Assessment of Tertiary Educatioin is a project sponsored by UNDP under a grant signed with HMG in August 1992 and executed by the World Bank in collaboration with HMG and Tribhuvan University. It is designed as a self-study focussed on five major areas: structure, management, financing, quality and the physical facilities of tertiary education. Its main objectives are:

1. to make tertiary education cost-effective and relevant to the national goals of development of human resources and macro-economic growth.

2. To prepare a policy framework for the next decade for tertiary education sector in Nepal, including affordable and alternative financial and policy scenarios for implementation by HMG and the universities

The self-study is designed to address specific policy-related issues and deliberate on and disseminate their findings among the policy-makers, planners, the university faculty and management.

All the studies are conducted almost entirely by national experts from the Tribhuvan University faculty.

The list of major studies sponsored by the project is given in the inside front cover.

FACILITIES RATIONALIZATION STUDY OF TRIBHUVAN UNIVERSITY

EXECUTIVE SUMMARY

1995
Assessment of Tertiary Education
A HMG/Tribhuvan University/UNDP/World Bank Project
NEP/91/011
Kathmandu, Nepal

List of the Studies Conducted by the Project

1. Manpower Needs of Nepal: A Review and Synthesis of the Literature
2. A Study on Current Tution-Fee Waivers and Scholarships in Tribhuvan University
3. A Study on Financing of Higher Education in Nepal
4. Decentralization of the Management of Higher Education in Nepal
5. A Study on Regionalization of Higher Education in Nepal
6. A Study on Internal Efficiency in Tribhuvan University
7. A Study on Instructional Process in Tribhuvan University
8. An Inventory of Tribhuvan University Real Estate
9. Facilities Rationalization in Tribhuvan University
10. Space Survey in the Secondary Schools of Nepal
11. Teacher Availability Study
12. Feeder Schools Survey
13. Civil Works for Higher Secondary Schools
14. Facilities Required for Secondary Schools Upgradation
15. The Transition Plan for the Implementation of Higher Secondary Reform
16. Continuous and Comprehensive Evaluation for Higher Secondary Education
17. Curriculum Framework for Higher Secondary Education
18. SLC Results (1982-1991) Data by Districts and Projections for the Coming Decade

PREFACE

This Executive Summary consists of the findings and recommendations made by a team of specialists who were commissioned by this project to undertake the study at the request of His Majesty's Government and Tribhuvan University to help the university as well as the Government to initiate institutional reforms and policy changes in tertiary education. This is one of the several policy-related studies sponsored by the project.

The Terms of Reference as well as the team of experts who conducted the study are given at the end of this publication. The full text of the report is, of course, voluminous and much longer than this summary. Those who are interested in the complete report may find copies of the report with the Planning Division of Tribhuvan University, the Higher Education Project, Tribhuvan University, Kirtipur, the Resident Mission of the World Bank in Nepal at Kathmandu and the United Nations Development Programme Library at Pulchowk.

10 December 1995

Kamal P. Malla
National Project Coordinator

FACILITIES RATIONALIZATION STUDY OF TRIBHUVAN UNIVERSITY

EXECUTIVE SUMMARY

1. The "Facilities Rationalization Study of Tribhuvan University" was undertaken by the Institute of Engineering Consultancy Services (IECS) of the Institute of Engineering, Tribhuvan University for "Assessment of Tertiary Education Project (ATEP)", a HMG-N/Tribhuvan University/UNDP/World Bank Project-NEP/91/011.

2. The Study had the following objectives :

   - to examine the long term needs for Tribhuvan University facilities in Kathmandu Valley and

   - to formulate recommendations to address the long term development needs in general and to specifically recommend the buildings that are not needed and to propose the method of disposal

   in the light of policy enactments to phase out the Proficiency Certificate Level (PCL) Programmes from all the Institutes and faculties of Tribhuvan University and the policy initiative to introduce the 3 year Bachelor programmes in the Institute of Science and Technology and the faculties.

3. In conformity with the policy enactments and policy initiative mentioned above, IECS commenced its work on January 15 1994, submitted the first draft on September 10, 1994, and submitted a revised draft on October 10, 1994. The final report dated January 15, 1995 is attached herewith.

4. The "Facilities Rationalization Study" was completed in four stages as per the workplan submitted with the original proposal. The relevant data was collected during the First Stage. Based on the enrollment figures for PCL and equivalent programmes as well as the 3 years Bachelor programmes projected till 2003 A.D., different developmental scenarios were developed. The scenarios developed are physical facilities rationalization scenarios and are not at all scenarios related to educational policies. The physical facilities development scenarios developed are based on the sustainability of the programmes, many of which are offered by Campuses which are in close proximity to each other. Because of the unnecessary duplication of the programmes, many of the existing Campuses are multidisciplinary Campuses, which have higher operating costs than Campuses that are unitary and multi-level in nature.

5. Of the 22 Constituent Campuses in the Valley, the central campus of TU., viz. Kirtipur Campus, which offers only postgraduate courses and the technical campuses of the Institute of Engineering and the Institute of Medicine, have not been included in the Facilities Rationalization study because of their unique characteristics. The remaining 16 Campuses, which are given below, have been covered by the Facilities Rationalization Study of Tribhuvan University:

Bhaktapur District

(i) Bhaktapur Campus (ii) Sano Thimi Campus

Lalitpur District

(i) Patan Campus

Kathmandu District

(i)	Amrit Science Campus	(vi)	Padma Kanya Campus
(ii)	Lalit Kala (Fine Arts) Campus	(vii)	Public Youth Campus
(iii)	Mahendra Ratna Campus	(viii)	Ratna Rajya Laxmi Campus
(iv)	Nepal Commerce Campus	(ix)	Saraswoti Campus
(v)	Nepal Law Campus	(x)	Shanker Dev Campus
(xi)	Tri-Chandra Campus		

Campuses with special characteristics in Kathmandu District

(i) Bishwabhasa Campus (ii) Public Administration Campus

6. In 1991/92, the total enrollment in 14 Campuses (excluding Bishwabhasa Campus and Public Administration Campus) was 44, 679. The affiliated campuses had an enrollment of 8,795. Percentage wise, 83.55% was enrolled in the constituent campuses with the remaining 16.45% enrolled in the affiliated campuses.

7. The student enrollments for the period 1988/89 - 1992/93 in the sixteen campuses that were studied are as follows :

STUDENT ENROLLMENTS FOR THE PERIOD 1988/89 - 1992/93 A.D.

SN	CAMPUS	TOTAL STUDENT ENROLLMENT				
		1988/89 (B.S.045/46)	1989/90 (B.S.046/47)	1990/91 (B.S.047/48)	1991/92 (B.S.048/49)	1992/93 (B.S.049/50)
1	Bhaktapur Campus	764	949	949	1136	1077
2	Sano Thimi Campus	150	284	284	306	409
3	Patan Campus	4695	4765	4765	5704	4304
4	Amrit Science Campus	1793	1801	1801	2209	2067
5	Lalit Kala Campus	169	206	206	246	253
6	Mahendra Ratna Campus	981	1782	1782	1535	2160
7	Nepal Commerce Campus	1568	2510	2510	3605	3664
8	Nepal Law Campus	2708	2793	2793	3859	3805
9	Padma Kanya Campus	3715	5032	5032	6044	5271
10	Public Youth Campus	2743	2580	2580	2998	2629
11	Ratna Rajya Laxmi Campus	3272	4452	4452	5089	5276
12	Saraswati Campus	3250	3293	3293	4937	3079
13	Shanker Dev Campus	2028	3566	3566	4151	3707
14	Tri-Chandra Campus	3143	2395	2395	2860	2656
15	Bishwabhasa Campus	724	680	680	1040	521
16	Public Administration Campus	101	466	466	484	396
	TOTAL	**31804**	**37554**	**37554**	**46203**	**41274**

8. An analysis of the enrollment figures for the year 1992-93 indicate an enrollment of 1.26% in programmes of short duration, 53.52% in certificate courses, 36% in Bachelor courses and 9.22% in Master's.

9. In 1991/92, 54.37% of the students studying in 14 constituent campuses were from outside the valley. In 1992/93, the percentage of students from outside the valley was 44.85.

10. The faculty-wise distribution of students in the 1st Year of PCL in 1992/93 was found to be as follows :

Science	:	19.27%
Humanities	:	38.12%
Management	:	33.27%
Law	:	5.93%
Education	:	3.39%

11. The average unit cost (based on recurrent expenditures divided by enrollments) of the Campuses for the 3 year period 1990/91 to 1992/93 have been found to vary from a low of Rs. 1,156 for Shanker Dev Campus to a high of Rs. 12,326 for Sano Thimi Campus. The average enrollments and average unit costs of the Campuses for the 3 year period 1990/91 to 1992/93 are given hereunder :

AVERAGE ENROLLMENTS AND AVERAGE UNIT COSTS FOR THE PERIOD 1990/91 - 1992/93 A.D.

S.N	Campus	Average Enrollment (1990/91-1992/93)	Average Unit Cost (1990/91-1992/93) (Rs)	Ranking Lowest to Highest
1	Bhaktapur	854	5,923	12
2	Sanothimi	512	12,326	15
3	Patan	4,921	3,375	9
4	Amrit Science	2,024	5,027	11
5	Lalit Kala (Fine Arts)	235	8,169	14
6	Mahendra Ratna	1,826	3,468	10
7	Nepal Commerce	3,260	1,328	3
8	Nepal Law	3,486	1,566	5
9	Padma Kanya	5,449	2,603	8
10	Public Youth	2,736	1,328	3
11	Ratna Rajya Laxmi	4,939	1,294	2
12	Saraswati	3,770	1,793	6
13	Shanker Dev	3,741	1,156	1
14	Tri-Chandra	2,637	6,468	13
15	Bishwabhasa	747	2,023	7

12. Some of the inferences that can be drawn from an analysis of the unit costs are as follows :

    a. Small campuses tend to have higher unit costs,

    b. Unitary campuses, except those offering science and education, tend to have relatively less unit costs compared to multidisciplinary campuses,

    c. Campuses offering science and education, whether unitary or multiple in nature, have higher unit costs and

    d. Campuses offering courses of different levels of the same Faculty tend to have less unit costs than those which offer multi-level courses of various Faculties.

13. Based on an analysis of unit costs and the inferences that have been made, the following preliminary recommendations can be made on facilities rationalization :

    a. Small campuses should increase their intake capacity or be merged with other campuses offering courses of the same nature if units costs are to be lowered,

    b. The concept of multiple campuses requires reconsideration from the perspective of increasing its operational efficiency,

    c. Offering various courses of the same Faculty in many campuses without considering their economy of scale also needs rethinking,

    d. The University should formulate a firm policy in the allocation of its resources to various campuses (adopting an incremental annual budgetary policy will continually raise the unit cost of some small campuses),

    e. The enrollment capacity of the campuses should be optimally determined on the basis of available physical facilities,

    f. Teachers assignment in the campuses should also be based on functional ratio in order to maintain a reasonable unit cost and

g. The University should undertake a study not only to analyse the unit cost situation but also identify implementable measures to improve the cost efficiency of these Campuses.

14. Based on existing trends and parameters, the PCL and equivalent level enrollment in the 16 Campuses has been projected to reach 48,413 by the year 2003 A.D. Based on the same trends and parameters, the total enrollment in the 3-year Bachelor course is projected to reach 48,248 by the 2003 A.D.

15. If five (10+2) schools come up every year from 1994/95 onwards (Scenario I), then the number of students in the (10+2) schools is expected to be 21,246 by the year 2003 A.D. If fifteen (10+2) schools come up every year from 1994/94 onwards (Scenario II), then the number of students in the (10+2) schools is expected to be 44,958 by the year 2003 A.D. Under Scenario II, the enrollment capacity of the (10+2) schools as projected for the year 2003 A.D. should be able to accommodate the expected PCL or equivalent student enrollment projected for the year 2003 A.D., in spite of the fact that the projection is based on current trends and parameters. As the current trends and parameters are expected to change due to changes in the educational policies, there should be surplus capacity in the (10+2) schools because of the decrease in the PCL or equivalent student population.

16. Based on prevalent regional norms of 1.2 sq.m./student in the classrooms and 5-10 sq.m./student in the various laboratories, the optimum enrollments that can be accommodated in the existing classrooms, lecture halls and laboratories of the different Campuses (based on a detailed spatial analysis given in Appendix II and the floor plans given in Volume II) vary from a low of 96 students per shift for Public Administration Campus to a high of 1,704 students per shift for Padma Kanya Campus.

The optimal enrollment per shift in the sixteen Campuses that were studied works out to 11,592. If the Campuses that already have a reputation for certain type of courses as well as the campuses identified as district campuses and those that offer unique courses (such as Bishwabhasa, Public Administration) or are unique in nature (such as Padma Kanya Campus which is an all-girls Campus) are allowed to operate two shifts, then the optimal enrollment that can be accommodated works out to 20,040. The 1992/93 enrollment, the average shift-wise enrollment, the enrollment per shift suggested by the Campus, the optimum enrollment capacity per shift as per spatial norms, the recommended shifts and the optimal enrollment based on the recommended shifts for the sixteen campuses that were studied are as follows :

OPTIMUM ENROLLMENT CAPACITY

S.N	Campus	1992/93 Enroll-ment	Average Shift-wise Enrollment 1992/93	Enrollment per shift suggested by Campus	Optimum Enrollment Capacity as per Norms	Reco-mmended Shifts[1]	Total Enrollment as per Norms
1	Bhaktapur	1,077	539	650	480	2	960
2	Sano Thimi	409	409	1,000	912	2	1,824
3	Patan	4,304	1,435	1,187	1,152	2	2,304
4	Amrit Science	2,067	1,034	570	816	1	816
5	Lalit Kala	253	253	125	168	1	168
6	*Mahendra Ratna	2,160	1,080	1,000	576	2	1,152
7	Nepal Commerce	3,664	1,832	1,400	816	1	816
8	*Nepal Law	3,805	1,903	1,040	528	2	1,056
9	Padma Kanya	5,271	2,636	2,350	1,704	2	3,408
10	Public Youth	2,629	1,350	1,000	768	1	768
11	* Ratna Rajya Laxmi	5,276	1,759	834	816	2	1,632
12	Saraswati	3,079	1,027	630	576	1	576
13	Shanker Dev	3,707	1,236	760	624	2	1,248
14	* Tri-Chandra	2,656	886	1,004	1,344	2	2,688
15	Bishwabhasa	521	174	200	216	2	432
16	Public Administration	396	198	175	96	2	192
	TOTAL	41,274	17,751	13,925	11,592		20,040

[1] Bhaktapur and Patan Campuses, by virtue of their being district Campuses should operate 2 shifts. Padma Kanya, being the only girls Campus, should also operate 2 shifts to encourage the girls/working women to take up higher education. In addition, those Campuses identified as unitary and lead Campuses (shown with an *) for each of the different faculties should also operate 2 shifts. The under-utilized Sano Thimi Campus should also operate 2 shifts.

17. Given the policy enactments relating to the phasing out of the PCL programmes from TU and their phasing in into the 10+2 system as well as the opening up of a number of Universities and the resultant decrease that would occur in both the out-of-valley students studying in the Valley Campuses as well as in the total student population studying in the Valley, there is a real possibility of the Valley Campuses operating very comfortably (accommodating optimal enrollment figures) the bachelor level courses.

18. The above possibility is based on the following facts :

(a) the existence of 318 secondary schools in the Valley (some 243 of which belong to the private sector), quite a few of which are capable of offering 10+2 classes to the PCL student population of the valley if they are given reasonable encouragement and incentives;

(b) the existence of a number of Campuses offering only PCL programmes (the Campuses should be persuaded to switch over to 10+2 programmes);

(c) the existence of almost 2000 secondary schools located outside Kathmandu Valley (including almost 1000 secondary schools in the private sector) quite a few of which are capable of starting 10+2 classes to absorb the PCL student population from outside the valley and

(d) the existence of Kathmandu University and setting up of other Universities that will also provide higher level courses thereby decreasing the enrollment pressure on TU.

19. Considering the enrollment projections that have been made, the expected growth of the 10+2 system, the optimal enrollment capacities of the existing TU Constituent Campuses, the changes associated with the introduction of the 3-year Bachelor programmes, the following three different facilities rationalization scenarios have been envisaged :

FACILITIES RATIONALIZATION SCENARIO I :

All the Constituent Campuses to phase out the PCL programmes (to be assimilated by the 10+2, system) and increase the Bachelor intake as well as implement the 3-year Bachelor programme.

FACILITIES RATIONALIZATION SCENARIO II :

Out of the 16 Constituent Campuses, the University to retain ownership of 12 Campuses and make available 4 Campuses to the Council for Higher Secondary Education (CHSE) for expediting the implementation of the 10+2 programme in order to accelerate the phasing out of the PCL programmes from TU, or alternatively to sell the four campuses at commercial rates in order to build an entirely new campus, to accommodate the students and programmes that cannot be adjusted in the 12 Campuses that are retained, to renovate the Campuses that are to be retained by TU and to make funds available to accelerate the phasing out of the PCL programmes from TU.

FACILITIES RATIONALIZATION SCENARIO III :

The University to retain only 9 of the existing Constituent Campuses and build an entirely new campus or a number of new academic complexes in Kirtipur next to the Ring Road to accommodate the students and programmes that cannot be accommodated in the campuses to be retained by TU; thereby, making available seven Campus sites to CHSE to expedite the implementation of the 10+2 programme or to sell the campus sites at commercial rates in order to build a number of academic complexes in Kirtipur, renovate the existing campuses and to make available funds to expedite the phasing out of the PCL programmes from TU.

20. Scenario I is the one favoured by the University and campus authorities because the other two scenarios envisage sacrificing some campuses that could result in student and faculty unrest. The enrollment proposed as per Scenario I is as follows :

PROPOSED ENROLLMENT, SCENARIO I

S.N	Campus	Programmes to be Offered	1992/92 Enrollment		Proposed Optimum Enrollment[1]	Remarks
			Total	Bachelor & Master's		
1	Bhaktapur	Humanities & Mgmt.	1,077	170	960	District Campus.
2	Sano Thimi	Education, Humanities & Science	409	199	1824[2]	Science to cater to students of Bhaktapur district as well.
3	Patan	Humanities & Mgmt.	4,304	1,568	2,304	District Campus.
4	Amrit Science	Science	2,067	542	816	
5	Lalit Kala	Fine Arts (Humanities)	253	38	168	To offer specialized short courses in fine arts.
6	Mahendra Ratna	Education & Humanities	2,160	1,482	1,152	
7	Nepal Commerce	Management	3664	2,017	816	
8	Nepal Law	Law	3,805	2,140	1,056	
9	Padma Kanya	Humanities & Mgmt.	5,271	1,635	3,408	
10	Public Youth	Humanities & Mgmt.	2,629	1,503	768	
11	Ratna Rajya	Humanities	5,276	1,742	1,632	
12	Saraswati	Management.	3,079	1,013	576	
13	Shanker Dev	Management.	3,707	2,477	1,248	
14	Tri-Chandra	Science	2,656	1,743	2,688	
15	Biswabhasa	Humanities	521	-	432	
16	Public Administration	Public Administration (Management)	396	396	192	
	Total	*Humanities* : 8 Campuses *Management*: 8 Campuses *Science* : 3 Campuses *Education* : 2 Campuses *Law* : 1 Campus	41,274	18,665	20,040[3]	

[1] Proposed Optimum Enrollment is based on the optimum that can be accommodated in the existing physical facilities , cf para 2.18 in the main report.

[2] Sano Thimi should be utilized to a greater extent given the huge area of the Campus. It should not only offer bachelor programmes in humanities, education and science but also conduct pre-service and in-service courses on a regular basis.

[3] This total proposed enrollment is based on the available physical facilities of the campuses, some of which have been proposed to be used in two shifts.

21. The faculty-wise distribution of the enrollment proposed under Scenario I is as follows:

PROPOSED FACULTY-WISE ENROLLMENT DISTRIBUTION, SCENARIO I

S.N	Campus	Proposed Faculty-wise Enrollment					TOTAL
		Science	Humanities	Management	Law	Education	
1	Bhaktapur	-	576	384	-	-	960
2	Sano Thimi	360	984	-	-	480	1,824
3	Patan	-	1,056	1,248	-	-	2,304
4	Amrit Science	816	-	-	-	-	816
5	Lalit Kala	-	168	-	-	-	168
6	Mahendra Ratna	-	576	-	-	576	1,152
7	Nepal Commerce	-	-	816	-	-	816
8	Nepal Law	-	-	-	1,056	-	1,056
9	Padma Kanya	-	2,016	1,392	-	-	3,408
10	Public Youth	-	192	576	-	-	768
11	Ratna Rajya	-	1,632	-	-	-	1,632
12	Saraswati	-	-	576	-	-	576
13	Shanker Dev	-	-	1,248	-	-	1,248
14	Tri-Chandra	2,688	-	-	-	-	2,688

Contd...

S.N	Campus	Proposed Faculty-wise Enrollment					TOTAL
		Science	Humanities	Management	Law	Education	
15	Bishwabhasa	-	432	-	-	-	432
16	Public Administration	-	-	192	-	-	192
	TOTAL	3,864	7,632	6,432	1,056	1,056	20,040
	Proposed Enrollment	3,864	7,632	6,672	1,200	672	20,040

22. Scenario II envisages the retention of 12 campuses and disposal of four campuses, viz. Lalit Kala Campus, Nepal Commerce Campus, Public Youth Campus and Saraswati Campus. Under this scenario, a brand new campus is to be built in Kirtipur to accommodate the students and the programmes that cannot be accommodated in the campuses that are to be retained by TU. The criteria that can be used to select the Campuses to be retained by Tribhuvan University are as follows :

a) The demand for higher education in the districts of the Kathmandu Valley;
b) Historical and other expedient factors underlining the need to retain the Campuses by the University;
(c) Gender and social equity factors;
(d) The excellence of specific programmes offered by the Campuses;
(e) The unique nature of the courses offered; and
(f) The adequacy of classroom facilities, the possibility of expansion and the location which will dictate both accessibility and sustainability.

23. Based on the criteria given above, the following Campuses will merit selection for retention by Tribhuvan University :

(a) Bhaktapur and Patan Campuses to be selected because they are district Campuses;
(b) Tri-Chandra Campus to be selected because it was the first Campus (College) to be opened in the country and Amrit Science to be selected because it was the first private science Campus that has succeeded in maintaining a record of excellence in the teaching of science;
(c) Padma Kanya Campus, the only all-girls Campus in the Valley, to be selected on the basis of gender and social equity;
(d) Shanker Dev, rated the best for Management (Commerce), Ratna Rajya, the best for Humanities, Mahendra Ratna, which caters exclusively to students of education and Nepal Law which caters exclusively to the students of law, to be selected on the basis of excellence of programmes;
(e) Public Administration Campus, Bishwabhasa and Lalit Kala to be selected on the basis of uniqueness of courses; and
(f) Sano Thimi Campus to be selected on the basis of ample scope for expansion (though it may not be preferred at present because of the distance from Kathmandu).

24. The enrollment proposed as per Scenario II is as follows :

PROPOSED ENROLLMENT, SCENARIO II

S N	Campus	Programmes to be Offered	1992/93 Enrollment		Proposed	Remarks
			Total	Bachelor & Master's	Optimum Enrollment[1]	
1	Bhaktapur	Humanities & Management	1,077	170	960	
2	Sano Thimi	Education, Humanities & Science	409	199	1,824	Sano Thimi should offer a wide range of refresher courses.
3	Patan	Humanities & Management	4,304	1,225	2,304	
4	Amrit Science	Science	2,067	461	816	
5	Mahendra Ratna	Education & Humanities	2,160	1,482	1,152	Adequate scope for expansion
6	Nepal Law	Law	3,805	2,140	1,056	
7	Padma Kanya	Humanities & Management	5,271	1,635	3,408	
8	Ratna Rajya	Humanities	5,276	1,742	1,632	
9	Shanker Dev	Management	3,707	2,477	1,248	
10	Tri-Chandra	Science	2,656	1,743	2,688	
11	Bishwabhasa	Languages & Fine Arts (Humanities)			432	
12	Public Administration	Public Administration (Management)	396	396	192	
	Total	*Humanities* : 7 Campuses *Management*:5 Campuses *Science* : 3 Campuses *Education* : 2 Campuses *Law* : 1 Campus	31,128	13,670	17,712[2]	

[1] These optimum enrollments are based on the existing physical facilities, cf para 2.18 in the main report.

[2] This total falls short of the 20,040 that is expected to be in 3 years bachelor programme. This shortfall should be provided for in a new Campus.

From the above-given table, it will be seen that the 12 Constituent Campuses will be able to accommodate 17,712 students.

25 The faculty-wise distribution of the enrollment proposed under Scenario II is as follows :

PROPOSED FACULTY-WISE ENROLLMENT DISTRIBUTION, SCENARIO II

S N	Campus	Proposed Faculty-wise Enrollment					TOTAL
		Science	Humanities	Management	Law	Education	
1	Bhaktapur	-	576	384	-	-	960
2	Sano Thimi	360	984	-	-	480	1,824
3	Patan		1,056	1,248	-	-	2,304
4	Amrit Science	816	-	-	-	-	816
5	Mahendra Ratna	-	576	-	-	576	1,152
6	Nepal Law	-	-	-	1,056	-	1,056
7	Padma Kanya	-	2,016	1,392	-	-	3,408
8	Ratna Rajya	-	1,632	-	-	-	1,632
9	Shanker Dev	-	-	1,248	-	-	1,248
10	Tri-Chandra	2,688	-	-	-	-	2,688
11	Bishwabhasa	-	432 Language, Fine Arts	-	-	-	432
12	Public Administration	-	-	192 Public Administration	-	-	192
	Total	3,864	7,272	4,464	1,056	1,056	17,712
	Proposed Enrollment	3,864	7,632	6,672	1,200	672	20,040
	Required : New Campus in Kirtipur	-	360	2,208	-	-	2,568

From the table given above, there is surplus provision for the Education faculty and a slight shortfall in the provision of student places in the Law faculty. A brand new Campus will be required to accommodate 360

Humanities students and 2,208 Management students. The new Campus must therefore have an enrollment capacity of 2,568.

26. Scenario III envisages the retention of 9 Constituent Campuses by TU and giving up seven Campuses, viz. Amrit Science, Lalit Kala, Mahendra Ratna, Nepal Commerce, Nepal Law, Public Youth and Saraswati. The criteria that can be used for selection of Campuses to be retained by TU are the criteria given in para 22. Using the same criteria, the following Campuses can be selected for retention :

a) Bhaktapur and Patan Campuses based on the first criterion;

b) Tri-Chandra Campus based on the second criterion (this Campus can specialize in Science);

c) Padma Kanya Campus based on the third criterion;

d) Shanker Dev Campus and Ratna Rajya Laxmi Campus based on the fourth criterion (Shanker Dev can specialize in Management, whilst Ratna Rajya can specialize in Humanities);

e) Public Administration Campus, which is the only Campus offering Master's in Public Administration, and Bishwabhasa Campus based on the fifth criterion. Bishwabhasa Campus can be developed as a School of Languages & Fine Arts offering both language courses and fine arts courses (this Campus could cater to the special needs of both foreigners and Nepalese); and

f) Sano Thimi Campus, with ample scope for expansion, based on the sixth criterion (Sano Thimi could focus on education).

27. The enrollment proposed as per Scenario III is as follows :

PROPOSED ENROLLMENT, SCENARIO III

SN	Campus	Programmes to be Offered	1992/93 Enrollment		Proposed [1] Optimum Enrollment	Remarks
			Total	Bachelor & Master's		
1	Bhaktapur	Humanities & Management	1,077	170	960	
2	Sano Thimi	Education, Humanities & Science	409	199	1,824	Sano Thimi should also offer a wide range of refresher courses.
3	Patan	Humanities & Management	4,304	1,225	2,304	
4	Padma Kanya	Humanities & Management	5,271	1,635	3,408	
5	Ratna Rajya	Humanities	5,276	1,742	1,632	
6	Shanker Dev	Management	3,707	2,477	1,248	
7	Tri-Chandra	Science	2,656	1,743	2,688	
8	Bishwabhasa	Languages & Fine Arts (Humanities)	-	-	432	
9	Public Administration	Public Administration (Management)	396	396	192	
	Total	Humanities : 6 Campuses Management: 5 Campuses Science : 2 Campuses	23,096	9,587	14,688	

[1] The proposed optimum enrollment is based on the optimum that can be accommodated in the existing physical facilities, cf. Para 2.18.

From the above table, it will be seen that 9 Constituent Campuses will be able to accommodate 14,688 students.

28. The faculty-wise distribution of the enrollment proposed under Scenario III is as follows:

PROPOSED FACULTY-WISE ENROLLMENT DISTRIBUTION, SCENARIO III

S.N.	Campus	Proposed Faculty-wise Enrollment					TOTAL
		Science	Humanities	Management	Law	Education	
1	Bhaktapur	-	576	384	-	-	960
2	Sano Thimi	768	-	-	-	1,056	1,824
3	Patan	-	1,056	1,248	-	-	2,304
4	Padma Kanya	-	2,016	1,392	-	-	3,408
5	Ratna Rajya	-	1,632	-	-	-	1,632
6	Shanker Dev	-	-	1,248	-	-	1,248
7	Tri-Chandra	2,688	-	-	-	-	2,688
8	Bishwabhasa	-	432 Language, Fine Arts	-	-	-	432
9	Public Administration	-	-	192 Public Administration	-	-	192
	Total	3,456	5,712	4,464	-	1,056	14,688
	Proposed Enrollment	3,864	7,632	6,672	1,200	672	20,040
	Required : New Campus in Kirtipur	408	1,920	2,208	1,200	-	5,736

From the table given above, there is surplus provision for the education faculty. A number of new academic complexes proposed to be built in Kirtipur along the Ring Road must accommodate 408 Science students, 1,920 Humanities students, 2,208 Management students and 1,200 Law students. The total enrollment capacity of the new academic complexes will work out to 5,736.

29. Financial Implications of Scenario I :

With decreased enrollments, the fees collected from the students would decrease proportionately. If academic environments are to be improved, it should be made mandatory for the Campuses to abide by the optimum

enrollments which have been worked out on the basis of the existing physical facilities. To make up for the loss of revenue from the decreased enrollments, the TU/Campus authorities must increase the fees that are charged, which, even the students will agree, are abysmally low. This must be done in conjunction with systemic reforms, the most sensitive of which will be cutting down on the excess staff and giving the faculty members a reasonable teaching load that is, at least, at par with those existing in the other SAARC countries. Only then will the Campuses not only generate additional revenue but feel compelled to minimize wasteful expenditure and use properly the revenue generated. By adopting sensible housekeeping measures, some money could even be saved for essential repairs and maintenance. Since this Scenario does not foresee giving up any of the Campuses, the advantages associated with giving up the Campuses (the commercial rates of the properties are so high that, if sold, the money would be available to build new and better Campuses) need not be discussed here

30. Financial Implications of Scenario II :

The loss of revenue from the students (because of decreased enrollments) can be made up by the measures which have already been explained in the para 29. By disposing of four campuses, viz. Lalit Kala, Nepal Commerce, Public and Saraswati Campuses, TU will have Rs. 215,835,000 (Rupees 215.835 million , that is Rs. 21.5835 crores) to build a new Campus to accommodate 2,568 students, renovate the Campuses that will be retained by TU., as well as make available a substantial amount of funds to accelerate the phasing out of the PCL programmes. The valuation of the four campuses that are to be disposed off under this Scenario is given hereunder :

VALUATION OF FOUR CAMPUSES TO BE GIVEN UP BY TU AS PER SCENARIO II

S.N.	CAMPUS	LAND		BUILDING		TOTAL VALUE (Rs.'000)
		Area (In ropani)	Value Rs.'000	Floor Area (sq.m.)	Value Rs.'000	
1	Lalit Kala	1-12-0-0 (0.09 hectares)	28,350	1,187	837	29,187
2	Nepal Commerce	21-0-0-0 (1.07 hectares)	43,050	4,115	10,679	53,729
3	Public Youth	8-11-1-1 (0.44 hectares)	53,984	3,062	7,623	61,607
4	Saraswati	10-14-3-3 (0.56 hectares)	65,602	1,965	5,710	71,312
	TOTAL	42-6-1-0	190,986	10,329	24,849	215,835

31. As per Scenario II, a new Campus with an enrollment capacity of 2,568 is proposed to be built on TU land in Kirtipur along the Ring Road. If 3 sq.m. is provided per student place, the total built-up area that will be required is 7,704 sq.m. As per prevailing norm, the land requirement for the above calculated built-up area is 3 times the built-up area, which works out to 23,112 sq.m. The new Campus is expected to cost Rs. 122,794,056.00 (Rupees 122.794 million) leaving a balance of Rs.93,040,944.00 (Rs. 93.041 million) for renovating the Campuses to be retained by TU and for accelerating the phasing out of the PCL programmes.

TENTATIVE COST OF NEW CAMPUS AS PER SCENARIO II

Construction Cost 7,704 sq.m.	@ Rs 12,000/sq.m.	=	Rs. 92,448,000.00
Land Development Cost :	@ 10% of Construction Cost	=	Rs. 9,244,800.00
Furniture Cost :	@ 5% of Construction Cost	=	Rs. 4,622,400.00
		=	Rs. 106,315,200.00
Consultancy Fees	@ 5%	=	Rs. 5,315,760.00
Total			Rs. 111,630,960.00
Contingencies & Miscellaneous	@ 10% of Total	=	Rs. 11,163,096.00
GRAND TOTAL			Rs. 122,794,056.00

32. Financial Implications of Scenario III :

In this scenario as well, there will be a loss of revenue from the students (because of decreased enrollments) which can be made up by the measures which have already been explained. By disposing of seven Campuses, viz. Amrit Science, Lalit Kala, Mahendra Ratna, Nepal Commerce, Nepal Law, Public Youth and Saraswati Campuses, TU will have Rs. 596,562,000.00 (Rupees 596.562 million, that is Rs. 59.6562 crores) to build a few more new Campuses to accommodate 5,736 students, to renovate the Campuses that will be retained by TU. as well as a substantial amount of funds to accelerate the phasing out of the PCL programmes. The valuation of the seven Campuses that are to be disposed off under this Scenario in given hereunder :

VALUATION OF SEVEN CAMPUSES TO BE GIVEN UP BY TU AS PER SCENARIO III

SN	CAMPUS	LAND		BUILDING		TOTAL VALUE (Rs.'000)
		Area (In ropani)	Value Rs.'000	Floor Area (sq.m.)	Value Rs.'000	
1	Amrit Science	22-7-2-0 (1.43 hectares)	153,911	7,675	12,714	166,625
2	Lalit Kala	1-12-0-0 (0.09 hectares)	28,350	1,187	837	29,187
3	Mahendra Ratna	50-10-3-0 (2.58 hectares)	119,079	3,911	5,700	124,779
4	Nepal Commerce	21-0-0-0 (1.07 hectares)	43,050	4,115	10,679	53,729
5	Nepal Law	7-12-2-3 (0.40 hectares)	82,606	3,300	6,717	89,323
6	Public Youth	8-11-1-1 (0.44 hectares)	53,984	3,062	7,623	61,607
7	Saraswati	10-14-3-3 (0.56 hectares)	65,602	1,965	5,710	71,312
	TOTAL	123-5-0-3	546,582	25,215	49,980	596,562

33. As per Scenario III, a number of academic complexes with a total enrollment capacity of 5,736 has been proposed to be built on TU land in Kirtipur along the Ring Road. If 3sq.m. is provided per student place for the Humanities, Management and Law faculties and 6 sq.m. is provided per student place for the science students then the 1,920 students of Humanities will require a total built-up area of 5,760 sq.m. and a land area of 17,280 sq.m. (as per prevailing norm which stipulates the land area requirement to be 3 times the total built-up area), the 2,208 students of Management will require a total built-up area of 6,624 sq.m. and a land area of 19,872 sq.m.; the 1,200 students of Law will require a total built-up area of 3,600 sq.m. and a land area of 10,800 sq.m. and 408

student of science will require a total built-up area of 2,448 sq.m. and a land area of 7,344 sq.m. The new academic complexes are expected to cost Rs. 293,787,648.00 (Rupees 293.788 million) leaving a balance of Rs. 302,774,352.00 (Rupees 302.774 million) for renovating the Campuses to be retained by TU and accelerating the phasing out of the PCL programmes from TU.

TENTATIVE COST OF ACADEMIC COMPLEXES AS PER SCENARIO III

Construction Cost			
Humanities Block : 5,760 sq.m.	@ Rs. 12,000/sq.m.	=	Rs. 69,120,000.00
Management Block : 6,624 sq.m.	@ Rs. 12,000/sq.m.	=	Rs. 79,488,000.00
Law Block : 3,600 sq.m.	@ Rs. 12,000/sq.m.	=	Rs. 43,200,000.00
Science Block : 2,448 sq.m.	@ Rs. 12,000/sq.m.	=	Rs. 29,376,000.00
			Rs. 221,184,000.00
Land Development Cost	@ 10% of Construction Cost	=	Rs. 22,118,400.00
Furniture Cost	@ 5% of Construction Cost	=	Rs. 11,059,200.00
			Rs. 254,361,600.00
Consultancy Fees	@ 5%		Rs. 12718080.00
Total		=	Rs. 267,079,680.00
Contingencies & Miscellaneous	@ 10% of Total	=	Rs. 26707968.00
GRAND TOTAL			Rs. 293,787,648.00

34. Implementation plans have been proposed for all three scenarios. These are given in chapter 8 of the main report.

TERMS OF REFERENCE FOR FACILITY RATIONALIZATION STUDY OF TRIBHUVAN UNIVERSITY

The study will examine the long-term needs (e.g. year 2008) for university facilities in the Kathmandu Valley in light of the expected removal of the +2 students from them. It should consider what facilities the university will need in light of :

- current size of faculties and projected rates of student increases in the Bachelor's and Master's degree levels : (Demand for Master's degrees may taper off after the three-year Bachelor's degree is instituted and if civil service promotions are changed on that basis.)

- state and size of the buildings, attachment of dormitories and cafeterias, space for professors' offices, proximity to where secondary-school use might be best located);

- unit costs (smaller facilities have higher unit costs);

- duplication of fields of study (Amrit, Trichandra, etc. all teach science, various colleges teach humanities);

-security, ease of communication between faculty and administration, flexibility of employing professors where they are needed with little regard to transportation problems;

- potential for developing the Kirtipur campus to locate most of the Valley's campuses

- The study should make recommendations for the long-term development of needed buildings and disposal of unneeded buildings:

- Make recommendations on possible new buildings and their locations and give rough cost estimates.

- Recommend how resources could be mobilized to obtain these new buildings given their estimated cost (e.g., sale of other university property, external donors).

- Consider exchange of buildings with others more conveniently located that are owned by the Ministry of Education and Culture or other public agencies or with conveniently located vacant land.

- Consider long-term lease/use arrangements to MOEC for +2 students and under what terms they could be undertaken to safeguard the continuity of the university property. Could vacant land (inside or outside the valley) be exchanged for them?

- Given the projected university population of the year 2010 (assuming a three-year Bachelor's degree, no +2 students, and slow-growing Master's degree programs) give a list or number of buildings likely to be needed at that time under various scenarios :

(a) if no new building are used; (b) if certain new buildings are built.

- Develop a phased plan to construct or obtain the facilities needed, including the possible retrieval of buildings that might be leased to the Ministry of Education and Culture for the +2 implementation.

The consultants who will conduct this study should be very familiar with the university's buildings in the Kathmandu valley. A site inspection of all should be made.

Research Team and Budget for the study on
Facilities Rationalization Study of Tribhuvan Univeristy
Executed by Institute of Engineering Consultancy Services

Budget : NRs 536,403

Duration : 8 months; effective from December 14, 1993 to August 14, 1994

Final Report to be submitted on August 14, 1994

Submission of Final Report on January 15, 1995

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