 May 2001
CONTACT	Prof. W.F. Van Impe Phone: +32 (0)9 264 57 17 Fax: +32 (0)9 264 58 49 Email: GEG2001@pi.be www.allserv.rug.ac.be/~wvanimpe

Modern Tunnelling Science and Technology (IS-Kyoto 2001)

DATES	Starts: Tuesday 30 October 2001 Finishes: Thursday 1 November 2001
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International Symposium on Earth Reinforcement (IS Kyushu 2001)

DATES	Starts: Wednesday 14 November 2001 Finishes: Friday 16 November 2001
VENUE	Fukuoka, Japan
ABSTRACTS	By Saturday 30 September 2000
PAPERS	By Wednesday 28 February 2001

CONTACT

Professor Hidetoshi Ochiai
 Department of Civil Engineering (Suiko), Kyushu University, 6-10-1, Hakozaki, Higashi-ku, Fukuoka 812-8581

Phone: +81 92 642 3285

Fax: +81 92 642 3285

Email: iskyushu@civil.kyushu-u.ac.jp

2nd ANZ Conference on Environmental Geotechnics

THEME

Environmental geotechnics

DATES

Starts: Wednesday 28 November 2001

Finishes: Friday 30 November 2001

VENUE

Newcastle, Australia

ABSTRACTS

By Friday 29 December 2000

PAPERS

By Sunday 29 April 2001

CONTACT

Ms Didi Stigter

Phone: +61 2 92903366

Fax: +61 2 92902444

Email: geoenv@icms.com.au

www.icms.com.au/geoenvironment

SEAGS Conference: Geotechnical Engineering Meeting Society's Needs

DATES

Starts: Monday 10 December 2001

Finishes: Friday 14 December 2001

VENUE

Hong Kong

CONTACT

Mr Ken Ho (secretary of organising committee) c/o Geotechnical Engineering Office, Civil Engineering Build-

ing, 101 Princess Margaret Road, Homantin, Kowloon
Phone: +852 2762-5051
Fax: +852 2624-4135
Email: sge.li@ced.gov.hk

International Deep Foundations Congress

DATES Starts: Thursday 14 February 2002
Finishes: Saturday 16 February 2002

VENUE Orlando, Florida

ABSTRACTS By Sunday 15 October 2000

PAPERS By Tuesday 1 May 2001

CONTACT Mohamad Hussein
Email: MHGRLFL@aol.com
<http://www.asce.org/conferences/deepfound2002>

Third International Conference on Unsaturated Soils

THEME Unsaturated Soils

DATES Starts: Sunday 10 March 2002
Finishes: Wednesday 13 March 2002

VENUE Recife - Brazil

ABSTRACTS By Friday 15 September 2000

PAPERS By Friday 15 June 2001

CONTACT Prof. José Fernando T. Jucá
Email: unsat@npd.ufpe.br
www.ufpe.br/unsat2002

International Conference on Physical Modelling in Geotechnics

THEME	Physical Modelling
DATES	Starts: Wednesday 10 July 2002 Finishes: Friday 12 July 2002
VENUE	St. John's, NF, Canada
ABSTRACTS	By Saturday 31 March 2001
PAPERS	By Friday 31 August 2001
CONTACT	Ms Abigail Steel Phone: +1 709 737 8584 Fax: +1 709 737 4706 Email: Abigail.Steel@c-core.ca www.c-core.ca/icpmg

4th International Congress on Environmental Geotechnics (4th ICEG)

DATES	Starts: Monday 12 August 2002 Finishes: Friday 16 August 2002
VENUE	Rio de Janeiro, Brazil
CONTACT	Luiz Guilherme de Mello c/o Dr Maria Claudia Barbosa, Programa de Engenharia Civil, COPPE-UFRJ, Cidade Universitaria û Ilha do Fundao, PO Box 68506, Rio de Janeiro 21945-970, RJ Fax: +55 21 280 9545 Email: 4iceg@pec.coppe.ufrj.br

12th European Conference on Earthquake Engineering

THEME	Earthquake Engineering and Seismic Risk Mitigation
DATES	Starts: Monday 9 September 2002 Finishes: Friday 13 September 2002
VENUE	Barbican Centre, London
ABSTRACTS	By Wednesday 31 January 2001
PAPERS	By Wednesday 31 October 2001
CONTACT	Rachel Coninx, 12ECEE Secretariat Phone: +44 (0)20 7665 2314 Fax: +44 (0) 20 7233 1743 Email: 12ECEE@ice.org.uk http://www.12ecee.org.uk/

IAEG Congress 2002: Engineering Geology for Developing Countries

DATES	Starts: Monday 16 September 2002 Finishes: Friday 20 September 2002
VENUE	Durban, South Africa

Regional Conference on Geotechnical Aspects of Underground Construction in Soft Ground

THEME	Ground movements prediction and control
DATES	Starts: Monday 16 April 2001 Finishes: Wednesday 18 April 2001
VENUE	Shangai, China

ABSTRACTS

By Friday 30 June 2000

PAPERS

By Wednesday 15 November 2000

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Bulletin Notice Board

Call for Contribution for the Bulletin

The Editorial Board of the Bulletin of the Nepal Geotechnical Society invite our readers to send relevant contributions to be published in the forthcoming issues of the Bulletin. The Editorial board reserves all the rights to publish or not to publish any submitted article/contribution. Before accepting for the publication, the Board may also request for amendments of such contributions, if necessary. The Editorial Board will inform of the status of the acceptance of contributions to the contributors after reviewing it. Contributions, once submitted to the Board, will not be returned to the contributor.

Top priority will be given for the publication of contributions submitted by the members of the Nepal Geotechnical Society. All contributions should be submitted in English language (unless otherwise stated) in an appropriate electronic medium and/or hard copy as required. Since picture of each contributor, whose contribution is accepted for publication, will also be inserted in the contribution, each contributor is requested to submit digital image of his/her picture along with the contribution.

All published contributions will automatically be considered to be the property of the Nepal Geotechnical Society. In case of any question, comment and suggestion, please feel free to contact the Editorial Board.

Graduate Thesis Abstract

Master (or equivalent) and Doctoral (or equivalent) thesis abstracts are published under the theme of

Technical Papers. For the publication of such abstracts, interested member of the Nepal Geotechnical Society should submit his/her abstract to the Editorial Board in time. However, all graduates and graduate students from any university in Nepal, regardless of their membership, are also encouraged to submit their thesis abstracts.

Original Technical Paper

Original technical papers are welcome from members as well as non-members of the NGS. Priority will be given for the publication of the works related to Nepal, and also that of works of the NGS members.

Technical Report

Geotechnical reports related to Nepal are welcome from any interested geo-professional. Such reports are published under the theme of Technical Reports in forthcoming issues of the Bulletin.

Activity Report

Reports based on activities of the Nepal Geotechnical Society are welcome from members of the Society.

Members Page

Individual news, updates, views of the Society members are published under this theme. Interested members of the Society are welcome to submit their contributions.

Front Page Picture of Nepal

Relevant pictures of Nepal to be published in the front page of the forthcoming issues of the Bulletin are welcome from any interested person.

All the picture contributions should be original work of the contributor. Picture already published elsewhere or already submitted for publication elsewhere must not be submitted for the Bulletin. Along with the picture, relevant information such as year and season of the photography, geographical location and geotechnical significance of the picture should also be furnished.

The Editorial Board deserves all the rights to publish or not to publish the received photograph. A decision on the status of publication of the picture will be conveyed to the contributor after examining its appropriateness. However, pictures, once submitted, will not be returned to the contributor, even if it is unpublished. If published, name of the contributor will be duly acknowledged in the Bulletin. If the contribution is decided to be published, its copyright will be considered to have automatically transferred to the Nepal Geotechnical Society.