



# **11<sup>th</sup> FYP HRD MASTER PLAN FOR THE ECONOMIC SECTORS (2013-18)**

Developed and Designed by  
**Human Resource Development Division**  
**Department of Human Resources**  
**Ministry of Labour and Human Resources**

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## FOREWORD

The Royal Government of Bhutan (RGoB), since the inception of its planning process has accorded high priority to human resource development. Well-planned and developed human resources are a means to achievement of our national goals.

During the 9th FYP, the Royal Government took the initiative in developing the first comprehensive HRD Master Plan for the Private and Corporate sectors and the Ministry of Labour and Human Resources (MoLHR) was mandated to take the role of planning, developing and implementing HRD for the sector. This was to acknowledge the increasing role of the private sector in the economy and to facilitate it to become 'the engine of growth' as well as the major employer of the increasing Bhutanese labour force. Since then, there has been an increasing shift in the focus from the Government to the private sector for economic development and employment generation. There was keen support from development partners such as Australian Government, Government of India, World Bank, the Netherlands Government and others in the implementing 10th FYP HRD Master Plan.

MoLHR is now proud to present the 11th FYP HRD Master Plan (2013-18). Compared to the previous two plans, this Master Plan is more comprehensive in its scope and objectives to fulfill the role of MoLHR as the apex agency for Human Resource Development and employment facilitation in the country. The plan now includes all entities and agencies outside the civil services besides the private and corporate organizations which are seen as key players in the economy and with the potential for employment generation.

The Master plan provides an analysis of the current labour market dynamics, especially in the private sector to identify key HRD challenges and issues. It has not only identified the HRD requirement for in-service employees engaged in different economic sectors, but also the supply of human resources required in the various sectors. The supply of human resources or skills is expected to be met through the pre-service skills development and vocational training programs and is targeted to address skills shortages and employment of school graduates. The targeted in-service human resource development programs are expected to enhance productivity and knowledge creation in the economy.

In the past, the MoLHR has been an active implementer of private sector HRD. The 11th FYP HRD Master plan will pave way for MoLHR to become a HRD facilitator rather than implementer and to integrate HRD well into the private and corporate sector's organizational strategies. Hence, the Master Plan also provides strategic guidance on the role of the MoLHR, the HRD implementing agencies and the private sector. Besides, the document is also expected to bring about synergy in HRD plans and policies and coordinated effort. Therefore, I hope all stakeholders will find this Master plan a useful guide and will render their full cooperation and collaboration in successful implementation of the plan.

*"Investment in Human Resource Development provides the firmest foundation for lasting development"*

Tashi Delek !



PEMA WANGDA  
SECRETARY (MoLHR)



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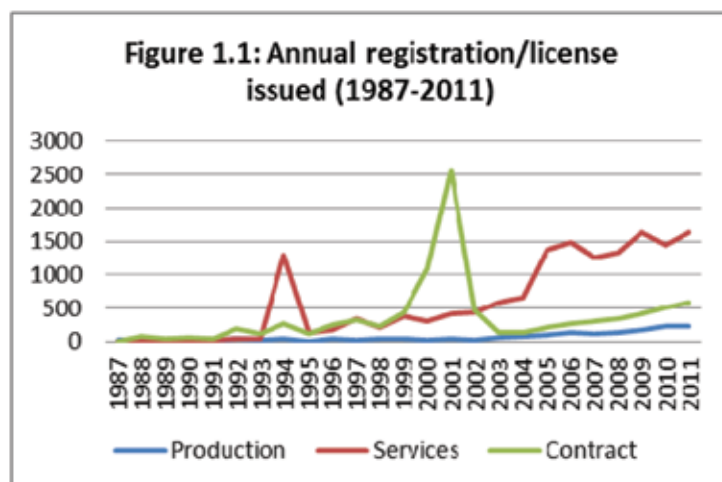
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**Part I**  
**Labour Market**  
**Context**





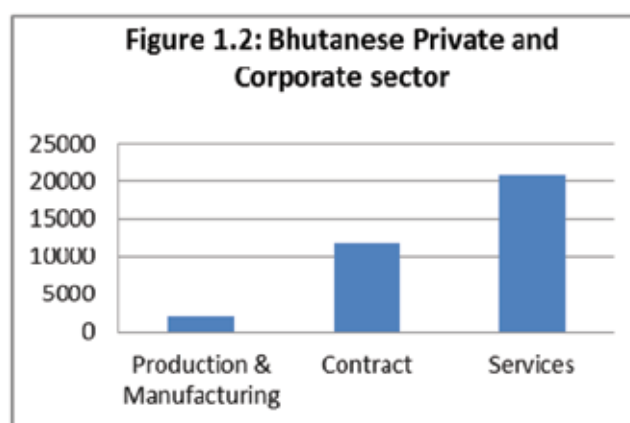
## PART I LABOUR MARKET CONTEXT



In Bhutan private sector is one of the largest employment and revenue generating sectors, and it has largely depended on the Government for its sustenance and development. In fact in the absence of a private entrepreneurial class, Government initially undertook a number of activities which are commercial in nature in addition to developmental functions. It took 20 years of planned development for the Government to recognize the private sector as a partner in socio economic development of the country. The Bhutan Chamber of Commerce (BCCI) comprising of business community members from all around the country was established in 1980 to represent

and nurture the private sector, and consequently the sector development received an increasing focus. The Government started by corporatizing some of its services and began divestment of Government equity of its commercial ventures. Transport, road building and maintenance, Government workshops, tourism and hotel industry were the first of the services to be corporatized/ privatized. This was followed by postal and telecom services, power plant construction and electricity distribution, and manufacturing plants of cement, ferro alloy and wood board products. More recently the Government corporatized the broadcasting and national newspaper and opened up the media sector. Finance, banking and insurance services, education and selected medical services are the latest additions to this.

Overall, the number of business establishments has grown rapidly, especially amongst the service and contract firms. However, what has stagnated is the manufacturing establishments. Requirement of larger capital and infrastructure, limited raw materials as well as knowledge gap has inhibited the growth of this sector, despite the country enjoying some significant advantage such as easy access to the Indian market as well as cheaper power tariff.



### 1.1 Composition of the Private Sector

As of 2011, there were 34,692 business establishments. The majority of these are in hospitality and tourism, trading, ICT, education and finance sectors. This is followed by contract and construction firms. The production and manufacturing units comprise of only 6% of the establishments.

Bhutanese firms are classified according to their assets as well as the number of employees. Large scale firms are expected to employ over 100 people, medium and small scale establishments are expected to employ between 20-99, and 5-19 people respectively while cottage scale industries are expected to employ 1-4 people. Bhutanese private sector is dominated by family operated small and cottage industries. In fact, only 1% of the establishment features within the large and medium scale categories.

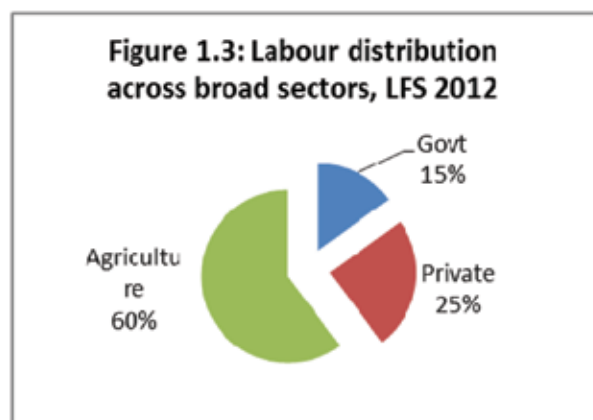
Corporations including Government owned establishments are in large scale industries category. Overall, there is a greater appreciation now than ever of the role of the private sector. The sector has penetrated in areas that were traditionally considered exclusive domain of the public sector or too sensitive to be privatized, such as the telecommunications, print media and radio services. The private sector has brought additional resources to many services and consequently greater choice to the people. In banking and insurance for example, private establishments have pushed down the interest rates and extended the bar on quality of services.

Size of establishments	Numbers
Large scale	133
Medium scale	220
Small scale	2,649
Cottage scale	19,774
Other (Contract)	11,916
<b>Total</b>	<b>34,692</b>

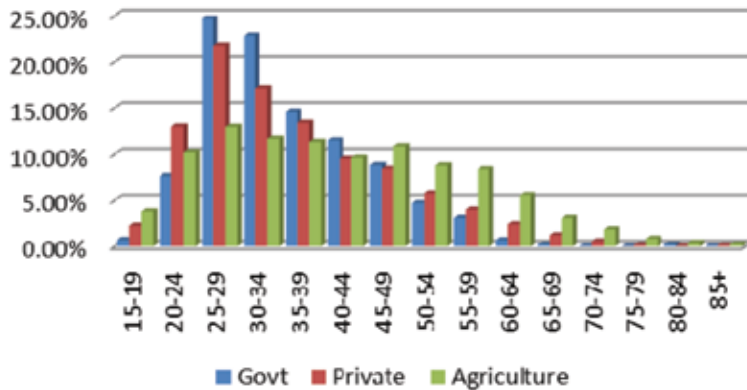
Despite these developments, private sector is described as weak and at a nascent stage of development. This can be attributed to the inability of the sector to respond effectively to the challenges and opportunities being provided by the developments taking place within the country. To build a strong private sector requires clarity of policy and good regulations. More so it needs competent human resources to lead the sector and a skilled labour force that is inspired to work in all categories of jobs.

## 1.2 Labour Force distribution and their characteristics

The total labour force in the country is estimated at 329,478 or 64% of the population. Bhutan’s Labour force is predominantly dependent on agriculture sector with 62% engaged in this sector, that too mostly subsistence farming. While the numbers in the agriculture sector has been decreasing steadily, this proportion still ranks the highest within the South Asian region. Government employees including the security forces comprise of 15% of the total employed. The private sector which includes the Government owned corporations and establishments accommodate 25% of the employment. Private sector is considered the impetus for growth and the Government has increased attention on developing this sector for employment generation as well as sustainable economic growth. Therefore, the private sector development is the main focus for this HRD Master Plan.

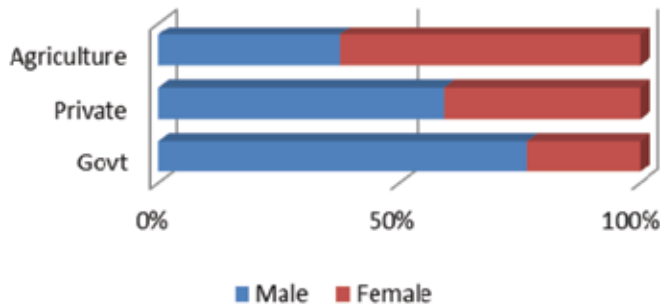


**Figure 1.4: Age profile of the employed - LFS 2012**



There is significant difference in the age profile of the employed amongst public, Government and in the agriculture sectors. Both the private and Government agencies have a larger proportion of youth. In fact the average employees' age of some of the new companies such as Tashi Infocomm is 26. In contrast, the agriculture sector employs an older population. This is understandable given that the country has attained universal primary education which has facilitated many of the younger generation to find employment opportunities outside the traditional agriculture sector.

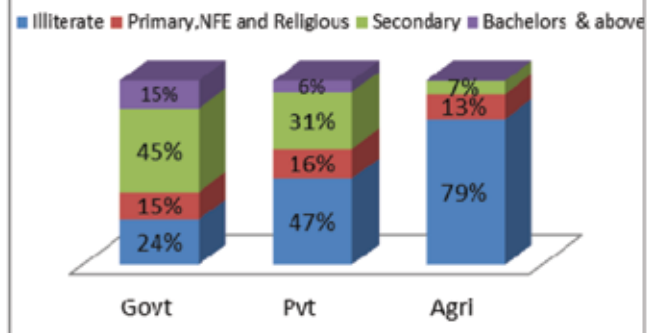
**Figure 1.5: Gender profile of the employed- LFS 2012**



There is significant difference in educational attainment across these broad sectors. The first choice of employment has always been the Government. Therefore the Civil Service generally attracts and employs the most qualified personnel. Second preference is the public corporations, where the salary scale and associated perks are even higher than the civil service.

Out of an estimated 13,303 people with university level education, 7,496 (58%) are in the Civil service, 1,549 (12%) are in Government corporations and only 3,551 (27%) are in the private sector establishments. Agriculture is no longer an option for most school leavers. However there is an estimated 350 university graduates in the agriculture sector. Considering that there was only 100 university graduates engaged in this sector in 2006, this shows some interesting development.

**Figure 1.6: Qualification by broad employment sectors**



In terms of gender, labour force participation in Agriculture has the highest proportion of female employees comprising of 62% of the sector's labour force. Followed by the private sector with 42% female employees and finally in the Government with only 25% female employees. This is a result of less female enrollment in schools in the past. The gap in enrollment has now been closed at the primary and secondary levels and this is expected to help improve the girls' enrollment ratio at the higher education level. This should overtime impact positively the gender distribution across the employment sectors.

### 1.3 Human Resource Development Mechanism

The three key agencies involved in education and training in the country are the Ministry of Education, Ministry of Labour & Human Resources and the Royal University of Bhutan. Their respective programs are described by the figure. Most of the education and training institutes are public provision although there is an increasing level of private participation in the training and the higher education sub-sectors. The Government has consistently been spending 16% of its budget on human resource development activities<sup>1</sup> during the last 5 years.



#### Existing HRD Challenges

- 1 While the constraints of human resources in Bhutan have been easy to define and predict, effective planning to address the constraints has been problematic. Traditionally Human Resource Development be it education or training had a strong focus on building a strong civil service. This is one factor consequently the inability of the private sector to compete with the attractions offered by the civil service, the peculiar social milieu that continues to embrace and even unconsciously promote deep rooted prejudices against menial and non-desk jobs, and the abiding deficiencies of the Bhutanese education system in developing intellect and creativity amongst its scholars continue to frustrate the efforts of HRD for the private sector. Also while higher level skills and knowledge may represent the single most important constraints to the industrial development, the industries themselves are not able to recognize this because of these very deficiencies.
- 2 Ultimately, the labour force in Bhutan is shaped not by the Government policies and program but the individual obsession to upgrade to a higher level of profession in the increasingly stratified society. The conflict between Government policy intent and actual outcomes can be illustrated at school education, higher education and technical education.
- 3 For general education, the Government made a conscious decision to provide universal 11 years of basic education till Class X. At the same time it limited the free scholarships for higher secondary to 40% of those completing Class X. The intent was that this would force many students to take up vocational courses in the TTIs established for this purpose. In practice, a majority of the class X passed

<sup>1</sup> Annual Financial Statements and the Budget Reports

graduates are finding ways to continue their academics, most of them in the private higher secondary schools, some repeating, while some even study outside the country. Of the 2011 class X cohort, 71% continued their studies (40% in public and 31% in private), 11% did not get their certificates out of which many would be repeating, and only 18% left the school system<sup>2</sup>.


- 4 In TVET subsector, the conflict is much more pronounced. While there were an estimated 1,800 grade X passed students leaving the schooling system, the numbers that eventually entered the TTIs were only 415<sup>3</sup>. This was despite the numerous programs established to make TVET more attractive.
- 5 After higher secondary or Class XII, the number of seats in the Royal University put a similar restriction to tertiary level education. But here too, people who do not qualify for RUB courses or scholarships find ways of financing their own studies, some enrolling in rather shady colleges in the region established just for such students. This combined with the RUB's expansion in response to perceived industrial demands will result in the number of annual University graduates tripling between 2012 and 2017, leading to an oversupply in many of the disciplines. This can result in serious educated unemployment issue unless of course, the private sector is able to respond to these new opportunities, but with its present mindset and the education profile of its managers, this is quite unlikely.

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2 From 2012 Education Statistics, Ministry of Education.

3 Administrative record of TVET Section, MoLHR



The background is a vibrant green with a gradient from light yellow-green at the top to a darker green at the bottom. Numerous thin, bright yellow-green lines radiate from the top left, creating a sense of motion and energy. Scattered throughout the scene are many small, semi-transparent white squares, some of which appear to be floating or falling, adding a dynamic and modern feel to the design.

**Part II**  
**Review of 10th**  
**FYP HRD**  
**Master Plan**





## PART II REVIEW OF 10<sup>TH</sup> FYP HRD MASTER PLAN (2008-2013)

Two important guiding instruments of the 10<sup>th</sup> FYP HRD Master plan for the private and corporate sector (2008-2013) was the Economic Development Policy of 2010 which established a framework of the priority sectors for growth, and the HRD chapter of the GHNC's 10<sup>th</sup> FYP which identified major skills gaps particularly in the areas of professional and high skilled occupations impeding economic development and sought for a resolution during the plan period. It strove to develop quality and critical mass of human capital to foster a culture of creativity, innovation and enterprise, and thereby facilitating poverty reduction in the country. The plan also recognized that most of the educated youths seeking employment are without the necessary skills which limit their employability and access to quality employment. Hence, it has proposed provisioning of appropriate training to enhance their prospects for gainful employment.

The Tenth Five Year HRD Master Plan for Corporate Sector was designed to fulfill these and the Government's vision of providing productive and meaningful employment to all citizens through education and training. To some extent the master plan was an employment plan as much as it was an education and training plan.

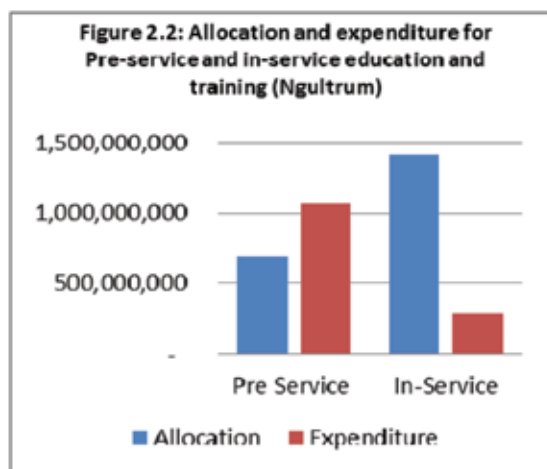
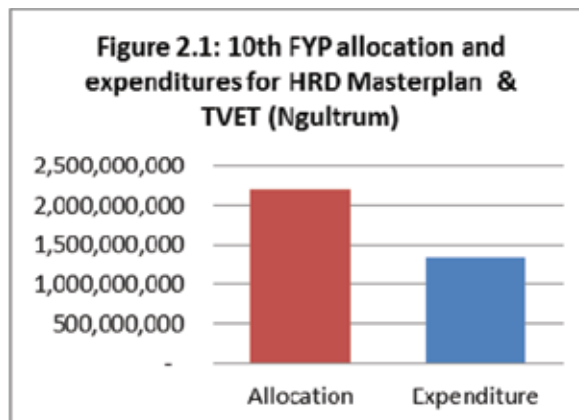
### Objectives of the 10<sup>th</sup> FYP HRD Master plan

The following were the objectives stipulated in 10th HRD Masterplan document.

- (i) Guide private and corporate sector HRD and to enable private and corporate sector to understand economic policy direction of the country,
- (ii) Promote private and corporate sector growth through support in building appropriate human resource capacities in the private and corporate sector,
- (iii) Ensure and enhance need based HRD training programs catering to the present and future needs of the private sector and corporate sector.
- (iv) Promote coordination among different HRD agencies in implementing various HRD activities;
- (v) Develop appropriate skills among Bhutanese youth to emerging needs of the private and corporate sectors.
- (vi) In addition, the Master plan contained two strategic subsidiary objectives. One was the development of in-country training capacities through partnership with renowned external training institutes. Another was to get the private sector to spend more of their own resources in developing their own human capital.

## 2.1 Implementation against Plan

The total allocation for the HRD Master plan was Nu 1,600 million, which was a modest increase over the 9th Plan allocation of 1,500 million. This did not include allocation for the TVET program implemented through the TTIs and IZCs, although it forms the Ministry’s core HRD program serving mostly the private sector needs. The total estimated expenditure as of date which includes the committed funds for fellowships that are ongoing is Nu 750.442 million or 46% of the allocation<sup>4</sup>. In-addition to this the allocations and expenditures on TVET estimated at Nu 600 million<sup>5</sup>, provides an achievement level of 61%<sup>6</sup>. This however does not include the expenditures on various other HRD programs under the MoLHR such as village skills development program, special skills development program and expenditures directly incurred by the private sector establishments and corporations. Further it does not include expenditures by other line Ministries and agencies in TVET programs.



The HRD Master plan covered in-service and some elements of pre-service education and training. While the plan apparently tried to give greater attention to in-service needs targeting to cover almost double the number as for pre-service candidates, there appears to have been a reversal of priorities in favor of pre-service during the implementation. First, the issue of educated unemployment became a much publicized national agenda, and the priorities for the programs apparently shifted to training and finding jobs for the new school leaver and graduates. All the undergraduate programs during the plan period were reserved for pre-service candidates. Apprenticeship program, which is considered as one of the flagship and successful program leading to over 50% rate of absorption in the job market continued to receive

greater attention during the plan period. Similarly, the Ministry’s short term training programs were mostly targeted at the new school leavers to provide them the skills to find job placements. These will be discussed in greater detail below.

### 2.1.1 Pre-service HRD programs

Pre-service HRD programs were intended to address skills gaps in major industries identified as growth areas by the Government. This covered long term fellowships for undergraduate studies in India and third countries based on the requisition put in by the corporate and the private sector, apprenticeship training programs mostly for school leavers, and a series of short vocational courses conducted both within and outside the country. To this must be added the 2 year Certificate Level vocational training program implemented by the 6 TTIs and 2 IZCs. Against a total of 7,987 target beneficiaries, MoLHR has implemented programs covering 6,663 beneficiaries or 83% of its target.

4 This is based on the pro forma costs of training, which are notional. Fees and stipends for many of the donor financed programs were disbursed directly.

5 Estimated from the recurrent budget of the 8 institutes. Annual allocation has averaged at Nu 110 million per annum.

6 The new plan document adopted for the 10<sup>th</sup> Five Year Plan makes it very difficult to segregate how much was allocated for TVET. Therefore the estimates have been based on budget information made available in the Annual Education Statistics.

<b>Table 2.1: Implementation of pre-service programs against plan</b>			
<b>Type of program</b>	<b>10<sup>th</sup> FYP Target</b>	<b>Achievement</b>	<b>% achieved</b>
<b>Pre-Service</b>	<b>7987</b>	<b>6933</b>	<b>87%</b>
Bachelors	51	167	327%
Apprenticeship program	1905	1428	75%
Short-Term Courses	1908	2698	141%
Technical Training Institute	3295	2308	70%
Institute of Zorig Chuesum	828	332	40%

While the target for bachelor's degree program was only 51, the actual implementation was scaled up by three times to cover 167. 110 of these slots were in engineering related fields. The actual administration of this aspect of the fellowships was undertaken by the Scholarship Division of the Adult and Higher Education Department, Ministry of Education.

### **Apprenticeship Training Program (ATP)**

ATP was first introduced in the country in 2000. It is a program wherein new job seekers are attached to the enterprises/industries to gain skills and experience. It is a "contract between a person (apprentice) who wants to acquire competency in a particular skill and work experience and an employer who needs a skilled worker"<sup>7</sup>. The apprenticeship is usually between 6-12 months, and covers wide ranging establishments in size and sector. Annual enrollment has grown from less than 20 in the early years of its operation to well over 300<sup>8</sup> during the 10th Plan. MoLHR provides a stipend of Nu 1,800 per month and the employers pay a matching amount.

1,428 youth were placed for this program during the 10th Plan, which is 75% of the target. The program covered almost all the sectors, but mostly concentrated in the service and hospitality industries which continue to grow at faster rate than other sectors.

### **Special Training Program (STP)**

Special training programs is a need based HRD intervention addressing the immediate shortages in the labour market through short term skills training program. Most of training under STP is implemented in partnership with the private training providers. MoLHR meets the costs of tuition and stipend for the training program while the private institutes take on the responsibility for designing and development of the course, on-the-job training (OJT) and job placements. In the 10<sup>th</sup> FYP STP was

<b>Table2.2: STP implemented during 10<sup>th</sup> FYP</b>			
<b>Sector</b>	<b>in-country</b>	<b>ex-country</b>	<b>total</b>
Service	5	24	29
Construction	30	80	110
Hospitality	364	160	524
Health	5	267	272
ICT	1360	272	1632
Media	10	0	10
Arts and Craft	28	20	48
Production	0	3	3
Finance	70	0	70
<b>TOTAL</b>	<b>1872</b>	<b>826</b>	<b>2698</b>

made possible because of the financing and support from the Government of India (GOI), the World Bank and the UNDP projects. Under GOI support, an annual fund of Nu. 8.4 million was allocated with flexibility to carry out training in any of the 10th FYP priority sector, in-country or ex-country. Through the UNDP program, the first hospitality program in partnership with the newly established Bhutan International School for Hospitality

7 ATP Guidelines, MoLHR

8 The Officer in charge reports that the numbers are more and even over 400. However supporting records were not available during this study.

and Tourism (BISHT) was initiated. In addition the World Bank Private Sector Development Project provided the financing for the generic courses for ITES. The World Bank IDF Project while providing direct support to training programs also enabled piloting different modes of training implementation and to study their relative effectiveness.

1,572 beneficiaries were trained in country under STP. Out of these 1,632 slots were dedicated to ICT related training including training for BPO industries and 364 were trained for the hospitality sector. Other sectors such as construction and services did not get much coverage under this program. The ex-country covered 826 beneficiaries, and concentrated on ICT (BPO related training), Health (GNM training) and hospitality. Under this program, 80 slots were used for the construction sector. Overall this component of the training exceeded the planned targets.

### TTIs and IZCs

Formal National certificate level course are offered by the TTIs and IZCs under the administration of the Department of Human Resources. There are currently 6 TTIs and 2 IZCs which together enroll about 500-600 pre-service students annually. The TTIs are offering mostly 2 years courses in construction related trades, carpentry, automobile repairs, electrical and electronics and driving. The IZCs offer courses in traditional arts and crafts for courses ranging from 3-6 years. Together the eight institutes advertised training space for 3,800 technicians and craftsmen, but was able to train only 2,640 because of the lack of adequate number of candidates interested in these trades.

<b>Table 2.3: Total number of youth trained from Technical Training Institutes ( 2008-2012)</b>						
<b>Name of Institute</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>Total</b>
Technical Training Institute- Khuruthang	70	95	72	108	87	432
Technical Training Institute- Rangjung	75	85	97	95	117	469
Technical Training Institute- Chumey	237	20	30	46	101	434
Technical Training Institute- Sherzhong	85	46	46	40	40	257
Technical Training Institute- Thimphu	0	0	21	17	19	57
Technical Training Institute- Samthang	117	172	125	80	165	659
<b>Subtotal of TTI</b>	<b>584</b>	<b>418</b>	<b>391</b>	<b>386</b>	<b>529</b>	<b>2308</b>
Institute of Zorig Chusum- Thimphu	64	40	46	45	29	224
Institute of Zorig Chusum- Trashiyangtse	17	27	21	21	22	108
<b>Subtotal of IZC</b>	<b>81</b>	<b>67</b>	<b>67</b>	<b>66</b>	<b>51</b>	<b>332</b>
<b>Total</b>	<b>665</b>	<b>485</b>	<b>458</b>	<b>452</b>	<b>580</b>	<b>2640</b>

### 2.1.2 In-Service HRD Programs

Under the In-Service program, as against the target beneficiaries of 12,687, the program covered only 926 beneficiaries or 7% of the target group.

<b>Table 2.4: In-service programs implemented against plan</b>			
<b>Type of program</b>	<b>10<sup>th</sup> FYP Target</b>	<b>Achievement</b>	<b>% achieved</b>
Masters	170	60	35%
Diploma	117	24	21%
Short-Term Courses	12327	834	7%
Seminar/Workshops/ Study Tours	73	8	11%
<b>Total</b>	<b>12687</b>	<b>926</b>	<b>7%</b>

Master's program denotes the apex level of academic attainment for most professions in the country and

scholarships for this is highly prized. Against the target of 170 fellowships target, 60 (35%) have been implemented. This is an underachievement even compared to the 9th Five Year plan during which 71 Masters were successfully implemented. The primary reason for the under achievement is that all the Master's program are externally financed and depend on the offers received annually from the different funding agencies and scholarship schemes. Except for TICA, most scholarship schemes have not been enhanced during the plan period and remains essentially at the level of the 9th Five Year plan. In addition, there were significant rejections of applications, which may also be reflective of the limitations of the in-service graduate pool applying for such programs. TICA on the other hand does not provide full scholarships to candidates from the corporate and private sectors, further limiting their uptake by the candidates themselves. This is true even for the diploma programs which were all dependent on donor offers. Obviously this is another casualty of over planning on the generosity of the donors.

One of the reasons for low achievement in the in-service HRD program was because many of the projects earlier designed for in-service was shifted to pre-service. Further implementation of this program mainly relied on multilateral and bilateral donor ad-hoc support.

### **Short-Terms trainings**

Short Term in-service trainings comprise of programs conducted in-country as well as outside the country. As covered earlier, most of the in-country skilling programs were directed to pre-service candidates. Nonetheless, some generic skills covering management, store keeping, accounts and HRD planning were conducted for the in-service candidates within the country using the local management consultancies and institutes. Overall, short term training availed outside the country were negligible estimated at 136 candidates during the 5 years. Implementation of planned seminar and workshops outside the country did not fair very well either, with only 8 candidates having availed this as against the target of 73 (11%). This data needs to be carefully whetted since some of the short-term trainings invitations are known to be routed directly through the Ministries to BCCI and then to the private sector establishments. Therefore may not feature in the records of the MOLHR on which this review is based.

## **2.2 Sector-wise beneficiaries**

The 10th FYP provided the maximum HRD allocation to the Power Sector which reflected the ongoing and planned concentration of development works within the sector. However, a closer examination of the industries that are engaged in the power sector shows that the industries are mostly construction and related trades. Therefore during the implementation there seems to have been an adjustment made with construction industry getting 8% more share than planned while power sector's share of expenditure went down. This also reflects reduced HRD in terms of Master's program as well as non-materialization of the extensive short term training (external) projected for this sector.

On the contrary, there was an increase for the Hospitality and Tourism Sector from a planned budgetary allocation of 5% to an expenditure share of 17%. This reflects higher concentration of both short term in country trainings within this sector as well as larger share of long term scholarships.

Under media, transport and communication, education and training were overwhelmingly dominated to serve the media sub-sector. Media alone had an expenditure share of 15% against the 9% target for the entire sector. In fact transport sub-sector seems to have been totally neglected. Media consumed one of the highest per capita budgets for education and training during the plan period, estimated at Nu 1.5 lakhs per person. This was geared towards strengthening the media as the fourth estate in the new constitutional democracy system. The resources went to supporting human resource development of both existing as well as new media establishments.

10th Five Year Plan priority sectors	10th FYP allocation	Expenditures
Trading and other Service	16%	12%
Hospitality and Tourism	5%	17%
Media, Transport and Communication	9%	15%
Power	23%	10%
Production	6%	10%
Construction	3%	11%
Finance	21%	10%
Education	7%	1%
Information and Communication Technology	9%	14%
<b>Total</b>	<b>100%</b>	<b>100%</b>

Trading and other services skills were allocated 16% of the budget and managed to spend 12%. However, the figures for this need to be taken with caution. The numbers of slots are reflective of the skills training rather than where the beneficiaries of training served. All the generic skills such as those related to administration, accounts and store keeping have been reflected under this head although the personnel may be employed in other sectors.

Communication and Information and Technology also received over 14% of the resources during the plan period, 5 percentages more than planned. While ICT was already identified as a new sector for growth and employment, the enhancement of the training slots over that of the plan was also an indication of the greater intensity of the development within this sector promoted through the World Bank financed Private Sector Development Project.

Finance sector also received a substantial share of the budget, at 10%, albeit reduced from the planned share of 21%. The high allocation was planned in anticipation of the need to respond to the development of new financial institutions such as the banks and the insurance companies. However, 20 of the 60 slots for masters level studies implemented were in the finance sector. The eventual reduction of the share was as a result of the high allocation for short term-ex country programs most of which were not realized.

## 2.3 Gender participation

In terms of the number of slots covered, more women benefitted from the HRD program than man with women comprising of 53% of the total number of beneficiaries. However, within this there are important differences. Such as for Master's, women comprised of only 30%, which is reflective of the prevailing gender composition of personnel with bachelor's degree in the

Courses	Total	Female	Female %
Masters	60	18	30%
Bachelors	167	60	36%
Diploma	24	7	29%
Short Term Inset Training Outside	106	35	33%
Short Term Inset Training Inside	728	337	46%
Short Term Pre-service Training Outside	826	394	48%
Short Term Pre-Service Training Inside	1572	806	51%
Apprenticeship Training Program	1428	949	66%
Seminar/workshops	8	2	25%
<b>Total</b>	<b>4919</b>	<b>2608</b>	<b>53%</b>

private and the corporate sectors. Lesser women also benefitted from undergraduate studies (bachelor's level) although there is not much gender difference amongst the qualifying class of grade 12. This could be attributed to the fact that most of the fellowships on offer were in engineering fields where women lag

behind. However, women participants dominated in the shorter employment based training programs such as ATP where they comprised of 66% of the total participants. There were also more women participants for the short term pre-service training programs within the country.

## **2.4 Other programs supporting human resource development capacity of the private sector**

MolHR implements a numerous other programs which are outside the domain of the HRD Master plan.

### **Village Skills Development program (VSDP)**

The Village Skills Development program (VSDP) was established in the 1980s initially to help villagers earn additional income during off farming seasons. Overtime, this has evolved to meet different skilling needs of the rural people spanning traditional craft skills to modern constructions and occupational skills. It has trained 1728 villagers under 175 gewogs from 18 dzongkhags and 2 dungkhags as of April 2012.<sup>9</sup>

### **Special Skills Development Program (SSDP)**

Under the Special Skills Development Program (SSDP), monks and nuns under the Dratshangs, Rabdeys, Gomdeys and Nunneries are trained in the traditional arts and crafts skills. The program is also extended to personnel of the armed forces who are provided basic construction skills. Beginning 2008, it has trained 1451 monks, nuns and armed force personnel against the 10th plan target of 600.

### **Skills training in hydropower projects**

Under the Accelerating Bhutan's Socio-economic Development initiatives, the Ministry signed Memorandum of Understanding with Larsen and Turbo, Hindustan Construction Companies, Gammon India and Jai Prakash Associates Ltd. to provide skills training related to the hydro power construction project. This was part of a scheme to get more Bhutanese youth to participate in the construction industry generated by the hydro power projects. It was expected to train thousands through the program. However, till date, 238 Bhutanese youth have completed training out of which only 132 are employed. This indicates the Bhutanese youth's response to employment opportunities within the construction and related industry.

Although, MoLHR is the designated agency of the Government for coordinating, planning and implementing HRD for the private and corporate sectors, there continues to be substantial HRD activities assumed by other line Ministries. An example is within the media sector where MoIC conducted series of trainings for the media personnel, at a cost of Nu 20 million. Another is related to the development of the entrepreneurship skills amongst the new and prospective investors of small and cottage industries. MoEA conducted 6 programs covering 200 participants at a cost of Nu 5 million. In addition, the Ministry of Education has a regular series of workshops for its teachers in which the teachers of the private schools are also invited but pay for themselves for their participation. Likewise there are several other public, private as well as NGOs involved in HRD. If MoLHR has fully assumed its mandate of coordinating or streamlining all HRD plans or activities, a more holistic approach towards HRD planning and allocation of resources for the country's workforce development can be adopted. Hence, issues such as duplication of programs, oversupply of human resources and inefficient use of fund could be avoided.

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## 2.5 Comparison of private and public sector HRD spending

It was estimated that Bhutan spent Nu 3.5 billion for civil service HRD during the 10th Five Year Plan. This amounts to around 10% of the salary bill for the civil service during the same period. Comparative statistics are not available for the private and corporate sectors. But it is estimated at no more than 3% of the salary bill<sup>10</sup>. Obviously per capita spending on HRD is much higher for the civil servants than the corporate and the private sector employees. Interestingly, one of the main reasons for the attraction to the civil service is the HRD opportunities it offers. Most graduates entering the civil service can look for an opportunity to enroll in a master's program within 4-5 years of their service.

Private sector generally spends less on staff development than public offices in most other countries. In fact a training budget that amounts to 3% of the salary bill is considered as a good threshold spending level by a number of HRD experts. Still, Bhutan needs to dwell on two related issues. First, there is very little spending by the private sector for HRD and largely dependent on Government resources. Hence, there will be issue of sustainability, especially after the 11th FYP if Bhutan is to become self-reliant. Second, like all Government financed program, there is a legitimate question as to how much of the resources used for education and training are optimally spent to improve employee productivity. There is scant information to draw any commentaries on this important subject. Except for ATP and TTI's for which tracer study has been conducted, there is little follow-up on the other education and training programs conducted by MoLHR.

## 2.6 Review of Other Planned Policy related initiatives

### Develop systematic HRD approaches (within the industries)

There is very limited evidence that the HRD Master plan in anyway enabled the private sector and its management to imbibe HRD culture into their management. The larger corporations which together contribute to a significant part of the revenue are mostly Government corporations where this is not an issue. Most of them already have a HRD division that takes care of HRD including succession planning, education and training. The smaller establishments and none of the construction firms have such a system. While 3-4 rounds of workshops and trainings were conducted on this particular aspect by MoLHR for the private sector, there is limited evidence of this having been taken up as a private sector management culture. The Ministry did follow up on its plan of developing HRD Regulations for the Private and Corporate Sector with specific guidelines. However the impact of this is perceived to be limited to procedural

### Streamlining Private & Corporate Sector Scholarship procedures

A great deal of time is spent on fulfilling procedural requirements of the scholarships. One of the changes to have been implemented for the 10<sup>th</sup> FYP was to get the information about the notifications of scholarships straight from MoFA to MoLHR and completed forms back from MoLHR to MoFA without going through RCSC. This is described below:

Prevailing system: MOFA → RCSC → MoLHR → Establishments → MoLHR → RCSC → MOFA

Proposed system: MOFA → MoLHR → Establishments → MoLHR → MOFA

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<sup>10</sup> It is assumed that on average a corporate employee earn Nu 15,000 per month and a private sector employee earn Nu 10,000 per month, the salary bills amount to Nu 55 billion for the 10th FYP. Therefore Nu 1.6 billion for HRD translates to 3% of the salary bill.



This never happened, resulting in continuing time loss that could be more productively used for information dissemination, better selection and fulfilling other procedures impacting the quality of selection. The high number of scholarships that are missed out could be attributed partly to this too.

### **HRD Trust Fund**

This was expected to be established in order to ensure greater sustained HRD support to the private sector. Although there continues to be interest on this within the Ministry, not much progress has been made in formulating concrete actions for such a scheme. For the 11<sup>th</sup> Plan, the basic idea is retained and an implementation modality proposed.

### **Training Impact Study**

This was not taken up as a separate exercise; however a cursory study was undertaken as part of current plan formulation.

### **Training needs assessment**

This was planned to be taken one year prior to the formulation of the 11<sup>th</sup> Five Year Master plan. It was not done, for the reasons that standard TNAs usually churned up a wish list that was difficult to be digested into a coherent strategic plan. Instead, MoLHR decided to use the current approach of consultations with the key industrial representatives along with sector analysis.

### **Restructuring and Certification of the Apprenticeship program**

This was expected to make the ATP more systematic than the prevailing system by ensuring “trainees are taken through cohesive and complementary stages which add and complement skills acquired at earlier stages.” Each phase was supposed to be based on clearly defined training objectives and curriculum. The training was expected to lead to relevant certification. None of these were implemented. The focus was on getting as many candidates participate in the program and little or no attention was paid to the skills they acquired.

### **Monitoring and Evaluation**

This was expected to be undertaken regularly in order to help reprioritize training needs in accordance with the changing needs of the industries as well to improve the program based on relevant feedback. The ATP and TTIs were reviewed during the plan period focusing on their impact. However there was no systematic review or much evidence of monitoring the Master plan. If there were, there would have been a greater alignment between the plan and the implementation, and a high implementation rate across the sectors and different types of education and training programs. But at the same time the Ministry did base most of its short term training programs on the prevailing market signals and priorities of the labour market.

## **2.7 Overall Impact of the HRD program**

### **Impact on economic development and productivity**

Close to five thousand employees and prospective employees received some form of education and training through the Master plan during the period under review. While this is a considerable number, it is less than 6% of the total employees in the private and corporate sectors. Also most of the beneficiaries were predominantly within the corporation. This is especially true of the long term trainings such as master’s program where they

have more qualified people to spare for further education. Out of the 60 slots implemented 47 (78%) were in the corporations, while corporations accommodate only 22% of the total employment.

The Bhutanese economy grew by 29% during the plan period. Employment for the country grew only 5% during 2009-12<sup>11</sup>, indicating greater productivity achieved per employee. However, there are significant variations across the sectors. Community, social & personnel services, private social & recreational services and public administration showed a continuing growth in GDP while the employment in these sectors declined.<sup>12</sup> Agriculture sector is significant for Bhutan not only for contributing to food security but accommodating 62% of the labour force. The sector's contribution to GDP grew by 4.6%, but registered only 0.3% employment growth thereby indicating labour productivity gain. The highest employment growth registered amongst the industries under review is construction, wholesale and retail trade, hotel and restaurants and followed by finance.

### Impact on Unemployment

Bhutan has successfully managed to maintain the unemployment rate at less than 3%. Part of this success can be attributed to the implementation of the various HRD programs. In particular the pre-service training programs and the apprenticeship training program have helped to some extent in providing the necessary skills to the Bhutanese youth to enable them to be absorbed in the labour market.

Sectors	GDP Growth 2008-12 <sup>1</sup> (%)	Employment growth 2009-2012 <sup>2</sup> (Absolute)
1. Agriculture, livestock & forestry	5%	678
2. Mining and quarrying	25%	197
3. Manufacturing	38%	1439
4. Electricity and water	-3%	2868
5. Construction	61%	3585
6. Wholesale and retail trade	52%	12308
7. Hotel and restaurant	28%	3328
8. Transport, storage & communication	48%	7818
9. Financing, insurance & real estate	40%	2358
10. Community, social & personal services	51%	-11191
10.1 Public administration	32%	-873
10.2 Education and health	84%	3922
11. Private social & recreational services	12%	-9846
<b>Total</b>	<b>29%</b>	<b>16591</b>

### Impact on private sector growth

The HRD also made substantial contribution to the growth of the private sector in Bhutan. Specifically, the institution of the ITES industry will not have been possible without the HRD activities implemented by the MoLHR. The pre-service programs provided much of the skills that the industry needed. The attachment as well as the apprenticeship programs helped the industry identify good workers, many of whom were absorbed by the industries.

11 Reference for 1<sup>st</sup> year used as 2009 since LFS 2008 was not available.

12 There appears to have been some classification changes overtime adopted by the LFS across the occupational groups as well as reorganizations of agencies within the government institutions which could make comparison overtime problematic. Therefore the figures for these sectors need to be interpreted with some caution

Another direct contribution of the HRD Master plan is the founding of a multi-media industry in the county. The support provided by the MoLHR to the two firms engaged in this industry was crucial for their development. This will have to be supported for a while for the industry to be able to sustain on its own, but all important base seems to have been established.

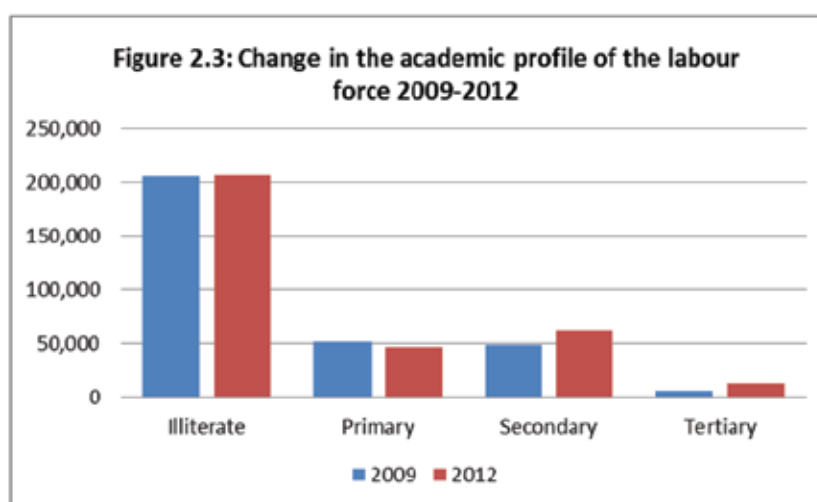
More bakeries and confectioneries shops are prominently visible in Thimphu and the other dzongkhags. Similarly more beauty salons have sprung up in Thimphu as well as some of the other dzongkhags. All these have been contributed in large measure by the MoLHR's HRD Master plan which facilitated the provision of these skills amongst the entrepreneurs as well as future employees.

### Benefits accrued to local training providers

Table 2.8: Distribution of HRD program by location		
Location of E&T	Slots covered	Expenditure (Nu)
For All Locations	4,919	750,442,342
In-Country	3,728	77,887,641
(Percent)	76%	10%
Ex-Country	1,191	672,554,701
(Percent)	24%	90%

4,919<sup>13</sup> education and training slots were implemented during the 10<sup>th</sup> Five Year plan, out of which 76% slots were implemented inside the country. In terms of resources, 90% of the costs were tied to the slots outside the country, and only 10% was spent within the country. This is because all the long term programs except for ATPs were undertaken in universities and institutes outside the country. Also the costs of training and fellowships are generally much higher outside the country.

Despite the large number of short term training implemented inside the country, there has not been a visible growth in terms of competencies amongst the national training institutes. The training market is yet to be established as a reliable base for growth. Most education and trainings are financed by the Government and the corporations whose choice of training location is outside the country. This is because in-service education and training programs has now gravitated into a form of perverse financial incentives for its employees rather than for skilling or education. In fact, one of the firms located in Thimphu now liaises with training firms in Thailand to provide management programs to Bhutanese corporate employees and civil servants in Bangkok.



MoLHR has been continuing its efforts to encourage private training providers to improve quality of services and expand into new sectors. During the plan period, it came up with a new policy framework for developing the private training providers by establishing enabling regulations and framework. A system for reviewing and approving these establishments was set up with the launch of the Guidelines for HRD support to the private and corporate sector. Further, it has initiated development of Quality Management

System (QMS) for 15 training providers (14 private and 1 Government) based on the 11 quality processes. It

13 National Accounts Statistics of the relevant years, NSB.

also provided courses in Training of Trainers targeted at these institutes.

### Impact on quality of Workforce

There has been a continuing enhancement of the education level of the work force. While much of this can be attributed to the Education Sector and RUB programs, MoLHR’s pre-service and in-service has made contributions to both the academic upgrading as well as skilling. Overall illiteracy level has not been reduced, but there is significant enhancement of the numbers with secondary and tertiary education.

### Labour productivity and General learning environment at work place

Universally, the employees seek improved salary levels, training opportunities and better treatment at workplace<sup>14</sup>. In terms of wage rates, it is much higher than that prevailing within the region. However the

Figure 2.4: Labour costs in the region



unit labor cost (the amount of value generated by a typical worker paid back to his/her as wages and salaries) is correspondingly lower than that in the neighboring countries<sup>15</sup>. Therefore, it appears that Bhutanese workers are more productive. There may be various factors contributing for this. One of this is the low level of establishment and overhead costs associated with some of the industries. This is certainly the case for construction industries where most small and even medium sized firms operate their business from their households. Similarly hospitality and tourism as well as much of the service industries leverage on this system.

Nevertheless as the issue of salary emerges as a universal concern, a deeper study including its wider economic affect seems to be in order. There appears to be a need for implementing a minimum wage rate for certain professions whose services are required on a premium. This is especially relevant for the technical fields where there issue of retention is most pronounced.

Most employees report that they learn from the workplace. Even for those with pre-service training, a good proportion of the skills they currently possess have been acquired through work-based experience. But workplace learning is generally not organized and left very much up to the individual, which is very inefficient. Therefore education and training has to be better integrated within the management of business establishments. Furthermore, this needs to be supported where possible by providing on-line materials and audio visuals for self-learning. There is a lack of this at present. The concept of lifelong learning can only happen if the workplace and the wider environment enable it.

14 LFS of the relevant years, MoLHR

15 Does not include the TTI and ZTC implemented programs.

## 2.8 Training Feedback from Employers and Trainees

### Feedback from trainees

A majority of those who participated in an education or training program are happy with the course content and found them generally very useful. However, when asked what percentage of those skills acquired was used, most were unable to provide a response, and those that did respond reported a low range, especially amongst those who participated in in-service trainings. This points to the need to be more rigorous in the selection of the training candidates to ensure better fit of the training program with the job responsibilities.

There is a general expression amongst the workers that employers need to treat them better. This factor takes precedence over job security, career path and basic amenities at workplace. Managers on the other hand complain that the biggest issue facing them is staff turnover. This confirms the finding of the establishment survey 2010 which reported some 3,042 staff separation during the year, working out to about 10%. It is possible that there is a direct correlation between the two, and that this partly arises from conflict in employer-employee expectations.

### Feedback from Employers

The employers rank the subject knowledge, attitude and communication skills of the graduates of RUB and schooling system at a satisfactory level, but provides consistently lower ranking for creativity. This is an important feedback that the education system must take on board. Competencies of TTI graduates are also perceived to be generally low.

With regards to in-service training, the firms have expressed greater room for improvements in providing advance information, making the courses more responsive and relevant to their needs and making the selection schemes more transparent.

There is also a general feeling of apathy amongst the employers in working towards improving the HRD system. Many of the firms were either unwilling to participate in the survey for the plan, or provided a poor response. The reasons for this being the demand on the time of the industry/private sector managers with many surveys conducted by multiple agencies within the MoLHR, BCCI and other Government agencies. Therefore, this needs to be addressed in future, and a coordinated and efficient information system established that will make it convenient for all the parties.

Some employers have voiced their cynicism on the purpose and the ability of the Government to actually help them. A number of firms expressed the need for greater transparency to be instituted during selection for education and training. Priority should be accorded to those that are actually employed within the industries and not the facilitators.

## 2.9 Knowledge base of HRD planning and implementation

One of the significant achievements related to short term training from the perspective of the implementing agency (MoLHR) is the institution of different training programs to suit different clienteles and population groups. There has been a move away from one size fits all training program to a diverse offerings catering to individual learning styles and convenience. This has provided the Ministry with much institutional knowledge and experience which can be used to advantage for future program designs. A brief summary of these innovative practices are described below.

- 1. Training based program** Under this, MoLHR's HRD Division liaises with the training providers in providing trainings based on market analysis carried out by the Labour Market Information Division (LMID) of Department of Employment (DoE). Post-training, candidates' profile under different trades is submitted to DoE for facilitation of employment with different employing agencies.

The drawback of this training mode is that the industry (employing agencies) are not involved in the initial stage of training identification and therefore take less interest of employing facilitation post-training. The percentage employed under this mode of training is less than 20-30% and therefore result in candidates hopping to other training programs.

- 2. Employment based program** Under this mode of training, training areas are identified in close collaboration with the industry (industry based association). Further in designing the program TOR, employment post-training is featured as a mandatory clause, thus requiring the training provider to closely liaise and dialogue with the industry at all stage of training delivery and placement of students post-training. In this mode of training delivery, training provider is penalized in case they don't meet the specified employment threshold or percentage. However, beyond the employment percentage specified in the TOR, the training providers are not incentivized to initiate additional employment. Employment percentage is recorded at 50% for this mode of training delivery.

- 3. Incentive based program** In this mode, training provider takes an active role in delivering all aspects of training including identifying participants and liaising with industry for OJT and placement. Most of the administrative burden from the Division is shifted to the training providers, therefore training provider take full ownership to the training. In process, training provider is able to advocate and generate public interest for their institute through the program supported by MoLHR. Furthermore, training provider is given additional incentive for initiating employment beyond the threshold/percentage specified in the TOR. The training duration, number to be trained, curriculum and other training aspects are kept flexible to be decided by the training provider and the Division provides incentive for each individual employed. Employment percentage is recorded as high as 70 to 80% for this mode of training implementation.<sup>16</sup>

## 2.10 Financing

For the HRD programs implemented by MoLHR, the Government of India (GOI) has been the main funding agency through the GOI project in the 10<sup>th</sup> FYP. Other major donors have been the Sustainable Development Secretariat (SDS) fund and the World Bank. The following information is excluding the spending on the regular national certificate programs which are RGoB funded.

<b>Table 2.9: HRD for private sector fund during 10<sup>th</sup> FYP</b>		
<b>Donor Projects</b>	<b>Fund support (in million Nu.)</b>	<b>In-service/ pre-service</b>
GOI – Special Training Program	42.00	Pre-service
GOI – HRD for private sector	20	Both
GOI – support for GNM program	44	Pre-service
SDS Project – HRD for private sector	30	Both
World Bank – Generic Skills Development for IT/ ITES sector	55	Pre-service
World Bank – IDF support	16.5	Pre-service
UNDP	0.9	Pre-service

The main scholarship providers in the 10<sup>th</sup> FYP have been Australia (AusAID), Austria (Austrian Development Corporation), Denmark (Danida), Thailand (TICA), India (GoI and ITEC), Netherlands (NFP), Japan (JICA), Malaysia (MTCP) and Colombo plan. In addition, Bhutan also benefitted from Hubert H Humphrey (USA), Endeavour (Australia) and Monbusho (Japan) scholarships. Scholarships offers are determined by the donors whose representatives provide invitations of nominations at regular intervals. The offers are made through the Foreign Ministry or the Royal Civil Service Commission. These are difficult to be planned or controlled, MoLHR's role is simply to coordinate or participate in the selection of the candidates and forward documents to the relevant donor agencies.





The background is a vibrant green with a gradient from dark green at the bottom to a lighter, yellowish-green at the top. Numerous thin, bright yellow and white light rays emanate from the left side, fanning out towards the right. Scattered throughout the scene are many small, semi-transparent white squares of varying sizes, some appearing to be in motion or falling. The overall effect is one of dynamic energy and forward movement.

**Part III**  
**11th FYP HRD**  
**Master Plan**  
**(2013-18)**



### PART III 11<sup>TH</sup> FYP HRD MASTER PLAN FOR THE ECONOMIC SECTORS (2013-18)

The first comprehensive HRD Master Plan for the private and corporate sector was prepared during the 9<sup>th</sup> FYP in order to enable the sector to become the 'engine of growth'. Since then, Bhutan has seen an increasing shift in focus from the Government sector to the private sector with economic contribution and employment generation increasing in this sector. Simultaneously, Government HRD plans and programs have been geared towards facilitating this sector. Furthermore, the HRD Masterplan has evolved from an in-service oriented plan to having both elements of pre-service for the supply of HR/skill and in-service for professional development.

The 11<sup>th</sup> FYP HRD master plan will provide strategic role of the MoLHR and the private sector in HRD and overall key HRD requirement of the sector for both in-service as well as the pre-service. The master plan also provides an indepth analysis of the current dynamics in the private sector. In the past, the MoLHR has been an active implementer of private sector HRD. However, the 11<sup>th</sup> FYP HRD Master plan should pave way for MoLHR to become an HRD facilitator rather than an implementer and for HRD to be well integrated into the private sector functioning

There are two aspects of education and training that this Plan will address. One is related to the lack of skilled workers in various categories of the employment sector. Most of this can be addressed through expanded pre service vocational programs and in-service HRD programs. The other area which has received lesser attention in previous plans but is central to the growth of the Bhutanese industries is the prevailing gap in knowledge and competencies amongst higher managerial and professional staff. This gap is best illustrated by the nature of the enterprises and business operations in Bhutan. There is very little value creation or knowledge products being generated by the Bhutanese private sector at present. Retail trading, low tech manufacturing and constructions dominate the private sector. Much of the growth in fact continues to be fueled by Government projects and public spending, further making the private sector dependent on the Government. The only way one can address this is to groom the mid managers and executives of the private sector to broaden their vision and skills through appropriate in-service education and training. Therefore the 11<sup>th</sup> Five Year HRD plan will seek to strike an appropriate balance between pre-service and in-service programs; between lower and higher level skills and knowledge. Further the current plan will have a sectorial approach by providing sector overview, and challenges faced by the sector which can be addressed through targeted HRD interventions. The eight economic sectors have been identified in accordance to the Economic Development Policy. The eight economic sectors are broadly categorized as follows:

- a. Construction;
- b. Power;
- c. Education and Training: including early childhood care and development, private schools, university education and TVET institutions;
- d. ICT, Media, and Transport: including communication industry, media industry, motion picture and music industry, and transport industry;
- e. Production and Mining: including wood based industry, mining industry, agro based industry and handicraft industries;
- f. Trading and Services: including automobile workshops, beauty and grooming industry, and micro small and medium industry
- g. Tourism and Hospitality; and
- h. Finance.

Currently most of the Government owned corporations, autonomous agencies, council and large scale industry have their own sector or organization's HRD Master plan and have the resources to execute them. Therefore, the current master plans will have greater efforts towards focused HRD interventions as well as building a sustainable HRD system within the private sector, establishments, association and institutions.

Hence, *the direct contribution of MoLHR to HRD for these establishments maybe limited to the supply of Human Resources through its pre-service training and education as well as in some of the areas of HRD that may not be addressed by any single entity.*

### **3.1 Objective**

The main objectives of the 11<sup>th</sup> FYP Master plan are to:

1. Expand the pool of Bhutanese entrepreneurs, business leaders, managers and professionals who will be able to contribute to solving problems in their establishments, recognize opportunities, create new products and services and help their enterprises to grow,
2. Continue building up the skills base of the country to fill in critical requirements in the existing as well as growth sectors,
3. Develop a culture of HRD within the private sector which can be self-sustaining, and
4. Contribute to the development of a viable national education and training system which meets the national HR needs.

### **3.2 HRD Policy and Approach**

#### **3.2.1 Seeking visible impact through focused action**

Both the 9<sup>th</sup> FYP and 10<sup>th</sup> FYP after spending over 2 billion ngultrums, it is difficult to ascertain its overall achievement. Part of this has to do with ambitious plan which led to spreading the resources too thin and resulting in less than optimal impact of the programs. Therefore, future plans should be selective but executed with greater care and linked with other MoLHR programs to ensure maximum impact. The DHR will work more closely in execution of its programs with all relevant stakeholders.

Towards this MoLHR has built a quite an extensive repertoire of training programs to cater to different sectors and clientele. There is a general move towards engagement of the private training institutes in a complete chain of HRD activities starting with training needs assessment, course design, implementing training and finding employment placements for the graduates. Similarly many courses can be organized within the country at a fraction of the overseas costs. In terms of course delivery, a healthy mix of classroom and practical are seen as effective and training courses needs to be diversified. All these have to be considered when executing the 11<sup>th</sup> FYP HRD plan.

#### **3.2.2 Migrating from faith based training list to resource based HRD plan**

The HRD Master plan for private and corporate sectors like the Civil Service HRD Master plan has evolved over time into a detailed listing of trainings all hinged on a very high level of generosity from donor agencies. As long as this faith based planning continues, HRD planning will remain at best an academic exercise and not really a plan one can pursue. This has happened in the 9<sup>th</sup> Five Year plan where only 57.2% of the slots were implemented spending 44.2% of the planned budget. The 10<sup>th</sup> FYP HRD Master plan which made a critical note of this system did not fare any better, resulting in only 33% of the slots being implemented using 50% of the planned budget.

Therefore it is suggested that for future HRD programs, the Government establish greater control over the scholarships and trainings. Two actions are proposed: (i) negotiate with the main donors for the courses that are determined of priority to the private sector and develop an implementation plan for them. In the likelihood that this does not materialize fully, (ii) set aside Government's own resources for the core HRD identified under the plan.



For the purpose of establishing clarity of what is intended, this HRD Master plan should be considered as the core HRD plan for these sectors. The other aspects of education and training in the country are the donor supported fellowships, both short and long term. This will continue to prevail, and all the establishments can compete for these resources as has been the practice. In addition, there is the industry led staff development which is dependent on how well endowed the establishments are. Most Government corporations have their own HRD master plans to support both professional developments as well as practice of staff incentives. However for smaller firms, a system is yet to take root. This will be covered more in the part on implementation.

### 3.2.3 Institutionalizing HRD within the business establishments

Government owned Corporations, autonomous agencies, and large scale industries have an HRD or training plan which they execute through their own resources as well as through support from Government and donor agencies. However, a majority of establishments neither have a plan nor have the capacity and the resources to undertake HRD. This section seeks to recommend some of the strategies to be taken up in 11<sup>th</sup> FYP to institutionalize the practice and system of HRD in the private sector.

The first thing that needs to be established is an understanding that HRD is an integral business strategy, and that investing in education and training of one's employees generates greater productivity. To a large extent this understanding exists and only a gentle reminder is required.

Then address the factors that discourage firms in investing in the training of their staff/employees. There are two reasons for this. Firstly, the staff is on contract and can leave any time and job hopping and poaching is prevalent in our labour market. Many firms allege that the current labour law does nothing to protect the employer from such a situation. In most cases, employees have to only give one month's notice to leave the firm<sup>17</sup>. Providing skills to an employee makes the employee more marketable and therefore increases the chances of leaving. Obviously apart from tightening the contractual terms, conditions need to be created whereby both the employer and the employee trust each other and some sense of mutual loyalty is established.

Second, there are no funds for training as the firms are operating at a slim budget and just managing to break even, or even operating at a loss. Obviously under such circumstances, staff training will be the last thing on the mind of the employers. This also provides a case for creation of a training fund for which contributions can be made during the good years so that firms can dip in when they require.

17 From Bhutan Investment Climate Assessment Report, The World Bank 2010

Following the above, MoLHR shall work to implement in a phase wise manner (i) establish a HRD funds at the industry association level, and (ii) work with the firms to institutionalize a system of HRD planning and implementation at the firm and the association levels. This is elaborated further.

**a. Establishing a HRD funds at the industry association level**

There are currently 14 trade associations registered with BCCI. One of the roles of these associations should be to act as trustee for the HRD funds that will be established through collection from the members and help coordinate and develop training programs for the members to be financed out of these funds. Depending on the nature of the business, the collection can be either annual membership contribution or contributions pegged to net earnings or contracted works both of which can be deducted at source and provided to the association. The basic principle is to make this as easy as possible without putting much administrative burden on the collection system.

**b. Instituting culture of in-house staff development**

Besides the industry level training programs, all firms registered as large should be facilitated to institute a regular training courses and workshops for its staff, in-house. This can be at no costs, using the establishments' own stock of knowledge, resources and time. This can be based on a training plan that is developed for each staff at the beginning of the year. This will require a policy direction from the MoLHR and implemented phased wise, starting with the corporations and the *large*<sup>18</sup> establishments.

**c. Industry Association to Lead HRD Planning**

To match the demand and supply of human resources, the needs assessment should ideally be done by the market/industry. By establishing a mechanism wherein the Government HRD plans for the Private Sector is informed by the industry, the issue of mismatch and effective HRD can be achieved.

Towards this, the MoLHR and other line ministries should work to develop environment conducive for such a system to be installed. The capacity of the industry associations has to be enhanced to take this responsibility of carrying out the needs assessment of the sectors/industries that they represent. The current operations of the associations have to move beyond just policy propaganda and engage into HRD for the industries that they represent. Even the current organization of the industry association needs to be re structured. Association like BCCI which is representing various business sectors will not be effective in fulfilling this responsibility; neither will the associations such as the Construction Association Board which is constrained in terms of staff and its capacity will be able to take this role.

Tourism Council of Bhutan has more or less moved in the right direction of taking up such role, though there is lot to be done in terms of its capacity and operations.

If the private sector is left on its own, collective actions to better organize in the desired manner cannot be achieved. Hence, the MoLHR and the other line ministries should collaboratively initiate development of such changes in the private sector. Such changes have to be initiated cautiously and progressively starting with few critical sectors such as construction, tourism and others.

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18 Tenzin Choden, MoLHR, Special Training Program, Meeting the Immediate HR Requirement, February 2013.

### 3.2.4 Building Partnership approach to HRD/TVET

While the current planning has been undertaken by the MoLHR albeit in consultation with various sectors, for annual plans and future plans, the finer detailing of the training needs and implementation plan modalities will have to be undertaken by the industry themselves in a professional manner. This will pave for greater HRD responsibilities of the private sector in future. BCCI has some responsibility for this but its responsibility is too broad to serve effectively the needs of particular industries. Instead it can be more effectively taken up at the Industrial association levels. There are 14 such registered bodies in the country, but none of them currently have been structured or has the capacity to undertake HRD assessments or implement trainings. The MoLHR should work with these bodies and support them to assume these functions. The associations could be the precursor or mirror Industrial Councils in other countries, who amongst others undertake HRD role for their sectors. To begin it is important that the industrial representative be aware of the current HRD objectives and scope. That should be the basis for engagement on HRD front. Annual consultations are suggested to be formalized to further such partnerships

The MoLHR has to work not only with the industries and its representatives but also with Universities, institutes and prospective development partners.

Furthermore, in implementing pre-service TVET HRD plans and programs, it will be important to build partnership with industry. Currently industry investment in TVET is almost non-existence. The only support rendered by the industry is in the form of OJT (on-the-job training) support. Therefore in the 11<sup>th</sup> FYP, MoLHR being the focal implementer of skills training and TVET programs, will have to draw up strategy to have visible industry investment into the TVET system. This can start by targeting some of the existing large scale industry or sector; eg: power sector investment in power related trainings.

### 3.2.5 Incentive approach to HRD investment

As mentioned above, most private agencies do not accord due importance to capacity development of their employees. Further, one of the biggest challenges during the 9<sup>th</sup> plan as well as the 10<sup>th</sup> plan has been in implementing various cost-sharing and self-funded programs which are partially or wholly funded by the employing agency. Though, many of the in-service in-country programs have been implemented through the cost-sharing modality, this however is not the case for ex-country programs for which cost-sharing amount is higher.

Though institution of HRD system within the private sector can be done through mandatory rules and regulations, it will be more desirable to have an intrinsic approach or culture within an organization to HR Development of their workforce. One way to do this would be through institution of incentive mechanism in the form of tax waiver, and other Government service support tied with an organization's HRD investment. This will require better coordination and cooperation among different ministries/agencies and policy decision of the executives.

## 3.3 Summary of Slot and Budget Allocation

A budget of Nu. 2.78 Billion will be required for the implementation of 11<sup>th</sup> FYP HRD Masterplan, out of which 83% of the budget will be allocated for pre-service HRD programs. A total of 16,587 slots will be implemented out of which 89% of the slot is allocated for pre-service programs. The costing has been calculated using pro forma costing as specified in the annexure.

For this master plan, within the eight broad sectors, the training level has been categorized into five different levels; masters and post-graduates, under-graduates, diploma, certificate level training and short-

term training. Certificate level training are those vocational program that leads to national certification and therefore encompasses trainings with TTIs/IZCs, ATP and STP. Short-term program are those managerial and technical programs targeted to those within the sector to overcome critical short-coming which would lead to better work performance and sector growth.

The details of pre-service and in-service program are specified more in detail in the following tables.

SN	Level of Training	In-service		Pre-service		TOTAL	
		Slot	Budget	Slot	Budget	Slot	Budget
1	Masters and post-graduates	178	298485000	0	0	178	298,485,000
2	under-graduates	0	0	385	151800000	385	151,800,000
3	Diploma	99	121143000	830	193200000	929	314,343,000
4	Certificate	192	36157000	13354	2045060000	13546	2,081,217,000
5	Short-term training	1396	21902375	150	9000000	1546	30,902,375
	<b>TOTAL</b>	<b>1865</b>	<b>477687375</b>	<b>14719</b>	<b>2399060000</b>	<b>16584</b>	<b>2,876,747,375</b>
	<b>Allocation %</b>	<b>11%</b>	<b>17%</b>	<b>89%</b>	<b>83%</b>	<b>100%</b>	<b>100%</b>

**Table 3.2: Percentage allocation of Slot and Budget by level of training for pre-service and in-service**

SN	Level of Training	In-service		Pre-service		TOTAL	
		Slot	Budget	Slot	Budget	Slot	Budget
1	Masters and post-graduates	9.54%	62.49%	0.00%	0.00%	1.07%	10.38%
2	under-graduates	0.00%	0.00%	2.62%	6.33%	2.32%	5.28%
3	Diploma	5.31%	25.36%	5.64%	8.05%	5.60%	10.93%
4	Certificate	10.29%	7.57%	90.73%	85.24%	81.68%	72.35%
5	Short-term training	74.85%	4.59%	1.02%	0.38%	9.32%	1.07%

**Table 3.3: Sector wise slot and budget for pre-service**

Sector	Level of Training	Pre-service	
		Slot	Budget
Construction	Masters and Post-graduates	0	-
	under-graduates	50	24,000,000
	Diploma	0	-
	Certificate	4515	976,180,000
	Short-term training	0	-
	<b>Sub-total</b>	<b>4565</b>	<b>1,000,180,000</b>
Power	Masters and post-graduates	0	-
	under-graduates	50	24,000,000
	Diploma	0	-
	Certificate	1595	176,950,000
	Short-term training	0	-
	<b>Sub-total</b>	<b>1645</b>	<b>200,950,000</b>



Education and Training	Masters and post-graduates	0	-
	under-graduates	41	14,760,000
	Diploma	180	43,200,000
	Certificate	0	-
	Short-term training	0	-
	<b>Sub-total</b>	<b>221</b>	<b>57,960,000</b>
ICT, Media and Transport	Masters and post-graduates	0	-
	under-graduates	25	9,000,000
	Diploma	0	-
	Certificate	795	74,400,000
	Short-term training	0	-
	<b>Sub-total</b>	<b>820</b>	<b>83,400,000</b>
Production and Mining	Masters and post-graduates	0	-
	under-graduates	0	-
	Diploma	0	-
	Certificate	1460	457,800,000
	Short-term training	0	-
	<b>Sub-total</b>	<b>1460</b>	<b>457,800,000</b>
Trading and Services	Masters and post-graduates	0	-
	under-graduates	70	25,200,000
	Diploma	0	-
	Certificate	2834	230,430,000
	Short-term training	150	9,000,000
	<b>Sub-total</b>	<b>3054</b>	<b>264,630,000</b>
Tourism and Hospitality	Masters and post-graduates	0	-
	under-graduates	54	19,440,000
	Diploma	600	144,000,000
	Certificate	2005	120,300,000
	Short-term training	0	-
	<b>Sub-total</b>	<b>2659</b>	<b>283,740,000</b>
Finance	Masters and post-graduates	0	-
	under-graduates	95	35,400,000
	Diploma	50	6,000,000
	Certificate	150	9,000,000
	Short-term training	0	-
	<b>Sub-total</b>	<b>295</b>	<b>50,400,000</b>
<b>TOTAL</b>		<b>14,719</b>	<b>2,399,060,000</b>

SN	Level of Training	Pre-service	
		Slot	Budget
1	Masters and post-graduates	0	-
2	under-graduates	385	151,800,000
3	Diploma	830	193,200,000
4	Certificate	13354	2,045,060,000
5	Short-term training	150	9,000,000
	<b>TOTAL</b>	<b>14,719</b>	<b>2,399,060,000</b>

**Table 3.5: Percentage allocation of Slot and Budget by level of training for pre-service**

SN	Level of Training	Pre-service	
		Slot	Budget
1	Masters and post-graduates	0.00%	0.00%
2	under-graduates	2.62%	6.33%
3	Diploma	5.64%	8.05%
4	Certificate	90.73%	85.24%
5	Short-term training	1.02%	0.38%
	<b>TOTAL</b>	<b>100%</b>	<b>100%</b>

**Table 3.6: Sector wise slot and budget for in-service**

Sector	Level of Training	In-service	
		Slot	Budget
Construction	Masters and Post-graduates	34	67,320,000
	under-graduates	0	-
	Diploma	10	35,640,000
	Certificate	0	-
	Short-term training	130	3,898,125
	<b>Sub-total</b>	<b>174</b>	<b>106,858,125</b>
Power	Masters and post-graduates	14	25,245,000
	under-graduates	0	-
	Diploma	10	31,020,000
	Certificate	0	-
	Short-term training	96	1,456,125
	<b>Sub-total</b>	<b>120</b>	<b>57,721,125</b>
Education and Training	Masters and post-graduates	27	42,570,000
	under-graduates	0	-
	Diploma	25	13,200,000
	Certificate	18	9,504,000
	Short-term training	105	278,438
	<b>Sub-total</b>	<b>175</b>	<b>65,552,438</b>

ICT, Media and Transport	Masters and post-graduates	23	38,610,000
	under-graduates	0	-
	Diploma	20	23,760,000
	Certificate	0	-
	Short-term training	96	2,912,250
	<b>Sub-total</b>	<b>139</b>	<b>65,282,250</b>
Production and Mining	Masters and post-graduates	17	27,225,000
	under-graduates	0	-
	Diploma	14	4,521,000
	Certificate	160	21,670,000
	Short-term training	280	1,340,625
	<b>Sub-total</b>	<b>471</b>	<b>54,756,625</b>
Trading and Services	Masters and post-graduates	20	29,700,000
	under-graduates	0	-
	Diploma	6	2,508,000
	Certificate	10	1,485,000
	Short-term training	275	5,585,938
	<b>Sub-total</b>	<b>311</b>	<b>39,278,938</b>
Tourism and Hospitality	Masters and post-graduates	21	31,185,000
	under-graduates	0	-
	Diploma	9	6,996,000
	Certificate	0	-
	Short-term training	243	2,757,563
	<b>Sub-total</b>	<b>273</b>	<b>40,938,563</b>
Finance	Masters and post-graduates	22	36,630,000
	under-graduates	0	-
	Diploma	5	3,498,000
	Certificate	4	3,498,000
	Short-term training	171	3,673,313
	<b>Sub-total</b>	<b>202</b>	<b>47,299,313</b>
<b>TOTAL</b>	<b>1,865</b>	<b>477,687,375</b>	

Table 3.7: Slot and Budget by level of training for in-service

SN	Level of Training	In-service	
		Slot	Budget
1	Masters and post-graduates	178	298,485,000
2	under-graduates	0	-
3	Diploma	99	121,143,000
4	Certificate	192	36,157,000
5	Short-term training	1396	21,902,375
	<b>TOTAL</b>	<b>1,865</b>	<b>477,687,375</b>

**Table 3.8: Percentage allocation of Slot and Budget by level of training for in-service**

SN	Level of Training	In-service	
		Slot	Budget
1	Masters and post-graduates	9.54%	62.49%
2	under-graduates	0.00%	0.00%
3	Diploma	5.31%	25.36%
4	Certificate	10.29%	7.57%
5	Short-term training	74.85%	4.59%
	<b>TOTAL</b>	<b>100%</b>	<b>100.00%</b>

### 3.4 Pre-service HRD Plans and Programs

During the 11<sup>th</sup> FYP period, 90,000<sup>19</sup> jobs are expected to be created in the economy. Similarly the National HRD Advisory document of 2012 projects that approximately 1,20,000 job seekers will enter the economy. However, in planning HRD programs for the pre-service, careful consideration has been made in assessing those that will enter into the vocational trades (specifically lower/middle/higher secondary graduates). Therefore, the above number has been narrowed down into a more realistic figure in planning for pre-service HRD in the form of skills development programs, through formal TVET programs (TTI and IZCs), apprenticeship training programs and special skills development programs. The rest can be accommodated in the private sector training provisions.

**Table 3.9: School leavers and pre-service training programs**

School leavers	2013	2014	2015	2016	2017	Total
VII-X	4,546	4,766	4,811	5,047	5,101	24,272
XI-XII	2,262	2,047	2,171	2,336	2,351	11,168
<b>Total</b>	<b>6,808</b>	<b>6,813</b>	<b>6,982</b>	<b>7,383</b>	<b>7,453</b>	<b>35,440</b>
<b>Training Programs</b>						
TTI/IZC	964	1,217	1,430	1,649	1,882	7,142
Apprenticeship	480	560	590	620	660	2,910
Special Training program	860	860	960	860	960	4,500
<b>Total</b>	<b>2,304</b>	<b>2,637</b>	<b>2,980</b>	<b>3,129</b>	<b>3,502</b>	<b>14,552</b>
Space for private	4,505	4,177	4,003	4,254	3,950	20,889
<b>Existing capacity</b>	<b>3,381</b>					

#### 3.4.1 Technical Training Institutes and Institute of Zorig Chusum

The core pre-service education for technician/certificate level training is provided by the six technical training institutes and the 2 Zorig Chuesum Institutes. TTIs train technicians for the construction industry, automobile technicians, electricians, computer repair technicians and drivers for heavy vehicles. There is a huge requirement for these personnel. In construction sector alone, there are approximately over 40,000 skilled expatriate workers. On this account alone, it justifies for increasing the training spaces by five or six times the current number. The plan is to go for much more modest target, and the subsequent paragraph explains why.

<sup>19</sup> The employment contract is between the employee and the employer and the terms of affecting separation can work both ways.

Despite numerous programs on the part of the MoLHR and the institutes to popularize these courses, the response for the TTIs and IZCs is very poor with some of courses being undersubscribed. Only 68% of the seats advertised seats have been filled for these programs during the 10<sup>th</sup> FYP. The contributing factors for these are cited as: (i) low status of the blue collar jobs as opposed to desk jobs, (ii) TVET is perceived as a last option with limited opportunity for professional development or higher education, (iii) unattractive service and working conditions in the private sector where the TVET graduates are generally employed and, (iv) availability of a large number of skilled non-nationals who are willing to work under more adverse conditions and for lower wage.

To address the low status of blue collar jobs, the MoLHR in collaboration with Ministry of Education launched different programs to imbibe dignity of labour and help make vocational trainings an attractive option. MoE's Career counseling program, school based vocational training program which evolved to school vocational clubs, SUPW<sup>20</sup> and more recently the introduction of vocational subjects for grades of 9-12 in schools that are in close proximity to the TTIs are some of these initiatives. Other initiatives of the MoLHR include career fairs, improving the image of the skilled workers by promoting the use of worker's uniforms, and providing a positive image of the worker through promotional materials in the media. To improve the working conditions in the private sector, the Labour and Employment Act of Bhutan stipulates minimum standards and conditions for employment. The Act amongst others covers the minimum age of employment and acceptable form of child labour, requirement of a written contract for employment over one year which can be reviewed by MoLHR to ensure minimum conditions, compensation and benefits, termination, dispute resolutions and others.

To address the career ladder for TVET graduates, RUB has recently made a provision to allow the 6 TTI graduates to compete for continuing their diploma but after a minimum of 3 years working experience. On the availability of a large number of skilled non-nationals, the 2007 Labour Act stipulates only skills that are not available in the country can be recruited. But in the absence of appropriate information system to determine this, and also the common knowledge about Bhutanese worker's own attitude towards taking up such works, the Ministry has not strictly sought compliance on this from the employers. None of these have made much impact in making vocational career a worthwhile pursuit.

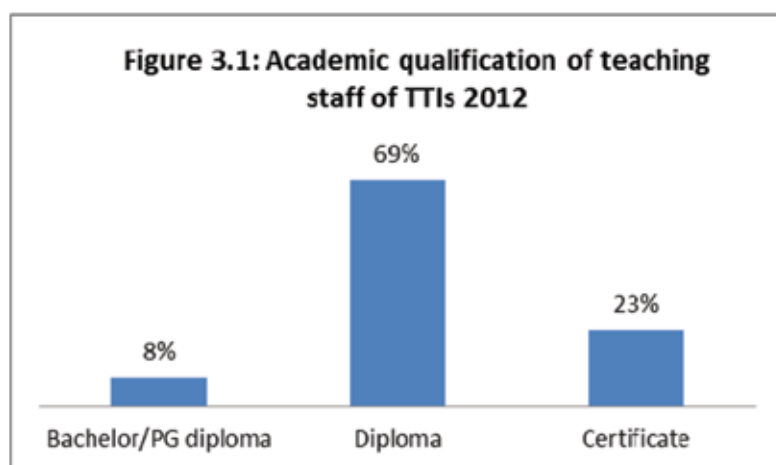
Intake into TTI and IZC will be expanded from 850 in 2012 to 1882 by 2017-18<sup>21</sup>, through diversified courses and continual social marketing of these courses. The concentration of the TTI courses will continue to remain in the construction industry which continues to grow. Even at a modest growth rate of 10%, the industry will require at least an additional 3000 technicians. In addition, electricians, automobile technicians, tailoring and the traditional arts and crafts will continue to be provided and expanded. Under the latter, it is also proposed that the IZCs to introduce other arts and craft courses such as pottery and jewelry making, and use ICT for the conceptual designs.

Disciplines	2013-14	2014-15	2015-16	2016-17	2017-18	Total intake for 11th FYP
<b>Technical Training Institutes</b>						
Electrical	230	253	278	306	337	1404
Welding	30	60	90	120	150	450
Mechanical	75	100	110	121	133	539
Computer	33	36	40	44	48	201
Furniture	15	15	15	15	15	75

20 As classified in the license

21 Source: LMID, Department of Employment

Automobile	138	151	166	183	201	839
Carpentry	60	90	120	150	180	600
Masonry	60	120	150	180	216	726
Plumbing	60	90	120	150	180	600
Upholstery and design	14	17	21	25	30	107
Driving (Heavy)	22	24	26	29	32	132
Tailoring	28	30	33	37	40	168
<b>Sub Total of TTIs</b>	<b>764</b>	<b>987</b>	<b>1170</b>	<b>1359</b>	<b>1562</b>	<b>5842</b>
<b>Zorig Chusum</b>						
Tshemzo(Tailoring)	-	-	-	-	-	-
Tshemdru(Embroidery)	12	12	12	12	12	60
Jimzo(Sculpture)	24	24	24	24	24	120
Shazo(wood turning & lacqueiring)	18	18	18	18	18	90
Lhadri(Painting)	42	42	42	42	42	210
Troezo(Silver/goldsmith)	28	28	28	28	28	140
Thazo(weaving/silk screaming)	12	12	12	12	12	60
Patra(wood carving)	34	34	34	34	34	170
Slate casting						-
New crafts (jewelry making, ceramics, etc).	30	60	90	120	150	450
<b>Sub Total of IZCs</b>	<b>200</b>	<b>230</b>	<b>260</b>	<b>290</b>	<b>320</b>	<b>1,300</b>
<b>Total of TTI &amp; IZC</b>	<b>964</b>	<b>1,217</b>	<b>1,430</b>	<b>1,649</b>	<b>1,882</b>	<b>7,142</b>



The second focus of TVET will be to continue improving the quality of the program and work on the minds and hearts of the youth to inspire them to take up the trades as a vocation. Apart from reviewing and reinforcing those strategies that are making an impact, a major attention of the plan will be to upgrade the profile of the teachers in the TTIs. In order that students get quality skills and stay motivated to undertake the profession, the staff of the institute must embody or at least exhibit these qualities themselves. Most of the existing teaching

staff only have certificate training and have acquired their diplomas recently to become eligible for teaching in the TTIs. Only 8 of the 96 staff members have a bachelors or Post graduate degree. Less than 5 of the staff members have some industrial experience themselves. TTIs have to aim to have at least 50% of their teaching faculty with a bachelor's degree and with industrial experience. If such teachers cannot be found, MoLHR needs to explore getting retired engineers on contracts or/and resort to recruiting expatriates.

### 3.4.2 Apprenticeship Training Program

This is another pre-service training program that has been aggressively pursued in the past as a way of resolving the unemployment problem. In fact, at one point, the MoLHR tried to oblige the employer to recruit their students after the successful completion of the training<sup>22</sup>, this is no longer pursued as many of the trainees themselves are reluctant to take on a career with the same employer. Currently the program covers 300-400 unemployed youth annually but is slated for expansion. The ATP system administration involves matching individual interest to the needs of the employers, drawing up contracts with the employers and disbursement of the monthly stipend based on a mast roll kept by the employer.

The training and skills development is most often without any structure and set learning objectives. The only exception being the structured ATP courses offered at the Wood Craft Centre and the Tailoring Training Centre which operate almost like vocational training cum production centers.

The ATP program will be expanded from current level to 660 annually. As in the past, these would mainly be in the hospitality and service industry.

ATP is essentially a skilling program, and the program components and system should provide priority to this. Towards this selection of the employers is a critical element. There has to be a reasonable assurance that the employers have the capacity and expertise to provide the trade skills. This will be the principal criterion for selection of future employing agencies. A list of competencies to be imparted during attachment has to be established between the employer and MoLHR. This should be the basis for monitoring the ATP by the MoLHR officials. Towards this, the existing monitoring system has to be strengthened.

### 3.4.3 Special Training Program (STP)

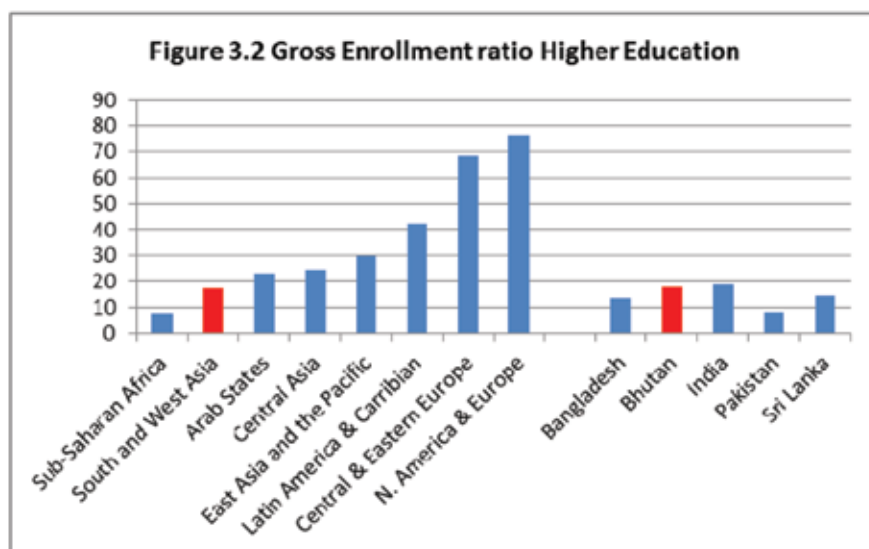
This will be the program to address immediate skills needs required as an alternative to the current program or for new emerging industries for which there may be no skilled manpower. During the 10<sup>th</sup> Five Year Plan almost 2,600 slots were implemented under this, mostly for the hospitality, ICT, Construction, Health and arts and craft sector. The current mode of STP is implemented in partnership with local and regional training providers in the form of incentive based and employment based approach, which needs to be continued due to higher percentage of employment generation. However, there has to be higher degree of flexibility and creativity in implementation of this program in order to target higher number of implementation and cover different aspect of training under different sectors.

### 3.4.4 Higher Education

The Royal University of Bhutan (RUB) as the only University in the country sees itself playing a central role in realizing the national aspiration of becoming a knowledge-based society. Towards this, it will increase the enrollment from a total of 9,000 in 2013 to 15,000 by the end of the plan period. By using the 19-23 population as the target age group for higher education the current enrollment rate for Bhutan works out to about 12%. However, by taking into account the 5,000 Bhutanese studying outside the country the enrollment ratio enhances to 18%. This makes Bhutan almost at par with India within the SAARC region, but far behind countries in other regions.

Considering that there are already about 14,000 Bhutanese students at higher education level, the RUB's enrollment target of 15,000 by the end of the plan is not going to be adequate to meet the rising demand for this level of education. Therefore the Government needs to consider private sector provisions. However, this should be as far as possible be directed through some incentive schemes to provision more technical program

22 Socially Useful Productive Work which is part of the school curriculum



instead of the arts stream, for which there is already an oversupply. This needs to be supported with human resources such as lecturers and professors with Masters and PhDs. RUB itself will need major HRD input to cope with the increased students as well as the continual development of the education quality and standards. This will be covered under the next section of the plan.

However, it is important here to provide a holistic picture of

the output from the Higher Education. The annual number of diploma and undergraduates is expected to increase from 2,000 to almost 5,000 during the plan period.

Field of Study	2012	2013	2014	2015	2016	2017
Dzongkha and Culture	56	91	128	263	428	448
Agricultural Sciences	88	102	102	118	183	176
Civil Engineering and allied sciences	132	242	333	410	438	430
Electricals/Electronics/Communication	88	96	173	196	226	236
Mechanical/Automobile	22	25	40	53	55	55
Architecture	0	2	13	20	33	60
MBBS/BDS	0	16	37	63	57	64
Traditional Medicine	16	16	16	16	20	16
Nursing and allied studies	81	151	133	149	161	167
Medical Lab Technology	60	63	73	70	72	73
Teaching	473	451	571	578	730	733
Liberal Art	172	468	456	444	472	495
General Sciences	93	106	106	106	108	110
Business Administration and Commerce	245	862	687	724	963	1152
Media and communication	0	29	39	39	50	60
ICT	117	355	299	258	318	331
Law	0	34	31	66	57	132
Tourism and Hospitality	100	143	130	144	150	160
<b>Total</b>	<b>1743</b>	<b>3251</b>	<b>3367</b>	<b>3717</b>	<b>4521</b>	<b>4898</b>

The market force seems to be working for some courses for the higher education sub sector. For example in response to the prevailing shortage of civil engineers in the country, there is a large number of students who are rushing to undertake engineering courses on their own expenses in India. But the expansion is not confined to engineering only; it pertains to almost every sector. Given this situation, undergraduate program will not be a priority in this HRD Master plan.



### 3.5 In-service HRD Plans and Program

The Bhutan 2020 foresees the private sector 'as the engine of nation's future economic growth' and also 'essential for the enlargement of nation's tax base'. The private sector is expected to create wealth of nation for the much needed economic development. The private sector is also expected to generate adequate employment opportunities to absorb the prospective job seekers in the country. The Royal Government is committed in removing all impediments and obstacles to the development and Growth of the private sector. The Government is also committed in developing a favorable environment that respects and honors fair commercial practices and promotes entrepreneurial initiatives.

The private sector has been increasingly contributing to the national revenue through tax and non tax revenues. The revenues generated from the private sector have significantly contributed in meeting the recurrent expenditure of the economy. The emphasis in the future with regard to private sector development would focus towards the small scale and the medium scale enterprises. The policy enabler would be aimed at enlarging access of small scale producers to technologies, credit and market with priority on creating employment. As such, the Bhutanese private sector has two distinct characteristic. Firstly, its workers lack both the managerial and the technical skills, as a result of which the productivity of these sectors are low. Secondly, a majority of the private and corporate sector are small and medium in nature. Therefore, it is important for the Government to develop a sound human resources development plans and programs to enable the sector to become the engine of growth and employment generation.

The labour force participation in accordance to the Labour Force Survey (LFS) 2012 shows 67% labour force participation which translates to 336,391 employed, out of which 23,909 are engaged in the civil service sector, which translate to 7.1% of the labour force. Though the erstwhile National HRD plans were designed to meet the human resource requirement in the Government sector, the current trend of labour absorption being high in the private sector will continue to grow, thus necessitating tertiary educational reforms and HRD intervention to address this issue.

In the 11<sup>th</sup> FYP, in-service HRD plan and programs will be geared towards developing the critical HRD needs of the sector through masters and short-term program, with focus on the private sector. Cross-sectorial programs such as Human Resource Management, Occupational Health and Safety, Risk management, team building, people management, leadership and change management, business ethics, labour law, TQM and others program will be provided to build human resource capacity of the private sector in leadership, quality control, change management, and institution sustainable HRM system. Further in-service HRD program will be provided through support in the form of long-term training (Masters, Phd and diploma) and short-term programs (to address immediate requirements).

#### 3.5.1 Long-term Training

The Royal Government has relied heavily on various bilateral and multilateral donor offers in the form of Australian Scholarship Award, GOI Scholarship, TICA (Government of Thailand Scholarship), Netherland Fellowship Program (NFP) and others in implementing post-graduation programs (Masters and Phd) for the private sector. As such the MoLHR will not have separate fund to implement post-graduation programs and will continue to rely on the multilateral and bilateral donor support for implementation of masters and Phd level programs. However, these offers will be aligned with the requirements specified in the Master plan.

Further, the MoLHR will support and foster further development of technical graduates from various in-country and ex-country vocational institutions (TTIs, IZCs and others) in the private and corporate sector through diploma and other long-terms program in the vocational fields. This will be further tied with the Bhutan Vocational National Certification system.

### **3.5.2 Short-term Training**

Private sector in general has two kinds of HRD needs: managerial and technical. Most of the managerial HRD requirements are common across organization and sectors, however, most technical requirements are specific to certain sector or organization. Therefore the current Master plan will not feature most technical requirements unlike the past Master plans since this should be addressed through in-house program within the organization, especially in the existing Government owned corporations and large scale private firms. However, the current Master plan will address certain critical technical requirements through various in-country and ex-country programs designed to meet specific requirement of the sector. Further cross-sectorial programs such as business ethics, leadership and change management, human resource management and planning, marketing, technology change management, TQM, occupational health and safety and labour law will be provided through various in-country programs. Most short-term program will be provided in the form of cost-sharing basis wherein nominating agencies will also bear certain cost of the training.

## 3.6 Sector wise Assessment and HRD plan

### 3.6.1 CONSTRUCTION SECTOR

Bhutanese construction industry is the fastest growing of all its industries and contributes to 16.26% of the GDP (2011)<sup>23</sup>. The sector comprises of almost 4,000 contractors who thrive on the works provided by the public sector infrastructure building such as office blocks, schools, hospitals, roads, bridges and their maintenance. While construction is the oldest industry with over 50 years of history, the Bhutanese firms are themselves a mixed group with a majority of them inexperienced and engaged in petty contracts. The larger ones are few (120) but even these lack the professional competencies to undertake the huge Government projects. Therefore the design and execution of major projects such as bridges, tunnels and dams continue to be outsourced to foreign firms. More significantly, there is no clear strategy to get the industry to ever grow in capacity to handle such projects.

The World Bank observes that “road building practices in Bhutan use mostly obsolete technology and follow the archaic practices of the mid-20th century. Road construction and maintenance is labor intensive and marked by low productivity and high costs. This results in poor quality roads that have high levels of roughness, poor serviceability, and a short life.”<sup>24</sup>

The Ministry of Information recently developed a Transport Master plan which envisages upgrading of road network and highways including the enlargement of existing roads to four road lanes, tunnels and viaducts. This will require correspondingly more sophisticated engineering skills than is available in the country. The total budget projected for the road sector alone during the 11th Five year plan is 22 billion compared to the 10 billion projected for the 10th FYP. Therefore the construction industry will continue to grow in terms of business opportunities.

#### Issues and Challenges

The Government instituted the Construction Development Board to help “develop” the construction industry and to regulate it. However, building up of professional competencies within the industry has not been its key focus. In fact there is conspicuous absence of coherent human resource development plan across the country for the engineering cadre. To begin with, competency of engineering skills is not even a requisite for registration as a construction firm. Even for “Large” contractors, all it requires is one engineer with a degree and another with a diploma. For smaller contractors, the regulation does not even require engineers. Therefore engineering decisions of the works are undertaken by the proprietors of the construction firms, many of whom have never had any engineering training. This is not a unique case within the private sector. This happens within the civil service too, upon which most of the emerging private sector HR systems are modeled.

Criteria	Large		Medium		Small
	W1 & W3	W4	W1 & W3	W4	
Manager	1	1	1	1	1
Graduate Engineer	1(C)	1(E)	-	-	
Diploma Engineer	2(C)	1(E)	1(C)	-	
Accountant	1	1	-	-	
Site supervisor	2(C)	2(E)	1(C)	1(E)	1
Minimum no. of employees	7	6	3	2	2

23 Unit costs estimated at Nu 100,000 per student per year, and average number of years for a student to graduate is estimated at 2 years.

24 This is categorically made a condition in the ATP Guideline.

W1 – Roads and Bridges

W2 - Traditional Bhutanese Painting/Finishing

W3 – Building, Irrigation, Drainage, Flood controls, Water supply and Sewerage.

W4 – Power and Telecommunication works

Second, beyond a degree in engineering, there is no system for professional development in the engineering field. Anyone graduating with a diploma or degree is seen as qualified to undertake the whole gamut of engineering related tasks from preparation of bid documents to design and supervision works, etc. Eventually every engineer in Bhutan develops some basic skills through experience, but at a cost to quality of works. This learning has not brought about the higher level of specialized skills required by the industry. For example at present there are no known specialists in structural engineering catering to earthquake resistant structures, no specialists in material engineering to advice on the strength of steel, sand and aggregates, no specialist in wood and other local materials. Bhutanese engineering firms have to seek the intervention of third party firms in India and Bangladesh on aspects of the higher level engineering advice.

Third, there are no incentives for firms to invest in the specialized skills of their staff. In any case Bhutanese construction firms have very lean staff strength and do not employ more engineers than that required by law for their registration. The rest of the engineering staffs are recruited based on work at hand as per the contractual terms of the clients. These staffs are only there for the duration of the works, so there is no real benefits for the firm in skilling them for a better career.

Fourth, much has been talked about mechanization, but there is no real expertise available within the industry which can guide the industry in which areas it should invest in. The dealers of these machineries have basic training programs for maintenance but a more systematic program is required to support the maintenance of equipment at work sites and in remote places.

Fifth, the construction industry employs the largest number of skilled non-national workers and the number has increased over the years with the huge infrastructure development projects. Some of the factors that contribute to this are, firstly, Bhutanese people do not want to take up low skill and labour intensive jobs. Secondly, supply of skilled workers required in this sector are not available in Bhutan, and finally the issue is further compounded by the easily available foreign workers willing to work at lower wage and harsher conditions as preferred by employers. The labour net information as of December 2012 indicated that approximately 80% of the total foreign workers are engaged in the construction industry.

A substantial number of workers who are skilled can be replaced by Bhutanese workers with targeted HRD intervention. This problem has been recognized and a number of initiatives have been undertaken but without any impact.

Assuming the sector continues to grow at 14% annually, these would create 7,000 jobs for the duration of the plan period<sup>25</sup>. Out of these 2,000 would be engineers (diploma and degree), another 2,000 would be in administrative jobs (finance and managers), and the remaining would be technicians. The engineering and other administrative staff can be recruited from the graduate pool coming out of RUB and Universities outside the country. 2,000 out of 3,000 additional technicians required by the industry would be met from the TTI's graduate pool. Another 1,000 could be trained as part of the Special Training Program, all of which have been addressed in the pre-service section of the plan.

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25 Sources for other countries than Bhutan, UIS, Unesco..

## HRD interventions

The 11FYP HRD for the construction sector shall be geared towards the following strategic objectives: i) to improve the quality of construction industry and ii) to establish pool of experts in Construction trades where Bhutan is weakest at present

### **1. *Improve the quality of construction industry through improved Management***

In principle, there are three aspects to ensuring quality of works. First the client or its representative must understand aspects of the quality which has to be ensured through the contract document. Second, the quality and standards have to be enforced on the contractor who is fully responsible for the works. Third, the monitoring of the quality has to be enforced. All these have to be addressed simultaneously for maximum impact, and for a culture of quality control and its determination to be firmly established within the industry. Focused HRD interventions targeted to enhance the capacity of the managers often the proprietors, site engineers, supervisors and technicians in the construction industry in the following competencies:

- Contracts management
- Construction project management
- Labour management
- Building services and facilities management
- Quality, safety and productivity in construction projects
- Construction estimation and cost management
- Occupational health and safety hazards
- Construction material testing and calibration
- Procurement & Stores management
- Maintenance of equipment including heavy machinery being deployed for the industry (also reflected under the Automobile sector)

200 short term training courses for a duration of 2 weeks each is earmarked for this part of the objective. This can be organized with the help of the Construction Development Board and the Construction Association of Bhutan as well as the Public Procurement Policy Division of the Ministry of Finance.

In addition, there has to be a major reorientation of current management system of the construction firms. At present, many firms are run by proprietors, and engineers are there mostly to fulfill a contractual clause, not for their professional services. This has to change and elements of professional accounting and responsibility built at every stage of the construction. This requires workshops and trainings for the management and senior engineers of the firms. 5 national workshops to cover 300 contractors are to meet this objective.

### **2. *Develop pool of skills in experts in construction trades where Bhutan is weakest at present***

EDP 2010 seeks to improve this through professionalizing the industry. One is through mechanization, and the other, the adoption of green technology in keeping with the brand image of the country. The policy also promotes the idea of specialization, getting bigger contractors to specialize in specific areas of construction. The long term master's program should be provided to develop specialized knowledge for the current and envisaged construction works in Bhutan in some of the following areas of competencies:

- Specialist in Structural Engineering & design
- Construction Management
- Specialist in soil, rock, steel and other materials
- Expertise to undertake research in engineering field of geology & terrain

- Use of local construction materials
- Green/Energy efficient building
- Roads and Bridge design engineering
- Geographical information system for road construction
- Tunneling engineering
- Environment management plan & bioengineering

Care must be taken to get the best candidates for these slots. This should be undertaken through a competitive process of selection where due weightage will be provided for proven capacity of academic rigor and performance, previous experiences and performance and a number of references from previous employers. These people upon their completion of the study can be absorbed in a private firm or establish themselves to provide a specific service of expertise. This part of the objective shall be addressed by providing Masters level fellowships in the field of Civil Engineering, Mechanical engineering, and Electrical engineering. The detailed program of study will be determined during the time of implementation.

In addition to the specialized expertise, the construction sector needs to be equipped with adequate supply of skilled technicians. One of the ideas often mooted by the Economic Development Policy to help professionalize the industry was to “support the development of ancillary companies specializing in areas such as electric wiring, tiling, wood processing, plumbing and fitting, ceiling, flooring, insulation installation, landscaping, architecture”. In addition, a concerted effort needs to be initiated to replace expatriate electricians, plumbers in the plan period and subsequently the masons and the carpenters too. This could pave way for developing greater professionalism amongst the TTI graduates and bring about enhanced quality and efficiency within the construction industry. This objective needs to be addressed through diversified course offerings through the TTIs and the short term skills development programs for the sector. Pre-service education (certificate level) for this sector includes 2,376<sup>26</sup> in the TTIs and 500 in the Special Training Program. No fellowships and trainings are envisaged for this aspect of the objective, but MoLHR has to take a lead in instituting this body and provide necessary budgetary support if required.

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26 Estimated from RUB’s projection of annual enrollment and graduates and MoE’s record of students studying through various scholarships and private financing in India and other countries.

### 3.6.2 POWER SECTOR

Energy is probably the most important development agenda in particular the hydro power. Bhutan has hydropower potential of 30,000 MW, of which 23,760 MW is technically feasible and the plan was to harness 10,000MW by 2018. Bhutan has competitive advantage in this sector and uses this source of energy for its own purpose and also to earn foreign exchange by exporting it to India, which has a huge market. The sector contributes to 13.92 of GDP<sup>27</sup> and is expected to contribute close to half of country's GDP by 2020. Total contribution from this sector amounts to Nu. 11,911.61 million and of the four generating firms, 60% is contributed by THPA (Tala Hydro Power) alone followed by Chukha Hydro at 30%. The current energy generation stands at 1504MW and the plan targets of 10,000MW is to be achieved with the commissioning of the 10 projects. Out of the 10 projects five are being executed with inter-Governmental authority overseeing the execution of the project and being handed over for national ownership after completion providing the Government with great control for ensuring that Bhutanese workers are employed in these projects. The other projects are being implemented on a joint-venture model. (Bhutanese Government taking 49% of the ownership and the Indian Government appointed PSO holding 51% of the share till the project is transferred to the Bhutanese Government, after 35 years of its operation)

More than 7000 people are engaged in this sector and DGPC and BPC are the major employing agency. In addition to this, with the construction and operation of the current hydro projects this sector is expected to generate the major employment opportunities for the Bhutanese. The labour net as of December 2012 records approximately 2300 foreign workers engaged in the hydro project.

#### Issues and Challenges

DGPC and BPC who are responsible for power generation and transmission respectively have adequate professional staff supported by an effective HRD management system. There are plans to take on greater responsibility and more jobs that have been outsourced to external firms such as in executing power plant projects and undertaking in-house maintenance of major hardware associated with the industry with improved human resources.

In the 11<sup>th</sup> FYP period, the challenge will be to meet the requirement of engineers and technicians in civil, electrical and electronics and mechanical fields to support the construction of 10,000 MW projects. In addition, the projects will require administrators, finance personnel, transporters and laborers.

Despite huge employment potential, the current issue seems to be in not being able to recruit skilled Bhutanese workers and technicians into these projects. The reasons cited again being lack of skills, or attitude towards manual work, unattractive working conditions and availability of alternative employment in other sectors.

WAPCOs, an Indian public company has prepared the corresponding requirement of skills by broad categories segregated as project management staff and contractor's employees. Within the project management are two groups of professionals: i.e. executive and non-executive staff, comprising of professionals with mostly engineering degree or diploma. As per the projections, the executive staff starts at around a thousand, and it increases every year reaching a high of 3,000 (in 2016). The requirements thereafter keep dropping till the operation and maintenance stage when the requirement stabilizes at 1,000. The requirement for non-executive staff starts at around 300 and gradually peaks at 1,500 from 2016-2018 and slowly stabilizes at 1,000.

27 National Accounts Statistics, NSB, 2012

<b>Table 3.13: Projected Project staff requirement (Peak and O&amp;M stage)</b>					
Category	Key Officials	Mid - & Junior level staff			Total of Peaks
		Mid level staff	Junior level staff	Non-Exec. Staff	
<b>Peak Stage:</b>					
Civil Engineers	82	472	913	578	2045
Elect. Engineers	50	180	349	75	654
Mech./ Engineers	23	95	184	50	352
Admn. / Personnel	18	144	279	297	738
Finance / Accounts	14	72	140	161	387
Others*	37	61	120	563	782
<b>Total Strength</b>	<b>224</b>	<b>1025</b>	<b>1985</b>	<b>1724</b>	<b>4958</b>
<b>O&amp;M Stage:</b>					
Civil Engineers	32	102	185	286	605
Elect. Engineers	32	102	185	286	605
Mech. Engineers	3	11	21	32	67
Admn. / Personnel	17	57	103	159	336
Finance / Accounts	7	23	41	64	135
Others*	14	44	83	127	268
<b>Total Strength</b>	<b>105</b>	<b>339</b>	<b>618</b>	<b>954</b>	<b>2016</b>

## HRD Interventions

The supply of technical manpower for this sector is mostly through the engineers produced by the College of Science and Technology, and some engineers educated outside Bhutan. The management and other human resources engaged in this sector or mostly from Sherubtse College and Gedu College with Business or finance background. The skilled technicians are supplied by Jigme Namgyal Polytechnic and the Technical Training Institutes.

The long term and short term in-service HRD programs have to be geared towards meeting the expertise required for the power sector both for the construction and operation and maintenance of the hydro power plants. The master plan will aim to supply adequate skilled manpower for the sector and also develop the executive and advance expertise required for the sector.

- 4. In service HRD Programs:** The in service programs are planned to develop capacities of the professionals already engaged in the power sector to take up tasks which are currently outsourced to foreign experts. Some of the following competencies/training need identified by the BNHRD 2010 which still needs to be addressed will be taken up in the 11<sup>th</sup> FYP.

- Hydropower project management & execution
- Renewable energy and distributed generation
- Power system design
- Water resource management
- Disaster management
- Hydrological analysis, planning & modeling
- Geomatics engineering

The long term study program is to be further augmented with some of the short term training programs for the in-service executives and management of the power sector to be conducted in collaboration with CST and RIM.



- 5. Recommendation for Technical Education:** As mentioned earlier, CST and the JNP are major providers of engineers and technicians with tertiary qualification. However, the course offerings are mostly general and not catering for the specific needs of the power sector.

In addition, the numbers produced are below the projected requirement for both the construction and the power sector. Hence, although the tertiary technical education is not part of this Master plan, it recommends the 2 colleges to increase slots, diversify programs, and plan for offering masters/ specialization to cater to specific needs of the power & construction sector.

**6. Technical Training and Development (pre-service programs)**

The bulk of the skilled technicians required for the sector needs to be produced by the Technical Training Institutes and other skills development programs. However, again the institutes and the programs produce graduates with some generic construction trades such as masonry, carpentry, plumbing, mechanical and electrical. The most common feedback received from employers (BPC, DGPC) is that the graduates have to be put through their in house training program before they can start working. Hence, the plan is to diversify the course offerings in the institutes, diversify and upscale the apprenticeship and special training in collaboration with the hydropower projects. The training needs indentified are only indicative and during implementation it has to be further validated.

### 3.6.3 EDUCATION AND TRAINING SECTOR

This sector encompasses private schools, tertiary education and private TVET institutions. Thus the sub-sector covered are (i) Early Childhood Care and Development (ECCD), (ii) private schools, (iii) the training services, and the (iv) tertiary education, each of them catering to a specific clientele and with special characteristics. For this plan, TVET and Apprenticeship Training program both under the aegis of MoLHR have been included as these form an integral part of the Master plan serving the private sector.

#### A. Early Childhood Care and Development (ECCD)

It's well established that cognitive development takes place at a rapid pace right from the child's birth. ECCD is a program to facilitate that development. There are different expectations from ECCD in Bhutan. Some believe it's the holistic development of the child including physical, social, psychological and mental development of the child; others limit it to cognitive development and somewhat of a downward extension of the formal school. In many ways this scenario is not unique to Bhutan. The system of ECCD operating around the world show varying models all driven by the peculiar context and the believe systems. What is universally acknowledged as critically important is the quality of these programs to ensure that the children do receive positive benefits from the experience.

Ministry of Education has adopted a two pronged strategy for the provision of ECCD through a) the promotion of sound parenting and child care practices for young children through home and family based interventions using the mass media, NFE centers, health facilities and schools and b) promotion of and support to early childhood care and development centers to enhance early learning opportunities for children age 3 to 6, through community based ECCD centers and centers run by private sector, civil society organizations and corporate bodies.

As of March 2012, there were 96 ECCD centers in the country, mostly catering to and located in the urban areas and Dzongkhag headquarters. The Ministry of Education provides guidelines for the establishment of ECCD, but the operation of the facilities are mostly left up to the promoters and facilitators.

There is a growing demand for ECCD centers because of the overall belief that it helps provide early start to the children's education. These are notions that that the Government has to further verify through research. Nevertheless, this popular sentiment is a powerful force and will require responses in terms of new centers during the plan period. More important the Government must establish basic standards of these services and ensure that the children receive positive development and care based on best practices around the world as well as keeping in view local contexts and culture.

#### Issues and Challenges

There seems to be a popular notion that since one is dealing with small children, one need not have care givers with high academic qualifications. A recently concluded study on ECCD found "Existing facilitators have likely received a very short training, while many staff in private daycares has no training at all." Many of

Program	Education completed					Total
	Class VIII	Class X	Class XII	Class XII+	Bachelor's Degree	
Community ECCD	0	6	9	0	1	16
Private ECCD	2	29	26	3	2	62
Workplace ECCD	0	3	4	0	0	7
NGO	0	0	2	0	0	2
<b>Total</b>	<b>2</b>	<b>38</b>	<b>41</b>	<b>3</b>	<b>3</b>	<b>87</b>

the promoters of ECCD including the donor agencies recruit fresh school leavers for the tasks and have no plans for long term- HRD for the facilitators. This is clearly evident from the profile of the recruits below.

This could ultimately undermine the quality of the program and need to be addressed. While it may be too much to expect at this stage for every ECD facilitator or care giver to have an ECCD<sup>28</sup> degree, the whole program has to be based on well founded, tested and sound pedagogy- after all, these people are dealing with the very foundation of the development of the future citizens. It is learnt that the MoE has a set of basic qualifications set for the ECCD staff, but these are not enforced, because of lack of an approved Government policy on ECCD program.

There is very limited expertise and knowledge on ECCD program to develop policies and guide the program development. In the whole of the country there are only 4 teacher educators who have majored ECCD as their field of higher education. While the Ministry of Education has the overall responsibility for the ECCD policy and programs, MoLHR can support in terms of building the human capacity at the higher level as well as support the short term training of care givers in the privately run centers.

### **HRD interventions**

The primary HRD objective for this sub-sector is to build the human capacities and knowledge base to provide leadership for developing good policies and programs, relevant education for the facilitators or care givers, and support the development of a continuing system of ECCD professional development amongst its teachers. In this connection, RUB already has plans to introduce ECCD in its teacher education colleges catering to a diploma and degree and eventually to a Masters and PhD. However that will take a number of years.

For the 11<sup>th</sup> Five Year Plan, MoLHR will support master's program for 20 ECD specialists to be selected from existing teachers who have studied child psychology. The candidates have to be sent to a reputed institute outside the country. These candidates would form the core body to provide leadership for the future development of ECCD in the country, including policies, standards, and curriculum development and teacher education.

The plan will also seek to ensure that each ECCD centre has a well trained staff qualified in ECCD. Towards building such a system, the plan will support 20 post degree diplomas in ECCD for the larger private ECCD centers.

In parallel, the plan will ensure that the existing centers have the necessary skills to provide quality services, and that future establishments are ensured of quality care givers skilled in their profession. This will involve the development of the following:

#### ***In-Service training for the care givers of the private centers***

The Ministry of Education and RUB will be invited to develop a series of workshops for the serving facilitators covering Government, community and private ECCD centers. MoLHR will finance the participations of the teachers operating in centers not financed by the Government. There will be an initial training of 2 months followed by 1 month of refresher courses every year for these staff.

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28 Quoted from World Bank website

**Pre-Service training for the future care givers**

The pool of trained care givers will be enhanced using the same curriculum described above. All fresh entrants will receive the 2 months training package, and the annual upgrading. The numbers will depend on the social demand as well as the ability of the market to respond to these demands. This is assumed to be 50 annually. Therefore all together (in-service and pre-service) the number of facilitators to be trained through the HRD Master plan is 300 for an average of 4 months each over the plan period.

**B. Private Schools**

In 2012, there were 26 private schools in the country with 9,928 students, which is 5.6% of the total school enrollment in the country. They are all established for profit purposes, and are very highly regulated by the Education Ministry. The regulation covers physical facilities, curriculum, teacher qualifications and training, not to mention the school fees which have to be approved by the Education Ministry. Overall there is very little the private schools have to offer in addition to that provided by the public schools.

Year	Public	Private	Total	Private %
2005	1539	1688	3,227	52%
2006	2525	1709	4,234	40%
2007	2667	1914	4,581	42%
2008	2885	2541	5,426	47%
2009	3271	2719	5,990	45%
2010	3425	3021	6,446	47%
2011	3564	3123	6,687	47%
2012	4669	2717	7,386	37%

9 of these schools only provide education up to the primary level. Parents who opt for private primary education do so because of lower class sizes, smaller schools as well as perceived better quality. Some private schools are also generally lax in implementing admission policies, such as the minimum age requirement, ensuring

therefore an earlier start. It's reported that in some schools children get admitted into PP as early as 4 years of age which is 2 year ahead of the official age for admission. In general the private schools seem to provide better education program than their Government counterparts at the primary level. A recently concluded Education Ministry<sup>29</sup> report ranks two of Thimphu's private school on the top 10 list of schools providing high quality primary education in the country.

Secondary Private Schools provide an opportunity to continue education beyond basic education for those who do not qualify to study in the Government schools. Only 40% of students appearing for class X Examinations find seats in one of the 34 Higher Secondary schools to continue their education. The rest aspiring to continue but do not meet the academic criteria are accommodated within one of the 14 private schools. The numbers of class XI students studying in private schools have however never gone beyond 3,100, and as a proportion to the total, it is decreasing. Unlike for primary education, private higher secondary education is not a choice for the academically qualified because of its perceived poor quality. Also most private higher secondary schools limit their curriculum offering to the Arts and Commerce/Business Administration streams. This is because most private schools find it not very lucrative to invest in laboratories or science teachers.

<sup>29</sup> Assuming that the value added per employee in base year 2012 is 1.5 million, and that that the job distribution would be 18% Managers, 30% engineers, 12% finance and administrative support and 40% technicians.

## Issues and Challenges

Although the sector has been opened to private investors and promoters since 1980s, there is not much growth in this sector. This is because the demand is limited, understandably so because it is considered as mostly as a second choice. The Private Schools have not developed to a stage wherein its status is at par with public schools. The few good schools with better academic standings are replicas of similar public schools that have been established in the past. The rest of the private schools are merely trying to cope up with the basic standards established by the Education Ministry. There are no additional curriculum choices, alternatives or more progressing learning system that is being promoted by the private schools.

Teacher profile	Public	Private	Total
Total Teachers	7,335	597	7,932
Expatriate teachers	473	106	579
Untrained teachers	483	267	750
Percentage of expatriates	6.4%	17.8%	7.3%
Percent of untrained teachers	6.6%	44.7%	9.5%

Private secondary schools generally produce poorer results. The straightforward reasons put forth for this is that they enroll students who are poor in academics to begin with. Therefore private secondary schools need to invest in better pedagogic support

and better teachers to make up for this. But as the statistics show, almost 45% of the private school teachers are untrained, compared to only 7% in the public schools. Also private schools generally have more difficulty in finding good Bhutanese trained teachers, so they resort to recruiting expatriates who are more expensive.

It must be mentioned here that some of the private schools are investing time and resources on teacher professional development. One school in the capital has a dedicated educator whose primary role is to train and provide professional support to its teachers. There is limited support for the teacher development from the Government. The costs of participation in the Government provided training, whether it is long term program in one of the teacher education colleges or a program organized by MoE must be financed by the private schools themselves.

## HRD interventions

The objective of the 11<sup>th</sup> Five Year Plan HRD Master plan is to help the private schools enhance their academic quality. These schools should become a more attractive option amongst Bhutanese students, particularly for those that go out of the country. There is a considerable outflow of resources for school education. The schools should also be able to attract better performing candidates because of the quality of education it offers. Good private schools can also help enhance Bhutan as a destination for FDIs.

The HRD support for the private schools during the 11<sup>th</sup> Five Year will cover three areas. (i) long term professional development of the new and serving teachers of the private schools, (ii) short term support for serving teachers and (iii) professional development of the principals and heads of schools.

### ***Long term professional development of the new and serving teachers of the private schools***

60 teachers from the private schools will be selected to undertake PGDE program in the RUB colleges of education. While the selection will be undertaken by the schools concerned, the cost of participation will be provided by the MoLHR. This will cover a broad representation of schools but mostly schools providing secondary education.

For the secondary schools, 10 master's program will be provided. This will be in the area of Mathematics and Science where there is currently a shortage throughout the education system.

### ***Short term support for serving teachers***

School based in-service training forms an important element in the upgrading of teacher competency and knowledge. While most of these programs are inbuilt within the school plans, there will be need on occasions to undertake training involving resource persons outside of the country. A selected number of these programs which caters to the general needs of the private schools will be supported by the MoLHR. For these the schools will have to apply for a grant at the beginning of the financial year. For effecting greater economy and impact, a group of schools should undertake such programs rather than individually. This will be one of the criteria adopted by the MoLHR to assess the viability of the proposals.

### ***Management program***

A key towards enhancing quality of education lies with the management and leadership of the school. MoLHR will support the participation costs of principals and other staff providing leadership roles to attend relevant workshops on managing education reforms and qualitative improvement. This shall be based on invitations received as well proposals of the schools. The Plan provides for the participation of 30 heads for such programs over the plan period.

## **C. Tertiary Education**

This sub-sector comprises of the Royal University of Bhutan with its 10 member colleges<sup>30</sup> and its affiliate the Royal Thimphu College. Courses offered include engineering, education, nursing, agricultural sciences, information technology and computer applications, commerce and business administration as well as general sciences and the arts and national language and culture. Majority of the courses offered are at the undergraduate level, but courses are also offered at the diploma level for engineering and agricultural sciences. There is a plan to further expand the diploma program to nursing and introduce Masters Programs in some of the disciplines.

Since its establishment in 2004, through a Royal Charter, the member colleges had to contend to a rising demand in education in all disciplines, prompted primarily by the enrollment expansion at the general education system resulting with more people qualifying to continue for higher education. Consequently annual intakes have doubled from 1000 in 2005 to well over 2000 in 2012. This has not been adequate to match the rising private demand. It is estimated that an equal number of Bhutanese students seek admission outside the country annually.

RUB has been pursuing an aggressive staff development over the years. In 2004, all the colleges combined had only 205 teaching staff out of which 27% were expatriates. The University could boast of only 1 Bhutanese staff member with a PhD. In 2012, there were 495 teaching staff and only 18% are expatriates.

The delinking of RUB from the civil service in July 2010 and empowering it to develop its own service rules have been used to its advantage. Under the new RUB HR rules, the eligibility criteria for recruitment of University staff has been relaxed to include anyone found capable including those who have resigned from RCSC. RUB has also done away with the age limit of 45 years to pursue long-term studies and allows anyone as long as he/she has five years to work with the University after the completion of the course. The new HR rules allows the retention of selected academics after superannuation on contract initially for three years, which can be further extended by another two years based on performance and the need of the University. All these have facilitated the RUB to cast its net wider for talent and retain its staff over longer working years.

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30 Please refer to table \_\_\_ for the breakup of the courses

## Issues and Challenges

Lack of qualified teaching staff has been the biggest challenge in developing a quality higher education program. Because of the enrollment growing at around 15% annually, the staff development has been a moving target, and will continue to be so during the 11<sup>th</sup> Five Year plan.

Bhutan's higher education is still very much confined to teaching and only very rudimentary research activities are being initiated. This is also a reflection of the HR constraints.

<i>Level</i>	Academic		Non-Academic		Total
	Bhutanese	Expatriate	Bhutanese	Expatriate	
PhD	21	19	4	0	<b>44</b>
Masters	250	64	8	1	<b>323</b>
PG Diploma/Certificate	17	0	3	0	<b>20</b>
Bachelors	89	6	42	0	<b>137</b>
Diploma	11	0	30	0	<b>41</b>
Certificate	7	0	77	0	<b>84</b>
Class XII	0	0	65	0	<b>65</b>
Class X	0	0	50	0	<b>50</b>
Others	7	1	187	0	<b>195</b>
Total	402	90	466	1	<b>959</b>

## HRD Interventions

HRD Master plan will support the Royal University of Bhutan and its institutes to realize their vision of becoming centers of excellence for education and research. Towards this, staff recruitment and development remains a continuing focus of the university. Currently 36 of its staff are enrolled in PhD program and another 49 enrolled in Master's program. RUB plans to increase the in campus teaching staff from 605 to 869 by end of 11<sup>th</sup> Plan. Further it plans to substantially improve the academic profile and standing of its teaching staff. The percent of teaching staff will be increased from 77 to 86 percent and the percentage of PhDs will be increased from 8 to 19%. To facilitate this, RUB will undertake PhDs, Masters and Post graduate studies and attachment/ staff exchange programs. In addition slots will be provided for short term training/ workshops for academic and non-academic staff respectively.

In the 11th FYP period, RUB will have its own separate HRD Master plan which plans to address the critical HR requirements and challenges of RUB and its affiliated colleges and institutions. RUB's Master plan will support 104 PhD programs, 131 masters program and other short-term programs for RUB and its tertiary institutions and colleges. A budget of Nu. 697.5 million has been estimated for the plan implementation, which is not included in this Master plan. However, this Master plan will identify and support training programs for tertiary institutions over and above the Master plan developed by RUB. Further, the MoLHR will support scholarship and other ad-hoc offers for RUB and its affiliated colleges through the various bilateral and multilateral donor offers.

## D. TVET Institutions

Technical Vocational Education and Training sub sector consists of all the public and private training providers offering training which falls with the Bhutan Vocational Qualification Framework and policy. It includes the 6 TTIs, 2 IZCs under the direct administration of the Department of Human Resources, other public institutes

like Royal Institute of Health Science, Rural Development Training Centre, Agriculture Machinery Centre, Ugyen Institute for Conservation & Environment, and more than 68 private training providers.

TVET in Bhutan evolved as a subsidiary growth from the mainstream school education system. The first polytechnic college started in 1965 with the establishment of Don Bosco Technical School later renamed as Royal Technical Institute (RTI). It was then administratively managed by the Technical Education Cell under the purview of the Ministry of Education. In 1999 NTTA was established as an autonomous body mandated to plan, formulate policies, register and authorize VET policies and in 2003 it was subsumed under MoLHR.

The Government is increasingly placing emphasis on the expansion and improvement of Technical and Vocational Education and Training. With rapid infrastructure development and technology the need for national skilled workforce has become a priority. The need to develop this sector is further highlighted in the face of rising youth unemployment problems and the related socio economic problems. Expansion and improvement of TVET is acknowledged as a means to achieve the national commitment towards sustainable socio economic development.

### Issues and Challenges

This sub sector of institutions which are to supply the majority of skilled professionals and work force faces several challenges. Some of the issues are external and largely hinged on the labour market and socio economic situations. However, one of the impediments internal to the system is the preparation and supply of technical teachers and the design and development of relevant TVET courses. Both of which has direct bearing on the quality of TVET delivery and this is a problem even for the private training institutes with limited experience and capacity in the development of TVET.

**Table 3.18: Overview of the current numbers of trainers/instructors in public and private institute and their qualification profile**

Institutes	No of Institutes	No of Trainers	Certificate level	Diploma level	Degree level	Trained	Untrained	% of trainer registered with DOS
Other Public	4	81	30	25	26	35	46	5%
DHR TTIs & IZCs	8	152	36	104	12	102	50	80%
Private Institutes	68	254	22	80	152	32	222	20%

As can be observed from the table, most of the trainers are in the diploma or certificate level and very few of the trainers especially in the private institutes are trained in instructional methodology to qualify as professional trainer/instructors. To ensure quality it is mandatory for all training institutes to be registered with the Department of Occupational Standards. Besides other requirements of registration, all the trainers have to be registered. Currently the percentage of trainers registered, particularly from the private institutes is very low because they do not meet two of the trainer registration criteria. Firstly majority of the trainers are not trained and secondly they do not meet the criteria of a minimum qualification of one level higher than the course that the trainers are teaching or the equivalent minimum work experience.

Only exception amongst these institutes is the Royal Institute of Health Science. Majority of RIHS faculty have bachelors in nursing and masters in health science which is further supported extended by the practicing doctors and nurses in the hospital. Even for the RIHS faculty a minimum working hours in the hospital is mandatory to keep in contact with practical experience and for their up gradation.

Such capacity and system for HRD is lacking amongst the other public TTIs, IZCs and absent in the private training institutes. Even the RITH, which is supposed to be the centre of excellence in hospitality and tourism



training having started off with a trained set of faculty, is facing similar constraints.

### **HRD Interventions**

To deliver quality training and to meet the demand of the labour market the capacity and expertise of the trainers/instructor needs to be enhanced. The Master plan will target to develop the capacity of the trainers/instructors of both the public and private institute through the following plans.

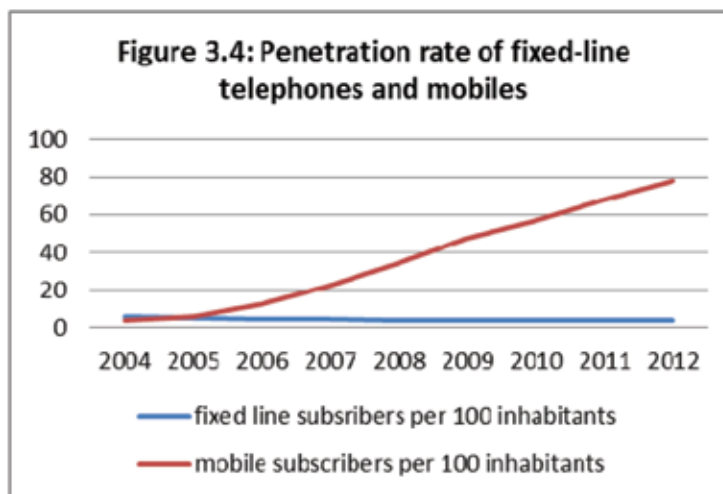
- 1. Qualification Up gradation Program:** Facilitate qualification up gradation of the trainers/instructors through the long term programs of bachelors' degree, master and diploma program.
- 2. Short Term Training & Development:** The short term training programs will target to enhance the capacity of the TVET managers and instructors in competencies such as institute management, total quality management etc.
- 3. Training of Trainers:** This program will be up scaled and intensified to suit the needs of the private training institutes and will target to develop the pedagogical and curriculum development competencies.

### 3.6.4 ICT, MEDIA & TRANSPORT SECTOR

#### A. Communication Industry

The corporatization of Bhutan Telecom and the subsequent opening up of the sector to the internet (1999) and introduction of mobile service (2004), created an unprecedented surge in the demand for telecom services. The licensing of another telecom company, Tashi Info Communications in 2006 further resulted in accelerated telecom coverage and price falls of the services.

Bhutan Telecom Ltd and Tashi Info Communications are the only two players in the telecom sector. Bhutan Telecom provides fixed and mobile services and employs over 500 people while Tashi provides mobile services and employ 219 people. Both have attained nationwide coverage, and future developments will concentrate on improving the quality of services and upgrading the technology deployed. There will also be efforts to gain value from existing services by adding new and innovative features.



Both have attained nationwide coverage, and future developments will concentrate on improving the quality of services and upgrading the technology deployed. There will also be efforts to gain value from existing services by adding new and innovative features.

#### Issues and Challenges

Both the companies spend a substantial amount for staff training through internal resources as well as Government provided HRD. Bhutan telecom's HRD budget is NU 34 million for the current fiscal year while Tashi Info Com's is Nu 4 million. Bhutan telecom has an established human resource base and it can do without the other Government HRD support for most technical training. Tashi on the other hand is still building up its human resource base, and it will need greater support. The other players within this sector are the cable operators and internet service providers.

Other issues pertaining to this sector are, despite recent price falls, Telcom prices are still high compared to the living standards of the average Bhutanese. Internet services are not reliable, with frequent outages. This may not affect most individual subscribers but is disconcerting for those engaged in business.

There are also very limited applications being offered by the telecoms. The overwhelming majority of the subscribers only use the voice applications. None of the e-Government applications or other Government services is integrated into the telcom services and only one bank provides an update of the financial transactions on mobile.

#### HRD Interventions

The HRD Master plan will support the development of the key people in the industry to become innovative and come up with new products and services that can benefit the business population as well as engendering new business opportunities. Towards this, MBAs, Masters in Communication and other certificate level and short-term programs has been included.

## B. ICT Industry

The development of the ICT can be viewed as an enabler and ICT as an industry. The enabling role of ICT aims at enhancing the productivity and effectiveness of business and Government. For example, to provide better business services, it can help the Royal Government to reach citizens in far-flung places, share relevant information with them and provide various services.

ICT as an industry has two sub-sectors: IT products and applications and IT Enabled Services (ITES). Product development and applications are highly specialized and complex businesses. As Bhutan has weak technical background, it does not have competitive advantage in this field. It may take a long time for her to compete in the IT industry. Bhutanese ICT sector was until very recently limited to the retail and repair of ICT equipment, and that too mostly serving the Government agencies. Product development of software and systems which are highly specialized and complex have been outsourced to expatriates and firms outside the country as there was no national capacity.

The 10<sup>th</sup> Five Year Plan and the establishment of the DIT saw the first serious attempt at developing the ICT sector on a coordinated including infrastructural network covering the entire country, establishment of a regulatory framework and the initiation of content development as part of e-governance project, and the attempt to lay the foundation for a business outsourcing system. MoLHR worked very closely with DIT during the plan period and was instrumental in making some inroad in building the outsourcing capacity.

The Government has identified ICT as a potential growth area to help provide gainful employment to the growing number of graduates. There has been a great deal of discussions on taking a focused approach within this sector and building on the strength Bhutanese may have. There appears to be some resolution to that now with the market responding to local demand and industry taking its own course. Areas of applications development and multimedia seem to be worthy of further development during the 11<sup>th</sup> Plan.

### Issues and Challenges

There are two HRD related issues pertaining to the ICT industry. One is the lack of knowledge to provide strategic direction and leadership within the industry. This is necessary for the industry to recognize opportunities and work towards its realizations. The second issue is the shortage of ICT related skills to service the current market. These two issues need to be addressed if the Bhutan is to develop its scope in applications development and multimedia in the 11<sup>th</sup> FYP.

**Software development:** The Government's e-gov project is the key driver for this and will generate substantial work for number of small firms over the next 5 -10 years. Sustaining on this market are currently about 5 software firms each employing between 5-12 developers. In addition there are numerous individuals who undertake various tasks ranging from web-designing to more sophisticated data base and application developments.

**Multi media:** A very positive development is emergence of a fledgling animation industry. Two local companies have already ventured into this and developed its own unique training and production model thriving on the local market.

### HRD Interventions

The HRD issues and development of the above three areas of scope will be through the following plans:

1. Software development will receive support in the HRD plan. Beyond the Government e-governance

there is a possibility for mobile application development for both domestic markets and beyond. Also a new concept of outsourcing is the micro<sup>31</sup>, which has not been adequately exploited by the Bhutanese. This could be potential source of employment for the freelancers within the ICT as well as other disciplines. For this, the current software developers need to be exposed to different software language and build greater expertise in development and testing.

2. The multi-media industry needs to be encouraged and a sizable pool of skills created to take this industry forward. There is enough local content on which the industry could work, but it needs to be supported with skills that go far beyond animation, and include other skills such as arts, designs, script writing, music, etc. Therefore there is potential synergy that this industry and media industry can draw upon each other. The Master plan should continue supporting the attachment programs as well as apprenticeships in this sector. This should be linked to providing business opportunities to the participating firms by giving them the content to work on. This requires greater coordination and involvement of other sectors within the Government including MoIC, Department of Culture, Education Ministry, etc. Towards this the Master plan will support slots for multimedia graphics and print and media HRD program through ATP ad STP.
3. To support the industry will require network administrators, hard ware engineers and marketing specialists. There is a pool of these available in the market and has not been included in the plan. However as part of the pre-service training, 201 computer repair technicians are projected to be enrolled in the TTIs and 150 electric and electronic repair technicians to be trained through apprenticeship training program.

### **C. Media Industry**

Media sector in Bhutan comprises of 12 newspapers, a television service and six radio stations. Out of these the oldest paper Kuensel and the oldest radio cum TV broadcasting station, Bhutan Broadcasting Service is public corporations. The private establishments in the print and radio broadcasting services have been established over the last 5 years after the liberalization of media sector.

Media is recognized as the fourth estate and fundamental for strengthening the democratic culture. "Media breaks barriers, lets off inhibitions, brings officials to task, and injects values in the society. This is the freedom of expression.<sup>32</sup>" The power of the media has been amply demonstrated during the last few years of free press reign including bringing to light corruption cases within the Government. At the same time, it's well known that media can also be manipulated. It can inject values that are detrimental to security and harmony of the people, and become a propaganda machine for establishments. Therefore the existence of private media alone does not guarantee the values propounded for the sector. To ensure that media takes the right path, the Government has to create the conditions where media attracts the best of the minds and the hearts who are standard bearers of goodness and the values that the nation promote. It has to ensure that media has the capability to exercise its power with wisdom, responsibility, courage and foresight.

### **Issues and Challenges**

Most of the newly established media depend on reporters who are straight from University or schools. In addition, the newly established print media business plans have been based on the expected revenue earnings from Government advertisement, and with lesser advertisement to go round all the media, this has developed into a greater debate than the substance and quality of reporting.

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31 National Accounts Statistics, 2012, NSB

32 A Situational Study to Gauge the Human Capacity Development Needs for Early Childhood Care and Development in Bhutan, Open Society Foundation, February 2012

Looking at the profile of the media personnel, and sampling through the media content, there is clearly a dearth of good journalists, and while the sector has been provided the highest per capita training support amongst all the other sectors for the 10<sup>th</sup> FYP, most of the long term scholarships have been availed by the established media houses, Kuensel and BBS. One of the reasons for this seems to be that the new media establishments were not able to match the academic and professional experience criteria required to compete for the fellowships.

To address this, the Media Department of MoIC implemented close to 50 workshops, seminars and study tours both in and ex country to support the media personnel, at a cost of NU 20 million. Unlike the MoLHR HRD plan, this covered greater number of media personnel from private media establishments. No impact assessment these program have been done, but going by the recently concluded training needs assessment<sup>33</sup> it seems the media sector is professionally challenged. The assessment lists with the usual Masters and undergraduate programs, communication and writing skills, research methods, news reporting, interview skills, journalistic reporting and use of Information Technology, in summary all the skills that should have come with the recruits in the first place.

### **HRD Interventions**

Bhutan Media Foundation has been recently established under the Royal Charter to oversee and promote the media. One of the roles outlined for the foundation is to foster professional development of the media. Therefore MoLHR's direct role in providing education and training to media personnel is not required.

Nevertheless, in the light of the observations made earlier, it is proposed that MoLHR work with Bhutan Media Foundation to establish the following:

- For private media sector, the objective of the HRD plan should be to fill the positions of the senior editors with a master's degree in a relevant field, get all reporters to have at least a degree in journalism from a recognized institute and upgrade specific skills of the media staff in analytical reporting, and
- Induct professionals in the media sector which will include sociologists, historians, economists, lawyers, educators, and health professionals and engineers.

### **D. Motion Pictures & Music Industry**

Film production in Bhutan started in 1989. The first couple of decades produced only about two films a year on an average. Currently there are close to 50 films being produced a year. The adoption of DV filmmaking has been one of the major contributors of this growth. Now more than 300 people are currently employed by the industry. This is another industry that has grown on its own and has brought about far reaching impact in strengthening Bhutan's cultural identity, especially amongst the youth. Compared to the 1980s, there are large numbers of artists who promote and record different genres of Bhutanese music. The music industry has become an ancillary industry of the motion pictures. This industry not only provides a new source of entertainment but is an important medium for inculcating values and cultural identity. IT has grown without much support from the Government and there is much to learn and develop.

### **Issues and Challenges**

A study undertaken by South Asia Foundation in 2011-12 found that the quality of Bhutanese films to be very poor. Much of the content is borrowed from Bollywood, Korean and Western Cinema. This amongst others is due to lack of good script writers and directors. The Industry also depends on actors that have little or no

33 Education Monitoring and Support Division, Ministry of Education, 2013.

formal professional training. Lack of adequately trained technicians is another issue.

With regard to the music industry which is booming alongside the movie industry, while there are good original singers, the musicians are currently dominated by amateurs who are more skilled in the creative use of technology than true artistic mastery of real instruments. This needs to change with the evolution of population's taste and discerning power. Much of the talent in the entertainment and creative sector is provided by the education system. However Bhutanese schools most of whom are struggling to provide basic literacy have little resource to spend on quality music program.

### **HRD Interventions**

The HRD Master plan will support in building up the professional skills of the industry based on a coherent proposals from the Motion Pictures Association of Bhutan (MPAB). To begin with, and towards developing the foundations of good story telling, provision is kept to develop potential writers in story board/script writing. These courses will be resourced by competent professionals from the region and abroad. Existing writers as well as others who are interested in taking up such a career will be covered during the 5 year period.

The plan will also address the lack of skills amongst the technicians, particularly in lighting and sound technology. Furthermore, attachments will be provided for skills to be identified by the MPAB. This could be in acting, directing or one of the technical skills.

For the music industry, the primary objective of the Master plan for the industry will be to establish a foundation for music education that is rooted in sound theory as well as practical skills. Towards this the Master plan will support the development of accredited music programs in private schools. The children can be taught Music Theory and to play modern as well as traditional Bhutanese musical instruments. Students of these programs, trained to read and write music and perform a variety of instruments will in future fuel this industry to develop to greater level of creativity and sophistication.

### **E. Transport Industry**

Transport industry in Bhutan includes the surface and air transport systems. The surface transport industry relies on a network of roads that now penetrates deep into the interior part of the country. As of 2012, there was 2,902 km of paved road including national highway, dzongkhag and access roads. In addition there was 4,380 km of farm road out of which 3,335km were built during the 10<sup>th</sup> FYP as part of the Government's party manifesto. The transport industry is fragmented and dominated by small owner-operators. While over 5000 trucks are registered there are only a few transport companies with more than 20 trucks, and only three companies with more than 100 trucks. Druk Air with its fleet of 4 aircrafts is mostly dedicated for passenger transport and operates to nine International and two domestic destinations. Tashi Air has been licensed as the second airline, and currently only has one plane which service the domestic sector. Bhutan Posts along with a number of courier services complements this important industry.

This is an industry with the engagement of multiple Government agencies as well as the private & corporate stakeholders. The Civil Aviation Department under MoIC is responsible for the development and maintenance of the airports as well as the regulation of the airlines. The Road and Transport Authority under the MoIC is responsible for regulating the surface transport. The Department of Roads under Ministry of Works and Human Settlement is responsible for planning, building and maintenance of the national road network. There has been a recent attempt to bring all these under a coherent transport master plan undertaken by the Ministry of Information and Communication.

## Issues and Challenges

World Bank's Investment Climate Report for Bhutan 2010 reveals that the third biggest constraints faced by the private firms relates to transport. Furthermore, costs of transportation of goods in Bhutan are much higher than in the region. According to a study undertaken by ADB, this is attributable to the relatively high fixed costs, high staff costs due to a shortage of drivers, high land prices for warehouses, workshops, parking and storage, the poor conditions of the road network causing long travelling times, low and unbalanced cargo volumes, and the low level of containerization which results in increased handling costs. Bhutan currently also uses the service of Indian transporters to move heavy equipment for its hydro power projects. Many of the larger industries have their own setup for sourcing the raw materials and transporting the finished goods. Others are resigned to the present system and simply pass the additional costs to the customers.

As mentioned earlier, the Government has invested heavily in building the road infrastructure, but besides the surface and air transport facilities other aspects of transport services has not been improved. Such as providing safe, reliable, affordable and efficient public transport system, professionalizing goods transport services etc .have not received attention. This must be undertaken to take advantage and add value to the investments being put in infrastructure.

## HRD interventions

The objective of the Master plan will be to support the transport sector in expanding the services and bringing down the costs of transporting goods. This will benefit not only the private sector and industries but every citizen. Towards this the Master plan will seek to develop greater professionalism and expertise for supply chain management to service the industries as well as the needs of the ordinary citizens.

In order to facilitate new business ideas and projects, MBA program in supply chain and logistics will be included which will be shared amongst the Government corporations as well as the private sector parties. In addition, existing transporters will be provided with workshops and study tours to help them get ideas that can be implemented in Bhutan. In addition the TTIs will continue to train the heavy vehicle driving & associated skills training.

### 3.6.5 PRODUCTION AND MINNING SECTOR

#### A. Wood Based Industry

The wood based industry is one of the oldest industries in the country. The industry's supply chain starts with the National Resource Development Corporation Ltd (NRDCL) which is the designated body to extract and sell timber at auction yards. The industry itself comprises of the logging operations, sawmills, furniture houses fabrication, ply board units and joinery establishments. There are currently 97 sawmills and 20 wood based manufacturing and production units<sup>34</sup>. There are also an addition 831 manufacturing units which base their products on wood and paper<sup>35</sup>.

Bhutan board Particles Ltd, established in 1982 was one of pioneering firms to produce knock down furniture using particle board. This company now caters to both local as well as Indian market. The unit is self-sustaining and has it's own dedicated forests and forestry program. The Wood Craft Centre in Thimphu specializes in premium quality furniture. Deploying modern tools and technology, the centre is a Government owned commercial production cum training centre. Interestingly, the centre imports its hard wood from East Asian countries as the NRDCL was unable to supply the required volume of hard wood for its furniture production. One of its important features is the training school which provides a 1-3 year vocational training program. The Centre also recently established a joinery unit to cater to the growing construction industry. Another furniture and joinery establishment is the privately owned Wood World which also uses modern technology and tools as well as graduates of the Wood Craft centre to produce higher quality furniture and joinery. Besides these, majority of the furniture and joinery establishments are of mixed quality, but mostly using outdated technology and skills. Some of the country's saw mills reportedly still use the technology deployed in 1960s.

#### Issues and Challenges

Some of the pertinent issues as a result of lack of competent human resources within the industry. The Government has not been able to resolve the issue of extraction. The annual target for extraction is 1.6 million cubic feet of timber, for the urban uses. It manages to just about meet this target but at a high cost. Difficult access, inefficient extraction methods imposed by the Forest Management protocols of the Department of Forests and Park services, outdated technology are some of the bottlenecks. The NRDCL hopes to address this soon. It is at the initial stage of recruiting an international expert to study the situation and propose solutions.

There is high amount of wastage. Even well established and managed units such as Wood Craft Centre produce 10-15% wastage. This is expected to be much higher in other units. The acceptable amount internationally is 2-3%.

There is no proper supply chain established for the industry. Much management time is used in procuring timber, transporting, seasoning, etc. Therefore every unit end up doing almost all the processing of the raw materials, requiring much greater investment in machinery and skills. Even with very high transportation costs, Indian products of the same quality come cheaper. And there are plenty of that, also becoming available at highly competitive prices are furniture and other wood based items from Bangladesh, Malaysia and China.

All these illustrate that the wood based industry is not competitive and lacks a effective system. The expectation is for the Government to address this, but there is no plan. There isn't even a Government organization that

34 The status keeps on changing. Initially even Royal Institute of Management was under the RUB, but later it was reverted to as a staff college for Civil Service. Currently procedures are underway to get the National Institute of Traditional Medicine and the Royal Institute of Health Sciences out of the RUB.

35 The online payment system is crucial for Bhutanese players to engage in this.



can be said to be the responsible agency. Clearly a greater depth of study is required to determine the potential of the industry and how this can be best exploited. The industry requires revamping the technology, and development of appropriate skills to work with the new technology.

### HRD Interventions

The Master plan will support the reorganization of the sector and to become a productive industry that can compete in the regional market as well as servicing the domestic needs for quality wood based products. As part of the HRD plan, MoLHR will recruit 3 professionals to develop a plan for reorganizing the sector. The suggested members are two architects who are well versed with the construction industry and a representative of the furniture/joinery establishment that has established a good practice. Based on the proposals, a detailed HRD support plan will be adopted. Tentatively, the Master plan has included diploma programs in wood based technology such as wood treatment, design of furniture, and others. As part of pre-service training program, slots will be allocated through enrollment in the TTIs, ATP and STP.

## B. Mining Industry

Mining is an important extractive industry which feeds the manufacturing, construction and export industries. There are currently 31 active mines and 62 quarries.<sup>36</sup> The annual production of dolomite, lime stone, gypsum, quartzite, talc, phyllite, calc tufa and iron ore is about 2.5 million metric tons, out of which two thirds are exported. The average annual production of marble, slate and granite over the last 3 years was 700,000 square feet and over 90% of these are exported. Stone production is on the rise fueled by the construction projects. The production of stones was over 9 billion metric tons over the last 3 years. The contribution of Mining to GDP was Nu. 1,941.73 million at current prices in 2011, recording almost 21 percent growth over the previous year. Mining and quarrying is the highest growing sector, only second to tourism and hospitality.<sup>37</sup>

### Issues and Challenges

While the mining sector has generated a lot of criticism from environmentalists, in its scale, the total approved physical coverage of active mines and quarries is only 1.2 sq. km. But the actual coverage of exposed and affected areas may be significantly higher because of the primitive technology being adopted and lack of adequate monitoring. Overall, there is potential for expanding this industry. However the units need to abide by the environmental codes and be professionally managed for sustainable mining. The Mines and Minerals Management Regulation 2002 already stipulates criteria for minimum human resources to ensure proper management and mining.

*Abstract from Mines and Minerals Management Regulation, 2002.*

#### Manager

The lessee shall appoint a suitably qualified manager. The manager shall have:

- a class XII and at least 2 years' experience in working or training in a mine in the mines employing 10 or more persons,
- a degree in mining engineering at least two years' experience of working in mine employing 100 persons and mechanized mines using heavy earth-moving machinery such as loaders, dumpers, drill machines, excavators.

#### Foreman

In mines employing over 10 persons a mine foreman, having a minimum of class X and at least 2 years' experience of working or training in a mine shall be employed

With the exception of the larger mines owned by Government corporations, the rest have not implemented the HR provisions, simply because of lack of human resources. This needs to be addressed.

<sup>36</sup> Quote from Media Development Assessment in Bhutan 2010

<sup>37</sup> Undertaken by the Bhutan Media Foundation

## HRD Interventions

The objective of HRD Master plan for the Mining industry will be to facilitate it to become much more professional. Towards this the plan includes Master's degree program for mining engineers. Furthermore the plan will support creation of a professional group of mining supervisors within the establishments. Towards this diplomas/certificate courses in mine management will be included in the plan. Alternatively, one of the TTIs shall introduce mining management course. There is adequate learning space available in the TTIs. MoLHR will recruit contract teachers from amongst the mining professionals within the country to undertake this program immediately.

## C. Agro based industries

Agriculture contributes to 13% of the GDP and employs 62% of the labour force. The Government has over the last 50 years invested heavily and built up various support programs encompassing the complete value chain of research network, extension services and support, marketing and support to cooperatives. The Agriculture with the largest labour force and also the Agriculture and Forestry Ministry is one of the biggest Ministry with some of the most qualified people within the Civil Service. Yet, Bhutan is not quite food self-sufficient.

In 2012 it was estimated that vegetable consumption alone in the country was 54,445 metric tons out of which the country produced only 30,595 metric tons or 56% of the requirements<sup>38</sup>. Agriculture productivity is low and there is limited opportunity for deployment of machinery because of the terrain.

Nonetheless Bhutan has some unique advantage in terms of its pristine environment, a strong conservation culture and practice and varied climatic zones making it possible to grow variety of crops at different seasons. Building upon this is the policy to go green and promote organic farming.

There are 101 production units based on raw materials from agricultural, forest, animal, horticulture and paper products. Bhutan established its first agro based industry in 1959 in Samtse as a Government undertaking. Managed by a private firm now, Tashi, the factory processes fruits and vegetables based products under the brand name "Druk". The factory employs about 350-400 workers on a daily basis during peak season. 80% of the products are supplied to India and Bangladesh where the "DRUK" brand has earned its popularity and rest is marketed within Bhutan. However, the raw material for the factory comes mostly from India.

Another established unit is the Bhutan Agro Industries Ltd in Wangchutaba, Thimphu. Started in 1993 with the financial and technical assistance from Danish International Development Agency (DANIDA), the Company commenced its commercial production in September 2004. Currently it manufactures 35 products which are consumed in and around Thimphu reflecting high local demand. The unit faces seasonal shortages of raw materials, which is made up through imports. Its production of the pickles is completely dependent on imported raw materials. The unit currently consumes 400 metric tons of raw materials, although the factory itself has a much higher capacity. It employs 113 workers, all of whom are Bhutanese nationals. The company also provides temporary employment to about 50 school students during their winter vacation, coinciding with the orange season. Drangchu Beverages a franchise of Pepsi and Tashi Beverages Limited, manufacturer of carbonated soft drinks and fruit juices under the brand name Coca Cola are some of the major players in this segment of the market, catering both to local as well as the North East Indian markets. Tashi also has a brewery unit for beer. Zimdra Food Pvt. Ltd is a major player in the dairy sub-sector. Other production units within this sector are fisheries, poultry and bee-keeping most of which are at cottage scale.

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38 Source- Administrative record of the Association of Bhutan Wood Based Industry

## Issues and Challenges

The Economic Development policy identifies and seeks development in organic farming, biotechnology including pharmaceutical, nutraceuticals, traditional and herbal medicines, forest based products, poultry, fisheries, floriculture, health food, animal feed, apiculture, horticulture and dairy. While these lists of possibilities continue to expand every year, very few entrepreneurs are on the ground producing or testing the market. The few that venture into these industries find the reality daunting. Inadequate and unreliable supply of raw materials, weak transport and logistics systems, competition from within the region, are some of the challenges.

The above also brings to the forefront the need for fresh ideas, innovations and products that will have their own unique selling points, and to overcome physical and logical constraints through better and creative management practices.

## HRD Interventions

The Master plan will contribute to building the brand Bhutan for the existing agro products. High quality, organic and environmentally friendly production will be the values associated with these products. For the existing units, education and training shall be focused in area of marketing, packaging, and training of production workers to cater to hygiene standards established by BAFRA or other certifying bodies. For this the HRD plan has incorporated MSc on agro industry product development, MSc in agro food processing with

specialization in fruits and vegetables and diplomas program for studies in packaging. Furthermore the plan is to train production workers to meet the hygiene standards and also to support workers training for any new units that might be established.

## D. Handicraft Industries

Like any traditional society, Bhutanese produce a rich array of cultural items ranging from textiles to household goods to objects of worship and intricate art pieces in various mediums. With modernization and the flooding of imported alternatives and ready to use goods in the market, the artisans have been quickly consigned to the back stage, in some areas they have all but vanished. Items such as ‘bangchung’ and wooden bowls that were once ubiquitous and used as daily utensils for meals are now only seen as show pieces and items for the curious tourists.

The Government has been trying to address this. Two institutes of Zorig Chusum have been established since late 1990s and are running under the aegis of the MoLHR. In addition the Agency for Promotion of Indigenous Crafts (APIC) has been established in July 2011 under the Ministry of Economic Affairs (MoEA). It is responsible for the execution of crafts and related initiatives under the Accelerating Socio Economic Development (ABSD) project, with the support from other relevant agencies of the Royal Government of Bhutan. Its mission is to promote *“equitable growth of handicrafts through the enhancement of skills and business knowledge of the craft community with emphasis on innovation, product development and marketing”*.

## Issues and Challenges

The development of true art requires creativity and innate talent as much as skills training. There is not much creativity visible in this field, most of the craft pieces that are on display or sale are poor replicas of creations of bygone master craftsmen of the region.

## **HRD Interventions**

APIC plans to spend Nu 15 million during the 11<sup>th</sup> Five Year plan to develop the skills of the artisans and dealers. Amongst its proposals is training of 100 artisans in packaging and souvenir making, training workshops for products improvements, training on cane & bamboo weaving skills for 100 youth, training of 30 artisans in wood turning, lacquering & material seasoning training, training 100 craft cluster members on new product designs, quality improvement training on metal products, as well as various trainings in book keeping and inventory.

All these proposed training programs are highly focused and relevant. However, greater attention is required for creativity and product development. This may require bringing into the handicraft occupation people from other professions such as designers, artists and people that have a broader education and training and people who can provide leadership in these fields. It is suggested that APIC undertake a talent hunt for such people and 20 prospective candidates be sent for diploma program in a reputed institute in the region.

Since the APIC can provide need based training program for the people working in this sector, MoLHR will focus on producing the skills supply through its programs for the school leavers. Under the pre-service program, 1,300 students will be enrolled to take up arts and crafts in the IZCs and another 150 students trained through the special skills development program. Furthermore slots have been allocated for sales and marketing under the Apprenticeship Training program to support this sector and additional slots have been kept under the Special Skills Development program to be utilized for new industries that will emerge during the plan

### 3.0.6 TRADING AND SERVICE SECTOR

#### A. Automobile Workshops

A growing industry that is conspicuously becoming an eye sore in Bhutan's urban landscape but on whom a large population and industries are dependent upon for its services is the automobile workshops. There is an estimated 150 workshops around the country to service over sixty thousand vehicles and machineries. The numbers of these machineries have seen a dramatic increase over the last decade, especially in the light cars segment as well as Earth moving machineries.

Year	Heavy	Medium	Light	Two-wheeler	Taxi	Power Tiller	Tractor	Earth Moving	Others	Total Vehicles	% of growth
2001	2,863	697	9,915	8,165	201	n.a.	n.a.	408	278	22,527	
2002	2,747	770	10,199	8,371	1,423	n.a.	n.a.	464	456	24,430	8%
2003	4,841	308	11,575	7,507	1,560	n.a.	n.a.	321	384	26,496	8%
2004	4,345	n.a.	12,425	7,707	1,682	n.a.	n.a.	1,682	388	28,229	7%
2005	4,352	n.a.	14,365	6,703	2,050	n.a.	n.a.	511	491	28,472	1%
2006	4,176	343	17,355	7,903	2,038	79	109	555	23	32,581	14%
2007	4,547	467	19,798	7,458	2,218	109	474	633	n.a.	35,704	10%
2008	4,624	659	24,244	7,734	2,511	151	611	744	n.a.	41,278	16%
2009	5,198	786	27,145	8,027	2,859	692	183	929	n.a.	45,819	11%
2010	6,568	1,007	31,162	8,820	3,599	756	210	1,260	n.a.	53,382	17%
2011	7,996	1,261	36,150	9,434	4,856	1,030	278	1,702	n.a.	62,707	17%
2012	8,443	1,330	39,254	9,739	5,354	1,128	283	1,918	n.a.	67,449	8%

The workshops around the country are owned and managed mostly by -mechanics themselves. The operations are easy for start-ups. They require just a space and a couple of mechanics. As they mature into larger operations which they quickly do because of the sheer increase in the number of vehicles needing servicing and repairs, they occupy larger space areas and recruit more people. For a country that imports all its motor vehicles and machineries, the automobile workshops plays an important role in extending the life span of machineries saving resources on imports and increasing rate of return on the investors of these machineries

There has been very little recognition of the important roles played by this group of ramshackle workshops and the poorly paid mechanics. Workshops in Bhutan operate under very basic conditions. Their tools are rudimentary, and the working conditions unsystematic

#### HRD interventions

The 11<sup>th</sup> Five Year Plan objective for the workshops is in setting basic standards for the establishments, including human, management, equipment and tools. It is learnt that there was an attempt at forming a trade associations amongst the automobile workshops. This has become dysfunctional and needs to be revived. One of its responsibilities should be to set standards and regulate it.

TTI automobile graduates provide the necessary skills for the workshops. The sector is expected to grow at least by 10% annually. This will require an additional 1,500 mechanics/ automobile technicians during the plan period, which will be trained by the TTIs. In addition an emergent need is for a core group of TTI graduates to be trained to provide specialized services for particular make of the cars. There are three major car makes in Bhutan, maruti-suzuki of Indian make, Japanese Toyota and Korean Hyundai. While both Indian cars and Toyotas have been relatively long in the market and greater expertise available to service their

repairs, Hyundai is a new comer although its market share has taken over Toyota and is still growing. However there is limited expertise to service and repair these cars, and its reported that currently the largest number of cars that are off-road waiting for spares and repairs. Therefore, ATP with ex-country experts in vehicle maintenance and repair will be explored.

In parallel there needs to be established a pool of experts dealing with different aspects of mechanical, hydraulics, electronics and other systems of the modern engine and its parts. These can be also trained outside the country. Once the pool of specialists and senior mechanics are established, one of their tasks should be to training the others in their own workshop or outside.

The management of the workshop has to be professionalized and basic service standards established. Larger workshops will be required to hire an automobile engineer to head the technical operations while the administration can be undertaken by a qualified administrator. Towards this, the plan will support senior managers to undertake courses in managing workshops, managing the personnel and adoption of systems approaches. It shall be mandatory for all participants of such workshops to provide an improvement plan upon the return from their courses and implement it.

There is also a need to promote skills to repair construction machinery such as concrete mixers, lift and pulleys systems and farm machineries and implements. These should be an extension to some of the larger workshops in the capital, and be a service also within the dzongkhags where such machinery are deployed and frequently suffer breakdown and resulting inconvenience because of lack of competent people or facility to undertake repairs. To facilitate this, special trainings will be offered for selected workshops who seek to include this as part of their services.

## **B. Beauty and grooming industry**

Until recently this industry was a mere collection of Indian barbers in Thimphu, Phunthsoling and in the more progressive border towns. With socio economic development and the spurge in the urban population, beauty and grooming is becoming an important service sought after by the young and old, men and women. In the 10<sup>th</sup> Five Year plan MoLHR supported various courses and programs to provide skills for this industry, including 30 youths who were trained in hair and beauty treatment through the Special Training program. There is opportunity for this service to grow in volume and range of services. Aspects of these services can also evolve into wellness centers and services, an area of focus of the Economic Development Policy 2010.

### **Issues and Challenges**

There is no well-established training facility in the country to service the HRD needs of this industry. Therefore for serving higher end services, people have to either study as apprentices under experienced people or go to take courses outside the country. There is also no standards and regulations established for this service sector. Many of the establishments rely on poorly trained technicians and support staff which affects the image and growth of these services.

### **HRD interventions**

The objective of the plan is to establish the human resource foundation for a high quality beauty and grooming industry to address growing local demand as well as establishing the base for wellness and beauty industry to service the tourism industry. The HRD plan will support the fellowship of workers in this sector to undertake specialized beauty treatment courses in reputed institutes in the region. In addition slots have been earmarked under ATP during the course of the plan period.

### C. Micro, Small and Medium Industries

While strictly speaking these group of industries do not represent any one sector, but is encompassing of all sectors, there are common features that demand some unique HRD strategies. The Enterprise Survey 2011<sup>39</sup> reveals that 23% of the employed in this segment of the industries are illiterate, 27% have a primary education, 39% have a secondary education and 11% have a University education. Also in terms of the education level of the enterprise owners, 33% have no education, 13% have primary education, 36% have secondary education and 13% had a University education.

#### Issues and Challenges

The Enterprise survey reveals the lack of qualified technical staff and skills as one of the major hurdles to their development. And yet, by the very definition of being small, many of these establishments cannot continue to operate while their employees are on training. Therefore staff development programs for MSMEs should explore different modes of delivering education and training such as friendly support systems extended through mobile training units, regional training centers or mentorships.

The MSMEs individually are not much, but together they accommodate the largest share of the employment market. Because of the sheer number of the establishments, it's going to be extremely difficult to address all their skilling needs. Instead, common needs and generic skills should be identified for these groups of establishments.

Many of the promoters and workers within this group are illiterate. So far all training and workshop programs are predominantly structured to address those who are literate. Future HRD program needs to be made more inclusive. Business ethics, customer services, financial literacy, tax policies can all be areas which could be delivered quite effectively without using literacy tools.

#### HRD Interventions

The objective of the HRD plan for the MSMEs will be to provide basic skills to make them provide better service to the customers manage their business better and be able to use ICT technology to help them in these tasks. Specifically the plan will cover the following activities.

**Entrepreneurship courses:** This are an ongoing program conducted by the MoLHR as well as the MoEA. It is suggested that MoLHR fully take over this program and implement this as part of its core program.

**ICT programs:** Globally it has been found that firms that adopt ICT can expect greater productivity , and the rate of return of ICT investment is in developing countries is much more than usually found in more developed countries<sup>40</sup>. Bhutan is investing in telecom infrastructure linking ever village with internet. Therefore apart from the productivity tools that come with desktops and other ICT equipment, connectivity can support business enterprises in a number of ways. It can enable the firms to access information on products and customers, link to Government services on line and even submit tax returns, and tenders. They can also sell their products online. For the immediate term, ICT educations for the MSMEs have to be packaged with productivity tools to provide greater incentive for its adoption. The two most sought after trainings currently are in basic book keeping and inventory. Therefore the ICT literacy courses should be structured to provide competencies in these areas using the ICT tools/soft wares.

39 Statistical Yearbook 2012, NSB.

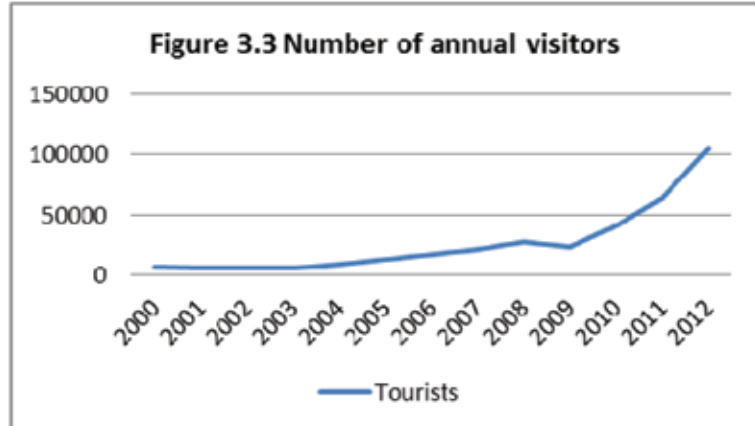
40 DGM, MoEA administrative record .

**Basic Accountancy, inventory management and Human resource management programs:** These courses are just –in time courses to help develop the skills of personnel who are already employed and need help in undertaking their tasks. Customer services, business ethics, financial literacy, environmental issues and regulations are some of the skills that every enterprise owner should be aware of and a package of such programs will be provided to cover 30% of the MSME owners.



### 3.6.7 HOSPITALITY AND TOURISM SECTOR

This sector includes sector includes tour operations, hotels, restaurants and handicrafts. Bhutan's tourism industry is quite modest with about 100,000 visitors in 2012, out of which less than 50% are international visitors<sup>41</sup>. Revenue generated by the industry was Nu 2.226 billion in 2011 or 2.55% of GDP<sup>42</sup>. Tourism Sector is considered the most important sector after Hydro Power because it is not only an important hard currency earner but is also one of the largest providers of employment in the country and it generates high number of indirect employment. Tight control is maintained over the number of visitors through its "low volume and high value" policy and the associated tariff system.



In the early years, visitors were mostly from European and North America. This is now changing with an upsurge of interest from the Asian countries. In 2012, arrivals from Japan comprised of 15.98%, US constituted 13.67%, followed by China (8.57%), Thailand constituted 8.13% and Germany 6.55% of the total international arrivals. Other major visitors are from UK (5.61%), Australia (4.38%), France (4.28%), Singapore (3.65%) and Malaysia (2.97%). Bhutan is mainly seen as a cultural destination with 82.26% of all visitors in 2012 undertaking cultural related tours. Nature-based activities accounted for 13.04%, which included 'Trekking' (7.32%), 'Bird Watching, Flora and Fauna' (1.22%). Adventure Sports is picking up and constituted 4.50% of the visitors engaged in rafting, kayaking, motorcycling and biking/cycling activities. Overall, the sector has good potential for growth. There are still many areas of the country that has not been opened to tourists, product ranges beyond culture has not been adequately explored and need to be exploited. TCB has projected that the number of visitors will grow to 150,000 by 2018.

Tourism Council of Bhutan (TCB) is responsible for development and regulation of the tourism industry. This includes the development of the human resources for the industry. Towards this it established the Royal Institute of Tourism and Hospitality (RITH) former HTMTI which currently provides diploma programs for prospective managers within the hospitality sector. In addition, a private institute caters to the service level staff, such as food and beverage preparation as well as housekeeping. The TCB organizes its own courses depending on the demand such as the recent guides training for 300 participants.

Further, the TCB is currently preparing its HRD Master plan for the tourism and hospitality industry. The Master plan will cover comprehensive training need assessment of the sector and its sub-sectors. The HRD interventions identified in this Master plan will complement and supplement TCB's Master plan for the tourism and hospitality industry.

#### Issues and Challenges

The growth and vibrancy of the tourism sector is constrained by several factors. Such as the problems of accessibility via the only international airport and limited land entry point, secondly lack of quality infrastructures, and most important of all the lack of competent human resources to provide quality services. The issues of the human resource constraints are considered for the purpose of this Master plan.

41 Statistical Yearbook, 2012.

42 From Kuensel 2012

If this sector is to grow to be the vital sector of the economy, it must be supported by qualified, professional and competent human resources. As per the BNHRD 2010, Educational qualification of people working in hotels and restaurants is on lower side with almost 80% of the people working in this sector having the highest qualification of only a junior high school. The Tourism Strategy and Development Plans 2013-2018<sup>43</sup> identifies the following as the HR related constraints.

- lack of experience and understanding of the international tourism industry and its market-oriented dynamics among national and district Government line agencies and bodies;
- lack of qualified and practiced tourism-related professionals working in both the Government and private sectors (staff from several hundred tour companies have likely never sold a tour while others, for example, lack skills and tools to work with local entrepreneurs, households and communities to develop products, itineraries and business-plans, or connect with outbound operators);
- critical lack of trained guides able to service the envisaged volume of 100,000 arrivals;
- critical lack of skilled labour engaged in the hospitality sector able to meet the needs of 100,000 tourists per year;
- the commercial imperative for most big and medium-sized local tour operators to conduct ‘business as usual’ to obtain their customer base, market share and business security – and the lack of incentives and know-how for these operators to develop alternative products and / or more equitable business models..

Therefore clearly the HR constraints and deficiencies are significant not only at the service levels but amongst the current leaders and senior managers of the tourism and hospitality sector as well.

Currently the major supply of HR for this sector at the service level is direct employment of school leavers with basic or no prior competencies and skills being acquired while on the job. The pool of diploma or degree level professionals at the management are mostly produced by RITH and some who have undertaken Hotel and Tourism Management studies on their own outside the country. The number of graduates churned out by RITH at 50 annually is far below the requirement of the sector. TCB & MoLHR supplements the skills shortages and up-gradation with short term programs implemented in collaboration with the private training providers our outside the country. The institutes and the agencies responsible for HRD of this sector are constrained both in terms of its scope and capacity to supply HR with the right competencies in this sector.

As prevalent in Bhutan’s private sector the culture of in house training and development is also poor because of resource constraints and also due to the lack of understanding of training and development as a driver of productivity and effectiveness by the top managers/proprietors. Only a few large and joint venture hotels have training and development of their employees through in-house programs and attachments to their other properties.

### HRD interventions

Tourism sector is expected to grow by around 10% over the next 5 years, taking the total number of annual visitors to 150,000. This would result in creation of 2,300 jobs in the hotel industry and 1,700 jobs within the tour sub-sector.

SN	Skill group	Numbers
1	Managers	480
2	Accounts	230
3	Guides	1000

43 From Annual Info-Comm. and Transport Statistical Bulletin -2013, Ministry of Information and Communications.

4	ICT and other technicians	280
5	Spa	80
6	Food and Beverages	830
7	Front office	340
8	House keeping	530
9	Support staff	230
	<b>Total</b>	<b>4,000</b>

Positions 1 and 2 will be filled by graduates with the appropriate degrees coming out from RUB, RITH and external Universities. Position 3 (guides) generally require a grade 12 but more and more general graduates are joining the profession). There are also adequate number of ICT and other technicians available in the market, and therefore their HRD does not feature within this plan.

For the 11<sup>th</sup> Five Year Plan, the HRD Master plan objectives of the tourism and hospitality sector will be firstly to substantially enhance the competencies and knowledge of the senior managers and executives to be creative, resourceful and competitive. Secondly the sector to be supported by the supply of service oriented pool of human resources in various occupations. They should be able to create new products, improve the quality of services and provide the visitors to Bhutan a favorable impression of the country and its culture.

Towards this objective some of the strategies/actions recommended by the National Human Resource Development Need Report of 2010 which were not implemented in the 10<sup>th</sup> FYP will be taken up in the 11<sup>th</sup> FYP. The plans are as follows:

1. RITH being the main institution for providing tourism and hotel management related education at the diploma and degree level to increase their scope and intake to meet the projection made in the above table. It should also offer training of managerial and supervisory employees in the tourism and hotel management area through targeted short term trainings in collaboration with other relevant institutes such as RIM. To support and supplement the outcomes of RITH, MoLHR will have to continue the in-service short term training programs either within the country or outside.
2. The BNHRD 2010 recommended that a Tourism Vocational Institute (TVI) should be established, preferably by the Ministry of Labour and Human Resources (MoLHR) as the responsible agency for vocational education in Bhutan. It should offer national certificate courses as well as short-term, pre-service certificate courses for job seekers. This recommendation is to be explored and pursued in the 11<sup>th</sup> FYP as the long term outcome of the plan period.
3. The proposed certificate level course and short term courses will mainly target school leavers and job seekers (refer pre-service implementation plan) to meet the skills requirement of the tourism industry. Some of the competencies the plan intends to develop is to create a core group of professional guides and food quality has been an issue with most visitors to Bhutan so the plan seeks to develop a group of professional cooks competent in preparation of different cuisines/meals.
4. In addition, the plan will continue to support the short term training of hospitality sector personnel for food and beverage, housekeeping and front desk and related hospitality services through ATP programs. Depending on the demand, additional pre-service trainings for these staff shall be provided through the private sector training facilities. Specific program has been tentatively earmarked under Special Training program for this sector to cover hospitality rated skills training not adequately covered by the apprenticeship programs.

### 3.6.8 FINANCIAL SERVICES SECTOR

This sector currently comprises of 4 banks, 2 insurance companies and a Development Bank. The Royal Monetary Authority is the Central Bank and regulates this sector. There are plans for licensing a re-insurance company in the future within the private sector. The sector contributes to 6% of GDP and the combined assets of the finance sector is estimated at 78.728 billion (2011) and has been growing at around 20% over the last 5 years<sup>44</sup>. Together, the sector employs close to 2,400 people<sup>45</sup>.

The prospect for growth of the finance sector is good and will continue to improve as a result of the development activities as well economic growth in general. In terms of Human Resource supply the current finance sector relies on the graduates coming from the RUB colleges as well as those undertaking private studies outside the country. Apart from BBA and B.Com degrees, the sector also takes in other general graduates as well as ICT and some engineering graduates.

The sector has two types of in-service education and training needs. (i) Short and specific training related to regulation, functions or operation of these institutes. (ii) long term training for upgrading the qualification of the staff. With regards to the first type, RMA has its own established training programs with the World Bank, IMF and ADB. The other institutes such as the Banks send their staff to institutes within the region such as India, Thailand and Philippines. Many of these courses are designed on demand. The plan is however to consolidate the training needs amongst the members and establish a Financial Training Institute in Thimphu to deliver the trainings. RMA will hold 70% of the shares of the institute and the rest are to be distributed amongst the 8 existing financial establishments. The institute will be governed by a board and headed by an Executive Director. The faculty development will take some years and therefore in the initial years, the courses delivery will rely on external experts.

Accordingly for the 11<sup>th</sup> FYP, Bhutanese financial institutes will no longer have to spend time and resources to send their staff outside the country for short courses as at present. With respect to the long term programs, older Government owned Banks such as the Bank of Bhutan have a system of sending their senior staff on Master's program after completion of 5 years of service, a practice similar to the Civil Service. Bhutan National Bank also provides similar study opportunities for its staff.

#### Issues and Challenges

Bhutan's financial sector is vulnerable as evident from the recent rupee shortages and its consequences. The sector requires competent manpower at various levels so that its financial services which are on the lower side compared to international standards can be enhanced. Currently there is a lack of leadership and higher skilled people who can provide strategic directions to the sector in terms of growth, opportunities and additional services. There is also a lack of accounting professionals to service the current and future demand. For example, there is no Accountancy and Auditing Services within the private sector and most of the firms employ the services of firms outside the country. The Accounting and Auditing Standards Board of Bhutan claims that there are only 28 professional accountants in the country and there is a need of an additional 47 just to service the current demand.

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44 Report of the Enterprise Survey, 2011, Ministry of Economic Affairs, and ADB.

45 ICT Adoption and Productivity in Developing Countries: New Firm Level Evidence from Brazil and India, IZA Discussion Paper No. 2294 September 2006 .

Table 3.21 Existing and additional requirement of professional Accountants								
	Large Companies	AASBB	CA Firms	RAA	MoF	RUB & RIM	Other	Total
Current	12	2	0	4	5	0	5	28
Additional requirement	21	2	6	3	5	5	5	47
Total Requirement	33	4	6	7	10	5	15	75

Since financial institutions have plans to upgrade their technology infrastructure, there will be a need to upgrade the IT skills of its staff. Although there is no dearth of supply of general graduates to join the financial services sector it is not followed by a good workplace HRD system by the financial institutions which are imperative for the development of the sector. Unlike the big power corporations, most financial institutions depend on the Royal Government for ex-country training. There is a strong need to institutionalize HRD system and invest in professionalizing its manpower.

### HRD interventions

The objective of the sector for the 11<sup>th</sup> FYP will be to build up highly specialized skills within the relevant fields of its engagement. Following are the competencies targeted to be enhanced:

- Market risk assessment & management
- Financing services & instruments
- Professional accountants
- MBA
- Effective supervision/management training
- Marketing
- Development & International Banking
- Banking law

In addition to the prevailing demand for expertise in risk assessment and management, the industry will be asked to develop expertise for different financing services and instruments. This should be financed by the industry and its establishments themselves and will no longer be part of the MoLHR's fellowship programs.

The Master plan will also help develop a pool of professional accountants and effective managers in the country to service the needs of the finance sector. MoLHR will also continue supporting the long term masters program for the managers in business administration and professional accountancy. Specifically it will support the fellowships of chartered accountancy and professional accountancy.

It may be further elaborated the Accounting and Auditing Standards of Bhutan Board is in an advanced stage of establishing the Institute of CA of Bhutan (ICAB) which will be responsible for conducting CA courses and regulating its members. It has already made a study of the requirement of professional accountants over time and prepared a training program. The Board is already in touch with other professional bodies such as Institute of Chartered Accountants of India and Certified Practising Accountants of Australia in instituting the ICAB and implementing the trainings.

<b>Table 3.22: Professional Accountants Training projection 2013-2021</b>										
<b>Institutes</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>Total</b>
CPA Australia	2	1	1	5	5	6	2	2	2	26
ICAI					2	2				4
BICA							30	50	50	130
Other		1		2		2				5
<b>Total</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>7</b>	<b>7</b>	<b>10</b>	<b>32</b>	<b>52</b>	<b>52</b>	<b>165</b>

Other short term training such as managerial training needs can be served by RIM and for technical training needs the financial institutions will have to make in-house efforts or depend on ex-country training.

The plan also has a provision to provide technician level certification for school leavers targeted to work at the operational level or as support staff. This will be done through training of accounts or related personnel through apprenticeship program and under Special Training program.

The background is a vibrant green gradient. On the left side, several bright, glowing light rays emanate from the bottom left, extending towards the top right. Scattered throughout the scene are numerous small, semi-transparent white squares of varying sizes, some appearing to be part of the light rays and others floating independently. The overall effect is one of dynamic energy and digital connectivity.

# ANNEXURE





## ANNEXURE

## Annexure 1

Sector wise slot and budget for pre-service and in-service

Sector	Level of Training	In-service		Pre-service		TOTAL	
		Slot	Budget	Slot	Budget	Slot	Budget
Construction	Masters and Post-graduates	34	67320000	0	0	34	67,320,000
	under-graduates	0	0	50	24000000	50	24,000,000
	Diploma	10	35640000	0	0	10	35,640,000
	Certificate	0	0	4515	976180000	4515	976,180,000
	Short-term training	130	3898125	0	0	130	3,898,125
	<b>Sub-total</b>	<b>174</b>	<b>106858125</b>	<b>4565</b>	<b>1000180000</b>	<b>4739</b>	<b>1,107,038,125</b>
Power	Masters and post-graduates	14	25245000	0	0	14	25,245,000
	under-graduates	0	0	50	24000000	50	24,000,000
	Diploma	10	31020000	0	0	10	31,020,000
	Certificate	0	0	1595	176950000	1595	176,950,000
	Short-term training	96	1456125	0	0	96	1,456,125
	<b>Sub-total</b>	<b>120</b>	<b>57721125</b>	<b>1645</b>	<b>200950000</b>	<b>1765</b>	<b>258,671,125</b>
Education and Training	Masters and post-graduates	27	42570000	0	0	27	42,570,000
	under-graduates	0	0	41	14760000	41	14,760,000
	Diploma	25	13200000	180	43200000	205	56,400,000
	Certificate	18	9504000	0	0	18	9,504,000
	Short-term training	105	278437.5	0	0	105	278,438
	<b>Sub-total</b>	<b>175</b>	<b>65552437.5</b>	<b>221</b>	<b>57960000</b>	<b>396</b>	<b>123,512,438</b>
ICT, Media and Transport	Masters and post-graduates	23	38610000	0	0	23	38,610,000
	under-graduates	0	0	25	9000000	25	9,000,000
	Diploma	20	23760000	0	0	20	23,760,000
	Certificate	0	0	795	74400000	795	74,400,000
	Short-term training	96	2912250	0	0	96	2,912,250
	<b>Sub-total</b>	<b>139</b>	<b>65282250</b>	<b>820</b>	<b>83400000</b>	<b>959</b>	<b>148,682,250</b>
Production and Mining	Masters and post-graduates	17	27225000	0	0	17	27,225,000
	under-graduates	0	0	0	0	0	-
	Diploma	14	4521000	0	0	14	4,521,000
	Certificate	160	21670000	1460	457800000	1620	479,470,000
	Short-term training	280	1340625	0	0	280	1,340,625
	<b>Sub-total</b>	<b>471</b>	<b>54756625</b>	<b>1460</b>	<b>457800000</b>	<b>1931</b>	<b>512,556,625</b>

Trading and Services	Masters and post-graduates	20	29700000	0	0	20	29,700,000
	under-graduates	0	0	70	25200000	70	25,200,000
	Diploma	6	2508000	0	0	6	2,508,000
	Certificate	10	1485000	2834	230430000	2844	231,915,000
	Short-term training	275	5585937.5	150	9000000	425	14,585,938
	<b>Sub-total</b>	<b>311</b>	<b>39278937.5</b>	<b>3054</b>	<b>264630000</b>	<b>3365</b>	<b>303,908,938</b>
Tourism and Hospitality	Masters and post-graduates	21	31185000	0	0	21	31,185,000
	under-graduates	0	0	54	19440000	54	19,440,000
	Diploma	9	6996000	600	144000000	609	150,996,000
	Certificate	0	0	2005	120300000	2005	120,300,000
	Short-term training	243	2757562.5	0	0	243	2,757,563
	<b>Sub-total</b>	<b>273</b>	<b>40938562.5</b>	<b>2659</b>	<b>283740000</b>	<b>2932</b>	<b>324,678,563</b>
Finance	Masters and post-graduates	22	36630000	0	0	22	36,630,000
	under-graduates	0	0	95	35400000	95	35,400,000
	Diploma	5	3498000	50	6000000	55	9,498,000
	Certificate	4	3498000	150	9000000	154	12,498,000
	Short-term training	171	3673312.5	0	0	171	3,673,313
	<b>Sub-total</b>	<b>202</b>	<b>47299312.5</b>	<b>295</b>	<b>50400000</b>	<b>497</b>	<b>97,699,313</b>
<b>TOTAL</b>	<b>1865</b>	<b>477687375</b>	<b>14719</b>	<b>2399060000</b>	<b>16584</b>	<b>2,876,747,375</b>	
<b>Allocation %</b>	<b>11%</b>	<b>17%</b>	<b>89%</b>	<b>83%</b>	<b>100%</b>	<b>100%</b>	

## Slot and Budget by level of training for pre-service and in-service

SN	Level of Training	In-service		Pre-service		TOTAL	
		Slot	Budget	Slot	Budget	Slot	Budget
1	Masters and post-graduates	178	298485000	0	0	178	298,485,000
2	under-graduates	0	0	385	151800000	385	151,800,000
3	Diploma	99	121143000	830	193200000	929	314,343,000
4	Certificate	192	36157000	13354	2045060000	13546	2,081,217,000
5	Short-term training	1396	21902375	150	9000000	1546	30,902,375
	<b>TOTAL</b>	<b>1865</b>	<b>477687375</b>	<b>14719</b>	<b>2399060000</b>	<b>16584</b>	<b>2,876,747,375</b>
	<b>Allocation %</b>	<b>11%</b>	<b>17%</b>	<b>89%</b>	<b>83%</b>	<b>100%</b>	<b>100%</b>

## Percentage allocation of Slot and Budget by level of training for pre-service and in-service

SN	Level of Training	In-service		Pre-service		TOTAL	
		Slot	Budget	Slot	Budget	Slot	Budget
1	Masters and post-graduates	9.54%	62.49%	0.00%	0.00%	1.07%	10.38%
2	under-graduates	0.00%	0.00%	2.62%	6.33%	2.32%	5.28%
3	Diploma	5.31%	25.36%	5.64%	8.05%	5.60%	10.93%
4	Certificate	10.29%	7.57%	90.73%	85.24%	81.68%	72.35%
5	Short-term training	74.85%	4.59%	1.02%	0.38%	9.32%	1.07%
	<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

## Annexure 2

## Sector wise allocation of budget and slots from Year1 to Year5

Sector	Level of training	Y1 slot	Y1 budget	Y2 slot	Y2 budget	Y3 slot	Y3 budget	Y4 slot	Y4 budget	Y5 slot	Y5 budget	Total Slot	Total Budget
Construction	Masters and post-graduates	4	7920000	8	15840000	6	11880000	8	15840000	8	15840000	34	67,320,000
	under-graduates	10	4800000	10	4800000	10	4800000	10	4800000	10	4800000	50	24,000,000
	Diploma	0	0	2	10560000	3	10560000	3	10560000	2	3960000	10	35,640,000
	Certificate	464	105560000	776	159260000	940	198020000	1088	236240000	1247	277100000	4515	976,180,000
	Short-term training	15	61875	45	2021250	40	1753125	20	41250	10	20625	130	3,898,125
	<b>Sub-total</b>	<b>493</b>	<b>118341875</b>	<b>841</b>	<b>192481250</b>	<b>999</b>	<b>227013125</b>	<b>1129</b>	<b>267481250</b>	<b>1277</b>	<b>301720625</b>	<b>4739</b>	<b>1,107,038,125</b>
Power	Masters and post-graduates	2	3465000	3	5445000	3	5445000	3	5445000	3	5445000	14	25,245,000
	under-graduates	10	4800000	10	4800000	10	4800000	10	4800000	10	4800000	50	24,000,000
	Diploma	0	0	2	10560000	3	5940000	3	10560000	2	3960000	10	31,020,000
	Certificate	200	30000000	305	33750000	350	36800000	350	36800000	390	39600000	1595	176,950,000
	Short-term training	15	30937.5	15	61875	28	480562.5	26	858000	12	24750	96	1,456,125
	<b>Sub-total</b>	<b>227</b>	<b>38295937.5</b>	<b>335</b>	<b>54616875</b>	<b>394</b>	<b>53465562.5</b>	<b>392</b>	<b>58463000</b>	<b>417</b>	<b>53829750</b>	<b>1765</b>	<b>258,671,125</b>

Education and Training	Masters and post-graduates	4	6435000	5	7920000	6	9405000	6	9405000	6	9405000	27	42,570,000
	under-graduates	7	2520000	7	2520000	7	2520000	10	3600000	10	3600000	41	14,760,000
	Diploma	35	9840000	35	9840000	40	11040000	45	12240000	50	13440000	205	56,400,000
	Certificate	3	1584000	3	1584000	4	2112000	4	2112000	4	2112000	18	9,504,000
	Short-term training	15	61875	20	41250	35	103125	35	72187.5	0	0	105	278,438
	<b>Sub-total</b>	<b>64</b>	<b>20440875</b>	<b>70</b>	<b>21905250</b>	<b>92</b>	<b>25180125</b>	<b>100</b>	<b>27429187.5</b>	<b>70</b>	<b>28557000</b>	<b>396</b>	<b>123,512,438</b>
	Masters and post-graduates	3	4950000	5	8415000	5	8415000	5	8415000	5	8415000	23	38,610,000
	under-graduates	5	1800000	5	1800000	5	1800000	5	1800000	5	1800000	25	9,000,000
	Diploma	0	0	15	22440000	5	1320000	0	0	0	0	20	23,760,000
	Certificate	85	7500000	210	17100000	196	17520000	139	14580000	165	17700000	795	74,400,000
Short-term training	17	391875	17	604312.5	24	666187.5	24	635250	14	614625	96	2,912,250	
<b>Sub-total</b>	<b>110</b>	<b>14641875</b>	<b>252</b>	<b>50359312.5</b>	<b>235</b>	<b>29721187.5</b>	<b>173</b>	<b>25430250</b>	<b>189</b>	<b>28529625</b>	<b>959</b>	<b>148,682,250</b>	
Masters and post-graduates	2	3465000	4	6435000	3	4455000	4	6435000	4	6435000	17	27,225,000	
under-graduates	0	0	0	0	0	0	0	0	0	0	0	-	
Diploma	0	0	4	2420000	3	440000	3	440000	4	1221000	14	4,521,000	
Certificate	306	96390000	346	100140000	351	96760000	266	89940000	351	96240000	1620	479,470,000	
Short-term training	15	61875	50	226875	80	391875	65	288750	70	371250	280	1,340,625	
<b>Sub-total</b>	<b>323</b>	<b>99916875</b>	<b>404</b>	<b>109221875</b>	<b>437</b>	<b>102046875</b>	<b>338</b>	<b>97103750</b>	<b>429</b>	<b>104267250</b>	<b>1931</b>	<b>512,556,625</b>	
ICT, Media and Transport													
Production and Mining													

Training and Services	Masters and post-graduates	4	5940000	4	5940000	4	5940000	4	5940000	4	5940000	20	29,700,000
	under-graduates	10	3600000	10	3600000	10	3600000	20	7200000	20	7200000	70	25,200,000
	Diploma	0	0	2	990000	2	990000	0	0	2	528000	6	2,508,000
	Certificate	363	31860000	483	40460000	609	49010000	681	54200000	708	56385000	2844	231,915,000
	Short-term training	47	1894875	97	3730500	132	3720187.5	72	1956750	77	3283625	425	14,585,938
	<b>Sub-total</b>	<b>424</b>	<b>43294875</b>	<b>596</b>	<b>54720500</b>	<b>757</b>	<b>63260187.5</b>	<b>777</b>	<b>69296750</b>	<b>811</b>	<b>73336625</b>	<b>3365</b>	<b>303,908,938</b>
Tourism and Hospitality	Masters and post-graduates	2	2970000	4	5940000	5	7425000	5	7425000	5	7425000	21	31,185,000
	under-graduates	10	3600000	10	3600000	10	3600000	12	4320000	12	4320000	54	19,440,000
	Diploma	102	25980000	102	25980000	101	24990000	152	36990000	152	37056000	609	150,996,000
	Certificate	263	15780000	343	20580000	423	25380000	473	28380000	503	30180000	2005	120,300,000
	Short-term training	15	61875	62	532125	92	1051187.5	27	325875	47	786500	243	2,757,563
	<b>Sub-total</b>	<b>392</b>	<b>48391875</b>	<b>521</b>	<b>56632125</b>	<b>631</b>	<b>62446187.5</b>	<b>669</b>	<b>77440875</b>	<b>719</b>	<b>79767500</b>	<b>2932</b>	<b>324,678,563</b>
Finance	Masters and post-graduates	2	2970000	4	6435000	5	8415000	5	8415000	6	10395000	22	36,630,000
	under-graduates	19	7080000	19	7080000	19	7080000	19	7080000	19	7080000	95	35,400,000
	Diploma	11	2190000	11	2190000	11	2190000	11	1200000	11	1728000	55	9,498,000
	Certificate	31	2790000	31	2790000	30	1800000	31	2790000	31	2328000	154	12,498,000
	Short-term training	29	985875	27	193875	59	563062.5	32	985875	24	944625	171	3,673,313
	<b>Sub-total</b>	<b>92</b>	<b>16015875</b>	<b>92</b>	<b>18688875</b>	<b>124</b>	<b>20048062.5</b>	<b>98</b>	<b>20470875</b>	<b>91</b>	<b>22475625</b>	<b>497</b>	<b>97,699,313</b>
<b>TOTAL</b>	<b>2125</b>	<b>399340062.5</b>	<b>3111</b>	<b>558626062.5</b>	<b>3669</b>	<b>583181312.5</b>	<b>3676</b>	<b>643115937.5</b>	<b>4003</b>	<b>692484000</b>	<b>16584</b>	<b>2,876,747,375</b>	
Allocation %		<b>12.8%</b>	<b>13.9%</b>	<b>19.4%</b>	<b>22.1%</b>	<b>20.3%</b>	<b>22.2%</b>	<b>22.4%</b>	<b>24.1%</b>	<b>24.1%</b>	<b>100.0%</b>	<b>100%</b>	

Year wise slot and budget by level of Training

SN	Level of training	Y1 Slot	Y1 Budget	Y2 Slot	Y2 Budget	Y3 Slot	Y3 Budget	Y4 Slot	Y4 Budget	Y5 Slot	Y5 Budget	Total Slot	Total Budget
1	Masters and post-graduates	23	38115000	37	62370000	37	61380000	40	67320000	41	69300000	178	298,485,000
2	under-graduates	71	28200000	71	28200000	71	28200000	86	33600000	86	33600000	385	151,800,000
3	Diploma	148	38010000	173	84980000	168	57470000	217	71990000	223	61893000	929	314,343,000
4	Certificate	1715	291464000	2497	375664000	2903	427402000	3032	465042000	3399	521645000	13546	2,081,217,000
5	Short-term training	168	3551062.5	333	7412062.5	490	8729312.5	301	5163937.5	254	6046000	1546	30,902,375
	<b>TOTAL</b>	<b>2125</b>	<b>399340062.5</b>	<b>3111</b>	<b>558626062.5</b>	<b>3669</b>	<b>583181312.5</b>	<b>3676</b>	<b>643115937.5</b>	<b>4003</b>	<b>692484000</b>	<b>16584</b>	<b>2,876,747,375</b>
	Allocation %	12.8%	13.9%	18.8%	19.4%	22.1%	20.3%	22.2%	22.4%	24.1%	24.1%	100.0%	100%

percentage slot and budget by level of Training from year 1 to year 5

SN	Level of training	Y1 Slot	Y1 Budget	Y2 Slot	Y2 Budget	Y3 Slot	Y3 Budget	Y4 Slot	Y4 Budget	Y5 Slot	Y5 Budget	Total Slot	Total Budget
1	Masters and post-graduates	1.08%	9.54%	1.19%	11.16%	1.01%	10.53%	1.09%	10.47%	1.02%	10.01%	1.07%	10.38%
2	under-graduates	3.34%	7.06%	2.28%	5.05%	1.94%	4.84%	2.34%	5.22%	2.15%	4.85%	2.32%	5.28%
3	Diploma	6.96%	9.52%	5.56%	15.21%	4.58%	9.85%	5.90%	11.19%	5.57%	8.94%	5.60%	10.93%
4	Certificate	80.71%	72.99%	80.26%	67.25%	79.12%	73.23%	82.48%	72.31%	84.91%	75.33%	81.68%	72.35%
5	Short-term training	7.91%	0.89%	10.70%	1.33%	13.36%	1.50%	8.19%	0.80%	6.35%	0.87%	9.32%	1.07%
	<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100.00%</b>

## Annexure 3

## Construction Sector

In-service																	
SL	level	Broad field of Study	slots	Duration (months)	in-country/ex-country	Year 1 slot	Year 1 Budget	Year 2 slot	Year 2 Budget	Year 3 slot	Year 3 Budget	Year 4 slot	Year 4 Budget	Year 5 slot	Year 5 Budget	total budget	priority
1	1	Structural Engineering	10	24	ex-country	2	3960000	2	3960000	2	3960000	2	3960000	2	3960000	19,800,000.00	A
2	1	Civil Engineering	9	24	ex-country	1	1980000	2	3960000	2	3960000	2	3960000	2	3960000	17,820,000.00	A
3	1	Environmental Engineering	4	24	ex-country			1	1980000	1	1980000	1	1980000	1	1980000	7,920,000.00	B
4	1	Transport Engineering	4	24	ex-country	1	1980000	1	1980000			1	1980000	1	1980000	7,920,000.00	B
5	1	Building Technology and Construction management	4	24	ex-country			1	1980000	1	1980000	1	1980000	1	1980000	7,920,000.00	B
6	1	Geo-technological Engineering	3	24	ex-country			1	1980000			1	1980000	1	1980000	5,940,000.00	B
7	3	Diploma in Civil Engineering	10	24	ex-country			2	10560000	3	10560000	3	10560000	2	3960000	35,640,000.00	A
8	5	Tunneling Technology	5	1	ex-country					5	1650000					1,650,000.00	B
9	5	Transport Engineering and Technology	5	1	ex-country			5	1650000							1,650,000.00	A
10	5	Construction Project Management	10	0.5	in-country			10	165000							165,000.00	A
11	5	Building services and facilities management	10	0.5	in-country			10	165000							165,000.00	B

12	5	Occupation Health and Safety hazards	20	0.25	in-country				10	20625	10	20625							41,250.00	A
13	5	Risk Management	20	0.25	in-country			10	20625	20625	10	20625							41,250.00	C
14	5	Human Resource Management	10	0.25	in-country	5	20625		5	20625	5	20625							41,250.00	A
15	5	Team Building and people Management	10	0.25	in-country	5	20625		5	20625	5	20625							41,250.00	C
16	5	Leadership and change management	10	0.25	in-country	5	20625		5	20625	5	20625							41,250.00	C
17	5	Achieving Sustainable competitive advantage	5	0.25	in-country						5	10312.5							10,312.50	C
18	5	Business Ethics	5	0.25	in-country						5	10312.5							10,312.50	C
19	5	Labour laws and employee relation	5	0.25	in-country						5	10312.5							10,312.50	C
20	5	TQM	5	0.25	in-country						5	10312.5							10,312.50	C
21	5	Marketing, creativity, innovation and change management	5	0.25	in-country								5	10312.5					10,312.50	C
22	5	mechanization and technology change	5	0.25	in-country									5	10312.5				10,312.50	C

**Pre-service**

SL	level	Broad field of Study	Slot	Dur ation (in months)	in-country/ex-country	Year 1 slot	Year 1 Budget	Year 2 slot	Year 2 Budget	Year 3 slot	Year 3 Budget	Year 4 slot	Year 4 Budget	Year 5 slot	Year 5 Budget	total budget	priority
1	2	Civil Engineering	50	48	ex-country	10	4800000	10	4800000	10	4800000	10	4800000	10	4800000	24,000,000.00	A



2	4	Electrical	904	24	in-country	130	31200000	153	36720000	178	42720000	206	49440000	237	56880000	216,960,000.00	A
3	4	Welding	450	24	in-country	30	7200000	60	14400000	90	21600000	120	28800000	150	36000000	108,000,000.00	A
4	4	Mechanical	539	24	in-country	75	18000000	100	24000000	110	26400000	121	29040000	133	31920000	129,360,000.00	A
5	4	Carpentry	600	24	in-country	60	14400000	90	21600000	120	28800000	150	36000000	180	43200000	144,000,000.00	A
6	4	Masonry	726	24	in-country	60	14400000	120	28800000	150	36000000	180	43200000	216	51840000	174,240,000.00	A
7	4	Plumbing	600	24	in-country	60	14400000	90	21600000	120	28800000	150	36000000	180	43200000	144,000,000.00	A
8	4	Upholstery and design	107	24	in-country	14	3360000	17	4080000	21	5040000	25	6000000	30	7200000	25,680,000.00	A
9	4	Heavy Machine Operation	90	12	in-country	15	1800000	15	1800000	20	2400000	20	2400000	20	2400000	10,800,000.00	B
10	4	Construction supervisor	30	6	in-country			15	900000	15	900000		0			1,800,000.00	B
11	4	Flooring and tile laying	45	6	in-country			15	900000	15	900000	15	900000			2,700,000.00	C
12	4	Site Supervisory manager	100	4	in-country	20	800000	20	800000	20	800000	20	800000	20	800000	4,000,000.00	B
13	4	New electrical wiring techniques	80	3	in-country			20	600000	20	600000	20	600000	20	600000	2,400,000.00	C
14	4	Plumbing technology	80	3	in-country			20	600000	20	600000	20	600000	20	600000	2,400,000.00	C
15	4	Carpentry and woodworks	80	6	in-country			20	1200000	20	1200000	20	1200000	20	1200000	4,800,000.00	C
16	4	Pre-fabricated windows and doors	84	6	in-country			21	1260000	21	1260000	21	1260000	21	1260000	5,040,000.00	C

**Annexure 4****Power Sector**

<b>In-service</b>																	
SL	level	Broad field of Study	slots	Duration (months)	in-country/ ex-country	Year 1 slot	Year 1 Budget	Year 2 slot	Year 2 Budget	Year 3 slot	Year 3 Budget	Year 4 slot	Year 4 Budget	Year 5 slot	Year 5 Budget	total budget	priority
1	1	Masters in Mechanical Engineering	4	24	ex-country			1	1980000	1	1980000	1	1980000	1	1980000	7,970,000	A
2	1	Masters in Electrical Engineering	5	24	ex-country	1	1980000	1	1980000	1	1980000	1	1980000	1	1980000	9,900,000	A
3	1	Master in HRM	5	18	ex-country	1	1485000	1	1485000	1	1485000	1	1485000	1	1485000	7,425,000	B
4	3	Diploma in Electrical Engineering	10	24	ex-country			2	10560000	3	5940000	3	10560000	2	3960000	31,020,000	A
5	5	Tunneling Technology	5	1	ex-country					5	412500					412,500	B
6	5	Water based management	5	1	ex-country							5	412500			412,500	A
7	5	Renewable resource management	5	1	ex-country							5	412500			412,500	B
8	5	Disaster Management	5	1	in-country			5	41250							41,250	A
9	5	Occupation Health and Safety hazards	10	0.25	in-country			5	10312.5	5	10312.5					20,625	A
10	5	Risk Management	10	0.25	in-country			5	10312.5	5	10312.5					20,625	C
11	5	Human Resource Management	10	0.25	in-country	5	10312.5			5	10312.5					20,625	A
12	5	Team Building and people Management	9	0.25	in-country	5	10312.5			4	18562.5					28,875	C
13	5	Leadership and change management	9	0.25	in-country	5	10312.5			4	18562.5					28,875	C

14	5	Achieving Sustainable competitive advantage	4	0.25	in-country									4	8250			8,250	C
15	5	Business Ethics	4	0.25	in-country									4	8250			8,250	C
16	5	Labour laws and employee relation	4	0.25	in-country									4	8250			8,250	C
17	5	TQM	4	0.25	in-country									4	8250			8,250	C
18	5	Marketing, creativity, innovation and change management	4	0.25	in-country											4	8250	8,250	C
19	5	time and stress management	4	0.25	in-country											4	8250	8,250	C
20	5	mechanization and technology change	4	0.25	in-country											4	8250	8,250	C

**Pre-service**

SL	level	Broad field of Study	slots	Duration (months)	in-country/ex-country	Year 1 slot	Year 1 Budget	Year 2 slot	Year 2 Budget	Year 3 slot	Year 3 Budget	Year 4 slot	Year 4 Budget	Year 5 slot	Year 5 Budget	total budget	priority
1	2	Electrical Engineering	50	48	ex-country	10	4800000	10	4800000	10	4800000	10	4800000	10	4800000	24,000,000	A
2	4	Electrical	500	24	in-country	100	24000000	100	24000000	100	24000000	100	24000000	100	24000000	120,000,000	A
3	4	Hydro power Training	900	6	in-country	100	6000000	150	9000000	200	12000000	200	12000000	250	15000000	54,000,000	A
4	4	Fiber optic test and measurements	15	1	in-country			15	150000							150,000	A
5	4	Solar and Wind Technology	70	1	in-country			10	100000	20	200000	20	200000	20	200000	700,000	A
6	4	Transformer maintenance	60	1	in-country			20	200000	15	150000	15	150000	10	100000	600,000	B
7	4	Central heating and cooling	50	3	in-country			10	300000	15	450000	15	450000	10	300000	1,500,000	B

**Annexure 5**

**Education and Training Sector**

In-service																	
SL	level	Broad field of Study	slots	Duration (months)	in-country/ex-country	Year 1 slot	Year 1 Budget	Year 2 slot	Year 2 Budget	Year 3 slot	Year 3 Budget	Year 4 slot	Year 4 Budget	Year 5 slot	Year 5 Budget	total budget	priority
1	1	PhD. In Education	5	24	ex-country	1	1980000	1	1980000	1	1980000	1	1980000	1	1980000	9,900,000.00	A
2	1	MSc. In Counseling	4	18	ex-country			1	1485000	1	1485000	1	1485000	1	1485000	5,940,000.00	B
3	1	MSc. In Education	10	18	ex-country	2	2970000	2	2970000	2	2970000	2	2970000	2	2970000	14,850,000.00	B
4	1	MSc. In Technical Education	8	18	ex-country	1	1485000	1	1485000	2	2970000	2	2970000	2	2970000	11,880,000.00	
5	4	B.Ed. in Education	18	12	ex-country	3	1584000	3	1584000	4	2112000	4	2112000	4	2112000	9,504,000.00	A
6	3	Diploma in School Management	15	12	ex-country	3	1584000	3	1584000	3	1584000	3	1584000	3	1584000	7,920,000.00	A
7	3	Diploma in Day care management	10	12	ex-country	2	1056000	2	1056000	2	1056000	2	1056000	2	1056000	5,280,000.00	A
8	5	Train the Trainer (TVET)	60	0.25	in-country			20	41250	20	41250	20	41250			123,750.00	A
9	5	Human Resource Management	10	0.25	in-country	5	20625			5	20625					41,250.00	A
10	5	Team Building and people Management	10	0.25	in-country	5	20625			5	20625					41,250.00	C
11	5	Leadership and change management	10	0.25	in-country	5	20625			5	20625					41,250.00	C

12	5	Achieving Sustainable competitive advantage	5	0.25	in-country													10312.5				10,312.50	C
13	5	Labour laws and employee relation	5	0.25	in-country													10312.5				10,312.50	C
14	5	TQM	5	0.25	in-country													10312.5				10,312.50	C
<b>Pre-service</b>																							
SL	level	Broad field of Study	slots	Duration (months)	in-country/ ex-country	Year 1 slot	Year 1 Budget	Year 2 slot	Year 2 Budget	Year 3 slot	Year 3 Budget	Year 4 slot	Year 4 Budget	Year 5 slot	Year 5 Budget	total budget	priority						
1	2	B.Education	41	36	in-country	7	2520000	7	2520000	7	2520000	10	3600000	10	3600000	14,760,000.00	A						
2	3	Diploma in Child Care	65	24	ex-country	10	2400000	10	2400000	15	3600000	15	3600000	15	3600000	15,600,000.00	A						
3	3	Diploma in Technical Education	115	24	ex-country	20	4800000	20	4800000	20	4800000	25	6000000	30	7200000	27,600,000.00	A						

**Annexure 6**

**ICT, Media and Transport Sector**

<b>In-service</b>																	
SL	level	Broad field of Study	slots	Duration (months)	in-country/ ex-country	Year 1 slot	Year 1 Budget	Year 2 slot	Year 2 Budget	Year 3 slot	Year 3 Budget	Year 4 slot	Year 4 Budget	Year 5 slot	Year 5 Budget	total budget	priority
1	1	Masters in ICT	5	24	ex-country	1	1980000	1	1980000	1	1980000	1	1980000	1	1980000	9,900,000	A
2	1	Master in Mass Communication	5	18	ex-country	1	1485000	1	1485000	1	1485000	1	1485000	1	1485000	7,425,000	B
3	1	Master in HRM	5	18	ex-country	1	1485000	1	1485000	1	1485000	1	1485000	1	1485000	7,425,000	A
4	1	MBA	4	18	ex-country			1	1485000	1	1485000	1	1485000	1	1485000	5,940,000	A
5	1	Masters in Journalism	4	24	ex-country	1	1980000	1	1980000	1	1980000	1	1980000	1	1980000	7,920,000	A
6	3	Diploma in TV production	10	6	ex-country			10	2640000						0	2,640,000	A
7	3	Diploma in Mass media	5	6	ex-country					5	1320000					1,320,000	B
8	3	Diploma in Animation	5	12	ex-country			5	19800000							19,800,000	A
9	5	marketing and product packaging	16	0.5	in-country			10	264000	2	264000	2	264000	2	264000	1,056,000	B
10	6	TV Production and design	6	1	ex-country					2	198000	2	198000	2	198000	594,000	B
11	7	Mass Communication	6	1	ex-country					2	198000	2	198000	2	198000	594,000	B
12	8	Program Design and management	6	1	ex-country					2	198000	2	198000	2	198000	594,000	B
13	9	Radio operation and management	6	1	ex-country					2	198000	2	198000	2	198000	594,000	B
14	10	Mass Media	10	1	ex-country	2	330000	2	330000	2	330000	2	330000	2	330000	1,650,000	B
15	5	Transport operation and management	10	1	ex-country	2	330000	2	330000	2	330000	2	330000	2	330000	1,650,000	B

16	5	Risk Management	10	0.25	in-country				5	10312.5	5	10312.5						20,625	C
17	5	Human Resource Management	10	0.25	in-country	5	20625			5	20625							41,250	A
18	5	Team Building and people Management	10	0.25	in-country	5	20625			5	20625							41,250	C
19	5	Leadership and change management	10	0.25	in-country	5	20625			5	20625							41,250	C
20	5	Achieving Sustainable competitive advantage	5	0.25	in-country					5	10312.5							10,313	C
21	5	Business Ethics	5	0.25	in-country					5	10312.5							10,313	C
22	5	Labour laws and employee relation	5	0.25	in-country					5	10312.5							10,313	C
23	5	TQM	5	0.25	in-country					5	10312.5							10,313	C
24	5	Marketing, creativity, innovation and change management	5	0.25	in-country								5	10312.5				10,313	C
25	5	mechanization and technology change	5	0.25	in-country								5	10312.5				10,313	C
<b>Pre-service</b>																			
<b>SL</b>	<b>level</b>	<b>Broad field of Study</b>	<b>slots</b>	<b>Duration (months)</b>	<b>in-country/ ex-country</b>	<b>Year 1 slot</b>	<b>Year 1 Budget</b>	<b>Year 2 slot</b>	<b>Year 2 Budget</b>	<b>Year 3 slot</b>	<b>Year 3 Budget</b>	<b>Year 4 slot</b>	<b>Year 4 Budget</b>	<b>Year 5 slot</b>	<b>Year 5 Budget</b>	<b>total budget</b>	<b>priority</b>		
1	2	Journalism	25	36	ex-country	5	1800000	5	1800000	5	1800000	5	1800000	5	1800000	9,000,000	A		
2	4	Software development	40	6	ex-country		0	20	1200000							2,400,000	A		
3	4	Computer	201	12	in-country	33	3960000	36	4320000	40	4800000	44	5280000	48	5760000	24,120,000	A		
4	4	Driving (Heavy)	124	12	in-country	22	2640000	24	2880000	26	3120000	20	2400000	32	3840000	14,880,000	A		

5	4	Mobile Application Development	30	3	ex-country	15	450000	15	450000	450000								900,000	A
6	4	Security System	30	3	ex-country	15	450000	15	450000	450000								900,000	A
7	4	Animation - 2D	75	12	ex-country			15	1800000	1800000	15	1800000	20	2400000	25	3000000	3000000	9,000,000	A
8	4	Animation - 3D	75	12	ex-country			15	1800000	1800000	15	1800000	20	2400000	25	3000000	3000000	9,000,000	A
9	4	Script Writing	60	6	in-country			15	900000	900000	15	900000	15	900000	15	900000	900000	3,600,000	A
10	4	Cinematography	10	6	in-country			5	300000	300000	5	300000						600,000	B
11	4	Multimedia and Graphic	10	6	in-country						5	300000	5	300000				600,000	B
12	4	Voice Training for Animation industry	40	6	in-country						20	1200000			20	1200000	2,400,000	C	
13	4	Comic development and concept	30	6	in-country			15	900000	900000			15	900000			1,800,000	C	
14	4	Screen Writing	30	6	in-country			15	900000	900000	15	900000					1,800,000	A	
15	4	Choreography	10	6	in-country			5	300000	300000	5	300000					600,000	B	
16	4	Film making	10	6	in-country			5	300000	300000	5	300000					600,000	B	
17	4	Event management	20	6	in-country			10	600000	600000	10	600000					1,200,000	C	



## Annexure 7

## Production and Mining Sector

In-service																	
SL	level	Broad field of Study	Slots	Duration (months)	in-country/ex-country	Year 1 slot	Year 1 Budget	Year 2 slot	Year 2 Budget	Year 3 slot	Year 3 Budget	Year 4 slot	Year 4 Budget	Year 5 slot	Year 5 Budget	total budget	priority
1	1	MBA	5	18	ex-country	1	1485000	1	1485000	1	1485000	1	1485000	1	1485000	7,425,000	A
2	1	Masters in Operation Management	4	18	ex-country			1	1485000	1	1485000	1	1485000	1	1485000	5,940,000	B
3	1	Msc in Food technology	4	24	ex-country	1	1980000	1	1980000			1	1980000	1	1980000	7,920,000	B
4	1	MBA in marketing	4	18	ex-country			1	1485000	1	1485000	1	1485000	1	1485000	5,940,000	B
5	3	Diploma in wood based vocational program	4	12	ex-country	2		2	1980000					2	1056000	3,036,000	B
6	3	Product design and development	10	1	ex-country			2	440000	3	440000	3	440000	2	165000	1,485,000	A
7	4	Marketing and packaging technology	5	1	ex-country					5	220000					220,000	B
8	4	Food technology	5	1	ex-country			5	1650000							1,650,000	A
9	4	Agro based product development	100	3	ex-country	20	2640000	20	2640000	20	2640000	20	2640000	20	2640000	13,200,000	A
10	4	Wood work innovation and design	20	3	ex-country					10	1320000			10	1320000	2,640,000	A
11	5	Organic Farming	15	1	in-country			5	41250	5	41250			5	41250	123,750	A
12	5	Post-Harvest Technology	15	1	in-country			5	41250	5	41250			5	41250	123,750	A
13	5	Commercial Farming	15	1	in-country					5	41250	5	41250	5	41250	123,750	A
14	5	Farm Mechanization	15	1	in-country					5	41250	5	41250	5	41250	123,750	A

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15	5	Processing of agro produce	20	1	in-country				5	41250	5	41250	5	41250	165,000	A
16	5	Export and marketing	70	0.5	in-country				10	41250	15	61875	20	82500	288,750	A
17	5	Survey methods and statistical analysis	10	0.5	in-country								5	20625	41,250	A
18	5	livestock management	20	0.5	in-country				5	20625	5	20625	5	20625	82,500	A
19	6	storage technology	20	0.5	in-country				5	20625	5	20625	5	20625	82,500	A
20	4	Contemporary textile art, design and innovation	30	3	ex-country							1980000		1980000	3,960,000	B
21	5	Occupation Health and Safety hazards	20	0.25	in-country				10	20625	10	20625			41,250	A
22	5	Risk Management	20	0.25	in-country				10	20625	10	20625			41,250	C
23	5	Human Resource Management	10	0.25	in-country	5	20625				5	20625			41,250	A
24	5	Team Building and people Management	10	0.25	in-country	5	20625				5	20625			41,250	C
25	5	Leadership and change management	10	0.25	in-country	5	20625				5	20625			41,250	C
26	5	Achieving Sustainable competitive advantage	5	0.25	in-country								5	10312.5	10,313	C
27	5	Business Ethics	5	0.25	in-country								5	10312.5	10,313	C
28	5	Labour laws and employee relation	5	0.25	in-country								5	10312.5	10,313	C
29	5	TQM	5	0.25	in-country								5	10312.5	10,313	C
30	5	Marketing, creativity, innovation and change management	5	0.25	in-country										10,313	C
31	5	mechanization and technology change	5	0.25	in-country										10,313	C

Pre-service																	
SL	level	Broad field of Study	slots	Duration (months)	in-country/ex-country	Year 1 slot	Year 1 Budget	Year 2 slot	Year 2 Budget	Year 3 slot	Year 3 Budget	Year 4 slot	Year 4 Budget	Year 5 slot	Year 5 Budget	total budget	priority
1	4	Tshemzo(Tailoring)	50	24	in-country	25	600000	25	600000							12,000,000.00	A
2	4	Tshemdrü(Embroidery)	60	24	in-country	12	288000	12	288000	12	288000	12	288000	12	288000	14,400,000.00	A
3	4	Jimzo(Sculpture)	120	48	in-country	24	1152000	24	1152000	24	1152000	24	1152000	24	1152000	57,600,000.00	A
4	4	Shazo(wood turning & lacquering)	90	48	in-country	18	864000	18	864000	18	864000	18	864000	18	864000	43,200,000.00	A
5	4	Lhadri(Paintings)	210	48	in-country	42	2016000	42	2016000	42	2016000	42	2016000	42	2016000	100,800,000.00	A
6	4	Troezo(Silver/goldsmith)	140	48	in-country	28	1344000	28	1344000	28	1344000	28	1344000	28	1344000	67,200,000.00	A
7	4	Thazo(weaving/silk screaming)	60	48	in-country	12	576000	12	576000	12	576000	12	576000	12	576000	28,800,000.00	A
8	4	Patra(wood carving)	170	48	in-country	34	1632000	34	1632000	34	1632000	34	1632000	34	1632000	81,600,000.00	A
9	4	Slate casting	30	48	in-country	6	288000	6	288000	6	288000	6	288000	6	288000	14,400,000.00	A
10	4	New crafts (jewelry making, ceramics, etc).	150	12	in-country	30	360000	30	360000	30	360000	30	360000	30	360000	18,000,000.00	A
11	4	Furniture design and development	30	6				15	90000	15	90000					1,800,000.00	A
12	4	Agro based product development	50	6	in-country	10	60000	10	60000	10	60000	10	60000	10	60000	3,000,000.00	A
13	4	noodle making	50	3	in-country	15	45000	15	45000					20	60000	1,500,000.00	B
14	4	Green car technology and maintenance	10	6	ex-country			10	60000							600,000.00	B
15	4	Floriculture	10	6	ex-country			10	60000							600,000.00	B

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16	4	Bio-technology	50	6	ex- country	10	600000	10	600000	10	600000	10	600000	3,000,000.00	B
17	4	Organic Farming	50	6	ex- country	10	600000	10	600000	10	600000	10	600000	3,000,000.00	B
18	4	Commercial Farming	50	3	ex- country	10	300000	10	300000	10	300000	10	300000	1,500,000.00	B
19	4	Textile art and design technology and innovation	40	6	ex- country			20	1200000	20	1200000	20	1200000	2,400,000.00	B
20	4	Contemporary design and tailoring	40	6	ex- country			20	1200000	20	1200000	20	1200000	2,400,000.00	B

## Annexure 8

## Trading and Service Sector

In-service																	
SL	level	Broad field of Study	Slots	Duration (months)	in-country/ex-country	Year 1 slot	Year 1 Budget	Year 2 slot	Year 2 Budget	Year 3 slot	Year 3 Budget	Year 4 slot	Year 4 Budget	Year 5 slot	Year 5 Budget	total budget	priority
1	1	MBA	5	18	ex-country	1	1485000	1	1485000	1	1485000	1	1485000	1	1485000	7,425,000	A
2	1	M.Com (Business Management)	5	18	ex-country	1	1485000	1	1485000	1	1485000	1	1485000	1	1485000	7,425,000	B
3	1	Master in HRM	5	18	ex-country	1	1485000	1	1485000	1	1485000	1	1485000	1	1485000	7,425,000	B
4	1	Masters in ICT	5	18	ex-country	1	1485000	1	1485000	1	1485000	1	1485000	1	1485000	7,425,000	B
5	3	Diploma in business management	6	6	ex-country	2	990000	2	990000	2	990000			2	528000	2,508,000	B
6	4	Product design and development	10	1	ex-country	2	440000	2	440000	3	440000	3	440000	2	165000	1,485,000	A
7	5	Export and Import	10	1	ex-country					5	440000			5	220000	660,000	B
8	5	Cable operation management	5	1	ex-country	5	1650000									1,650,000	B
9	5	Consultancy operation and management	10	0.5	in-country	5	20625	5	20625	5	20625					41,250	B
10	5	Event Management	10	0.5	in-country	5	20625	5	20625	5	20625					41,250	B
11	5	Export promotion	10	0.5	in-country	10	41250									41,250	B
12	5	Cosmetology and Hair Care	10	3	ex-country					5	660000			5	660000	1,320,000	A
13	5	International Postal Services	20	0.5	ex-country					10	220000			10	220000	440,000	A

14	5	Pharmacy	10	1	in-country														82,500	B	
15	5	Health Care management	5	0.5	in-country														20,625	B	
16	5	Business Management and operation	5	0.5	in-country						5	20625							20,625	B	
17	5	Cooperative Management	5	0.25	in-country						5	10312.5							10,313	B	
18	5	Tailoring and costume design	5	1	in-country						5	41250							41,250	B	
19	5	Association management	10	0.5	in-country						5							20625	41,250	A	
20	5	Operation of Association	5	0.5	in-country						5	20625							20,625	A	
21	5	Commercial Accounting	30	0.5	in-country						15	330000						15	330000	660,000	B
22	5	E-Commerce	5	0.5	in-country													5	20625	20,625	B
23	5	Entrepreneurship	5	0.5	in-country													5	20625	20,625	B
24	5	Small Business Management	5	0.5	in-country													5	20625	20,625	A
25	5	Cottage Industry management	10	0.5	ex-country						2	33000						2	33000	165,000	A
26	5	Occupation Health and Safety hazards	20	0.25	in-country						10	20625							41,250	A	
27	5	Risk Management	20	0.25	in-country						10	20625							41,250	C	
28	5	Human Resource Management	10	0.25	in-country						5	20625							41,250	A	
29	5	Team Building and people Management	10	0.25	in-country						5	20625							41,	C	
30	5	Leadership and change management	10	0.25	in-country						5	20625							41,250	C	

31	5	Achieving Sustainable competitive advantage	5	0.25	in-country													5	10312.5				10,313	C	
32	5	Business Ethics	5	0.25	in-country													5	10312.5				10,313	C	
33	5	Labour laws and employee relation	5	0.25	in-country													5	10312.5				10,313	C	
34	5	TQM	5	0.25	in-country													5	10312.5				10,313	C	
35	5	Marketing, creativity, innovation and change management	5	0.25	in-country															5	10312.5		10,313	C	
36	5	mechanization and technology change	5	0.25	in-country															5	10312.5		10,313	C	
<b>Pre-service</b>																									
SL	level	Broad field of Study	Slots	Duration (months)	in-country/ex-country	Year 1 slot	Year 1 Budget	Year 2 slot	Year 2 Budget	Year 3 slot	Year 3 Budget	Year 4 slot	Year 4 Budget	Year 5 slot	Year 5 Budget	total budget	priority								
1	2	B.com	35	36	in-country	5	1800000	5	1800000	5	1800000	10	3600000	10	3600000	12,600,000	A								
2	2	BBM	35	36	in-country	5	1800000	5	1800000	5	1800000	10	3600000	10	3600000	12,600,000	A								
3	4	Entrepreneurship	700	6	in-country	50	3000000	100	6000000	150	9000000	200	12000000	200	12000000	42,000,000	A								
4	4	Generic Skills Development	850	6	in-country	100	6000000	150	9000000	200	12000000	200	12000000	200	12000000	51,000,000	A								
5	4	Hair and Beauty	185	3	in-country	30	900000	30	900000	35	1050000	40	1200000	50	1500000	5,550,000	A								
6	4	Furniture	75	12	in-country	15	1800000	15	1800000	15	1800000	15	1800000	15	1800000	9,000,000	A								
7	5	Printing and Media	150	6	in-country	30	1800000	30	1800000	30	1800000	30	1800000	30	1800000	9,000,000	A								
8	4	Automobile	839	12	in-country	138	16560000	151	18120000	166	19920000	183	21960000	201	24120000	100,680,000	A								
9	4	Tailoring and Dress making	185	12	in-country	30	3600000	35	4200000	40	4800000	40	4800000	40	4800000	22,200,000	A								

## Annexure 9

## Tourism and Hospitality Sector

In-service																	
SL	level	Broad field of Study	Slots	Duration (months)	in-country/ex-country	Year 1 slot	Year 1 Budget	Year 2 slot	Year 2 Budget	Year 3 slot	Year 3 Budget	Year 4 slot	Year 4 Budget	Year 5 slot	Year 5 Budget	total budget	priority
1	1	MBA	5	18	ex-country	1	1485000	1	1485000	1	1485000	1	1485000	1	1485000	7,425,000	B
2	1	Masters in Eco Tourism	4	18	ex-country			1	1485000	1	1485000	1	1485000	1	1485000	5,940,000	A
3	1	Master in Hospitality and Management	3	18	ex-country					1	1485000	1	1485000	1	1485000	4,455,000	A
4	1	Masters in HRM	5	18	ex-country	1	1485000	1	1485000	1	1485000	1	1485000	1	1485000	7,425,000	A
5	1	Masters in Community Tourism	4	18	ex-country			1	1485000	1	1485000	1	1485000	1	1485000	5,940,000	A
6	3	Diploma in Hospitality Management	4	12		1	990000	1	990000	0	0	1	990000	1	528000	3,498,000	A
7	3	Diploma in Tourism Management	5	12	ex-country	1	990000	1	990000	1	990000	1		1	528000	3,498,000	B
8	5	Tours and Travel Management	8	1	ex-country			2	264000	2	264000	2	264000	2	264000	1,056,000	A
9	5	Eco Tourism	10	0.5	in-country					5	220000			5	110000	330,000	B
10	5	Community Tourism	5	0.5	in-country			5	20625							20,625	B
11	5	Bird Watching	10	0.5	in-country			5	20625	5	20625					41,250	B
12	5	Event Management	10	0.5	in-country			5	20625	5	20625					41,250	B
13	5	Tourism Promotion	10	0.5	in-country			10	41250							41,250	B
14	5	Air Ticketing and travel management	10	0.5	in-country					5	20625			5	20625	41,250	A



15	5	Resort management and operation	20	0.5	in-country				10	41250		10	41250	82,500	A
16	5	Food and beverage management	10	1	in-country		10	82500						82,500	B
17	5	Food Production	5	1	in-country		5	41250						41,250	B
18	5	Business Management and operation	5	0.5	in-country				5	20625				20,625	B
19	5	Cooperative Management	5	0.25	in-country				5	10312.5				10,313	B
20	5	Commercial Accounting	30	0.5	in-country				15	330000		15	330000	660,000	B
21	5	E-Commerce	5	0.5	in-country						5	20625		20,625	B
22	5	Occupation Health and Safety hazards	20	0.25	in-country		10	20625	10	20625				41,250	A
23	5	Risk Management	20	0.25	in-country		10	20625	10	20625				41,250	C
24	5	Human Resource Management	10	0.25	in-country	5	20625		5	20625				41,250	A
25	5	Team Building and people Management	10	0.25	in-country	5	20625		5	20625				41,250	C
26	5	Leadership and change management	10	0.25	in-country	5	20625		5	20625				41,250	C
27	5	Achieving Sustainable competitive advantage	5	0.25	in-country						5	10312.5		10,313	C
28	5	Business Ethics	5	0.25	in-country						5	10312.5		10,313	C
29	5	Labour laws and employee relation	5	0.25	in-country						5	10312.5		10,313	C
30	5	TQM	5	0.25	in-country						5	10312.5		10,313	C

31	5	Marketing, creativity, innovation and change management	5	0.25	in-country													5	10312.5	10,313	C
32	5	mechanization and technology change	5	0.25	in-country													5	10312.5	10,313	C
<b>Pre-service</b>																					
<b>SL</b>	<b>level</b>	<b>Broad field of Study</b>	<b>slots</b>	<b>Duration (months)</b>	<b>in-country/ex-country</b>	<b>Year 1 slot</b>	<b>Year 1 Budget</b>	<b>Year 2 slot</b>	<b>Year 2 Budget</b>	<b>Year 3 slot</b>	<b>Year 3 Budget</b>	<b>Year 4 slot</b>	<b>Year 4 Budget</b>	<b>Year 5 slot</b>	<b>Year 5 Budget</b>	<b>total budget</b>	<b>priority</b>				
1	2	B. Hospitality and Tourism Mgn.	29	36	in-country	5	1800000	5	1800000	5	1800000	7	2520000	7	2520000	10,440,000	A				
2	2	BBM	25	36	in-country	5	1800000	5	1800000	5	1800000	5	1800000	5	1800000	9,000,000	A				
3	3	Diploma in Hotel Management	600	24	in-country	100	24000000	100	24000000	100	24000000	150	36000000	150	36000000	144,000,000	A				
4	4	Cooking	700	6	in-country	50	3000000	100	6000000	150	9000000	200	12000000	200	12000000	42,000,000	A				
5	4	Front Desk and Hotel Opration	195	6	in-country	30	1800000	35	2100000	40	2400000	40	2400000	50	3000000	11,700,000	A				
6	4	Food and Beverage	195	6	in-country	30	1800000	35	2100000	40	2400000	40	2400000	50	3000000	11,700,000	A				
7	4	Housekeeping	250	6	in-country	50	3000000	50	3000000	50	3000000	50	3000000	50	3000000	15,000,000	A				
8	4	Bakery	135	7	in-country	20	1200000	25	1500000	30	1800000	30	1800000	30	1800000	8,100,000	A				
9	4	Tour Operation	140	8	in-country	21	1260000	26	1560000	31	1860000	31	1860000	31	1860000	8,400,000	A				
10	4	Spa and Therapy	145	6	in-country	22	1320000	27	1620000	32	1920000	32	1920000	32	1920000	8,700,000	B				
11	4	Guide Training	245	6	in-country	40	2400000	45	2700000	50	3000000	50	3000000	60	3600000	14,700,000	A				

## Annexure 10

## Finance Sector

In-service																	
SL	level	Broad field of Study	Slots	Duration (months)	in-country/ ex-country	Year 1 slot	Year 1 Budget	Year 2 slot	Year 2 Budget	Year 3 slot	Year 3 Budget	Year 4 slot	Year 4 Budget	Year 5 slot	Year 5 Budget	total budget	priority
1	1	MBA	6	18	ex-country	1	1485000	1	1485000	1	1485000	1	1485000	2	2970000	8,910,000	B
2	1	Master in Economics	5	24	ex-country			1	1980000	1	1980000			2	3960000	9,900,000	A
3	1	Masters in Actuarial Science	3	24	ex-country					1	1980000	1	1980000	1	1980000	5,940,000	A
4	1	Masters in Banking and Finance/Accounting	5	18	ex-country	1	1485000	1	1485000	1	1485000	1	1485000	1	1485000	7,425,000	A
5	1	Masters in HRM	3	18	ex-country			1	1485000	1	1485000					4,455,000	A
6	4	Chartered Accountancy	4	12		1	990000	1	990000	0	0	1	990000	1	528000	3,498,000	A
7	3	Diploma in Banking and Finance	5	12	ex-country	1	990000	1	990000	1	990000			1	528000	3,498,000	B
8	5	Designing Micro Finance for young Entrepreneurs	8	0.5	ex-country	2	132000	1	132000	2	132000	1	132000	2	132000	660,000	A
9	5	Financing new businesses	8	0.5	ex-country	2	132000	1	132000	2	132000	1	132000	2	132000	528,000	A
10	5	Instituting Micro work payment	8	0.5	ex-country	2	132000	1	4125	2	132000	1	132000	2	132000	532,125	A
11	5	Developing new credit schemes	8	0.5	ex-country	2	132000	1	4125	2	8250	1	132000	2	132000	408,375	A
12	5	Corporate Social Responsibility	8	0.5	ex-country	2	132000	1	4125	2	8250	1	132000	2	132000	408,375	A
13	5	Rural Credit Operation and schemes	8	0.5	ex-country	2	132000	1	4125	2	8250	1	132000	2	132000	408,375	A

14	5	Business Proposal evaluation and monitoring	8	0.5	ex-country	2	132000	1	4125	2	8250	1	132000	2	132000	408,375	B
15	5	Business Management and operation	5	0.5	in-country					5	20625					20,625	B
16	5	Cooperative Management	5	0.25	in-country					5	10312.5					10,313	B
17	5	E-Commerce and Banking	5	0.5	in-country							5	20625			20,625	B
18	5	Occupation Health and Safety hazards	20	0.25	in-country			10	20625	10	20625					41,250	A
19	5	Risk Management	20	0.25	in-country			10	20625	10	20625					41,250	C
20	5	Human Resource Management	10	0.25	in-country					5	20625					41,250	A
21	5	Team Building and people Management	10	0.25	in-country					5	20625					41,250	C
22	5	Leadership and change management	10	0.25	in-country					5	20625					41,250	C
23	5	Achieving Sustainable competitive advantage	5	0.25	in-country							5	10312.5			10,313	C
24	5	Business Ethics	5	0.25	in-country							5	10312.5			10,313	C
25	5	Labour laws and employee relation	5	0.25	in-country							5	10312.5			10,313	C
26	5	TQM	5	0.25	in-country							5	10312.5			10,313	C
27	5	Marketing, creativity, innovation and change management	5	0.25	in-country									5	10312.5	10,313	C
28	5	mechanization and technology change	5	0.25	in-country									5	10312.5	10,313	C
<b>Pre-service</b>																	

SL	level	Broad field of Study	slots	Duration (months)	in-country/ ex-country	Year 1 slot	Year 1 Budget	Year 2 slot	Year 2 Budget	Year 3 slot	Year 3 Budget	Year 4 slot	Year 4 Budget	Year 5 slot	Year 5 Budget	total budget	priority
1	2	B.Com	25	36	in-country	5	1800000	5	1800000	5	1800000	5	1800000	5	1800000	9,000,000	A
2	2	BBM	25	36	in-country	5	1800000	5	1800000	5	1800000	5	1800000	5	1800000	9,000,000	A
3	2	B.Accountancy	25	36	in-country	5	1800000	5	1800000	5	1800000	5	1800000	5	1800000	9,000,000	A
4	2	Chartered Accountant	10	48	ex-country	2	960000	2	960000	2	960000	2	960000	2	960000	4,800,000	A
5	2	B. Economic	10	36	in-country	2	720000	2	720000	2	720000	2	720000	2	720000	3,600,000	A
6	4	Accounts	150	6	in-country	30	1800000	30	1800000	30	1800000	30	1800000	30	1800000	9,000,000	A
7	3	DFM	50	12	in-country	10	1200000	10	1200000	10	1200000	10	1200000	10	1200000	6,000,000	A

## Annexure 11

### Pro Forma costing

A	External Long- Term Fellowship Cost	Cost ( in USD)
	<b>Region/Countries</b>	
1	USA, Europe, Australia, Singapore, Japan	2900 per month
2	South East Asia (Region)	1500 Per month
3	Sub Region- India, Nepal, Bangladesh, Pakistan, Myanmar	800 per month
B	External Fellowship of duration 1 month and less period( DSA)	
B1	<b>USA, Europe, Australia, Singapore, Japan</b>	
	Training Course of One month	13,500
	Training Course of 3 weeks	11,500
	Training Course of 2 weeks	9,500
	Training Course of 1 week	7,500
B2	<b>South East Asia (Region)</b>	
	Training Course of One month	10, 500
	Training Course of 3 weeks	8,500
	Training Course of 2 weeks	7,500
	Training Course of 1 week	5,500
B3	<b>Sub Region- India, Nepal, Bangladesh, Pakistan, Myanmar</b>	
	Training Course of One month	6,000
	Training Course of 3 weeks	5,000
	Training Course of 2 weeks	4,000
	Training Course of 1 week	3,000
C	<b>In - Country Training/ workshop/ Seminar</b>	
1	One month ( 30 Days)	600
2	3 weeks	450
3	2 weeks	300
4	1 week	150
D	<b>Certificate level training</b>	
	One month (In-country and ex-country)	200

## Annexure 12

### Description for Level of Training and training priority

Code	level of training
1	Masters and post-graduates
2	Under-graduate program
3	Diploma program
4	Certificate level training
5	short-term training

Priority Level	Description
A	Critical
B	Important
C	Moderate

## Annexure 13

### List of Registered TVET providers with Department of Occupational Standard

SN	Name of Training Provider	Location	Grade	Sector
1	Computer Management Institute	P/ling	B	Private
2	Royal Institute of Health Sciences	Thimphu	B	Govt.
3	Rigsum Institute of Information Technology & Management	Thimphu	B	Private
4	Institute for Management Studies	Thimphu	B	Private
5	Agriculture Machinery Centre	Paro	B	Govt.
6	Choki Traditional Art School	Thimphu	B	Private
7	Rural Development Training Centre	Zhemgang	B	Govt.
8	TTI- Samthang	Wangdue	B	Govt.
9	TTI- Chumey	Bumthang	B	Govt.
10	TTI-Thimphu	Thimphu	B	Govt.
11	TTI- Khuruthang	Punakha	B	Govt.
12	Athang Training Academy	Thimphu	B	Private

11<sup>th</sup> FYP HRD MASTER PLAN FOR THE ECONOMIC SECTORS (2013-18)

13	Bhutan International School of Hospitality & Tourism	Thimphu	B	Private
14	BK ONE Bhutan Center of Excellence	Thimphu	B	Private
15	GPY Computer Training Institute	P/ling	B	Private
16	Gangjung Driving Centre of Excellence	Thimphu	B	Private
17	Royal Institute for Tourism and Hospitality	Thimphu	B	Govt.
18	Bhutan Media and Communication Institute	Thimphu	B	Private
19	Bhutan School of Management and Technology	Thimphu	B	Private
20	TTI- Rangjung	Tashigang	C	Govt.
21	IZC- Trashi Yangtse	Trashiyangtse	C	Govt.
22	Bright Life Institute of Management	Thimphu	C	Private
23	IZC-Thimphu	Thimphu	C	Govt.
24	AA-Yang Music School	Thimphu	C	Private
25	G4S Security Service International	Thimphu	C	Private
26	TTI- Serzhong	Gelephu	C	Govt.
27	Nazhoen Pelri Skills Training Centre	Punakha	C	NGO
28	Dzongkha Development Training Institute	Thimphu	C	Private
29	Dzongkha Language Institute	Thimphu	C	Private
30	Kuenzang Institute of Information Technology	Gelephu	C	Private
31	Bhutan Institute of Media	Thimphu	C	Private
32	Kesang Driving School	Thimphu	C	Private
33	ST IT Institute	Tsirang	C	Private
34	Digital Shangri-la	Thimphu	C	Private
35	Dechen IT and Management Institute	Thimphu	C	Private
36	InfoTech learning Centre	Thimphu	C	Private
37	KheyRig Institute of Accounts & Management	Thimphu	C	Private
38	Nyinshar Computer Learning Centre	P/ling	C	Private
39	Tenzin's Hair & Beauty Academy	Thimphu	C	Private
40	Final Touch Multimedia Institute	Thimphu	C	Private
41	Tashi Lekphel Computer Training Institute	Wangdue	C	Private
42	Himalayan Institute of Information Technology	Gelephu	C	Private
43	Wood Craft Centre	Thimphu	C	Corp.
44	USD Driving School	P/ling	C	Private
45	USD Driving School	Gelephu	C	Private



46	Kuenphen Institute of Technology	Thimphu	C	Private
47	Link2 Support 168	Paro	C	Private
48	Jampel Computer & Management Training Institute	HAA	C	Private
49	Green Dragon Media Academy	Thimphu	C	Private
50	Rimpung Computer Training Centre	Paro	C	Private
51	Bhutan Center for Japanese Studies	Thimphu	C	Private
52	Rigsum Institute of IT and Management	P/ling	C	Private
53	Global Computer Training Center	Wangdue	C	Private
54	NorChuk Institute of Technology	Samtse	C	Private
55	Computer Management Institute	Thimphu	C	Private
56	Ghadyen Driving Training Institute	Wangdue	C	Private
57	Ugyen Wangchuck Institute for Conservation & Environment	Bumthang	C	Govt.
58	Druk Info Tech Institute	Mongar	C	Private
59	Eastern Computer Training Centre	S/Jongkhar	C	Private
60	Karma Driving Training Institute	Gedu, Chukha	C	Private
61	Guide Association of Bhutan	Thimphu	C	NGO
62	Niche Institute of Management & Technology	Thimphu	C	Private
63	Institute of Technology & Computer Education	Thimphu	C	Private
64	USD Driving Institute	Thimphu	C	Private
65	Gangjung Driving Center of Excellence	Paro	C	Private
66	High Land Driving Institute of Excellence	Mongar	C	Private
67	Central Maintenance and Training Division	Thimphu	C	Corpo-ration
68	Dzongkha Learning Centre	Thimphu	C	Private
69	Kuendhen Driving Training Institute	Nanglam	C	Private
70	Rewang Driving School	Paro	C	Private
71	Kuenchap Driving Training Institute	HAA	C	Private
72	Dewa Spa & Wellness Center	Thimphu	C	Private
73	Sherig Driving Training Institute	Samtse	C	Private
74	National Language and Rigzhung Institute	Paro	C	Private
75	Manju Shiri Institute of International Language and Cultural Studies	Thimphu	C	Private
76	Karma Driving Training Institute	Thimphu	C	Private
77	Jampel Dzongkha Dissemination Training Centre	Haa	C	Private

78	Thimphu Techpark Pvt.Ltd.	Thimphu	C	Partner-ship
79	Druk Driving Training Institute	Tsirang	C	Private
80	Shacho Driving Training Institute	P/Ling	C	Private

## Annexure 14

### List of tertiary Educational institutions in the country

Name of Tertiary College/ Institution	Location	Programs Offered (current and future)
College of Natural Resources	Punakha , Lobesa	<b>Current</b>
		B.Sc. ( Agriculture)
		B.Sc. (Forestry)
		B.Sc. (Animal Science)
		Diploma ( Agriculture)
		Diploma ( forestry)
		Diploma ( Animal Husbandry)
		<b>Future</b>
		B.Sc. ( Rural Development )
		B.Sc. ( Environmental Studies)
M.Sc.		
College of Science and Technology	Chhukha	<b>Current</b>
		B.E ( Civil)
		B.E ( Electrical)
		B.E ( Electronics and Communication)
		<b>Future</b>
		B.E ( IT)
		B.E ( Architecture)
M.E ( Hydropower)		
Gadue College of Business Studies	Chhukha	<b>Current</b>
		BBA
		B.Com
		<b>Future</b>
		Diploma in Banking and Finance
		Legal Studies
MBA		

Institute of Language and Culture Studies	Trongsa	<b>Current</b>
		BA ( Dzongkha Language and Culture)
		Class XI and XII ( Dzongkha)
		<b>Future</b>
		Diploma ( Dzongkha Creative Writing)
		Diploma ( Translation)
		Diploma ( Visual Communications)
		BA ( Bhutanese and Himalayan Studies)
		BA ( Bhutanese Language and Literature)
		MA ( Bhutanese Language and Culture)
		MA ( Bhutanese Language and Literature)
		MA ( Bhutanese and Himalayan Studies)
		MA ( Buddhist Studies)
		PhD
Jigme Namgyel Polytechnic	Samdrup Jongkhar	<b>Current</b>
		Diploma ( Civil Engineering)
		Diploma (Electrical Engineering)
		Diploma (Mechanical Engineering)
		<b>Future</b>
		B.E ( Mechanical)
		B.E ( Surveying)
		Diploma ( IT)
		Diploma ( Surveying)
		Diploma ( ECE)
National Institute of Traditional Medicine	Thimphu	<b>Current</b>
		B.Sc. (Traditional Medicine)
		Diploma ( Traditional Medicine)
		<b>Future</b>
		M.Sc. (Traditional Medicine)
		Develop Short Courses in English

Paro College Of Education	Paro	<b>Current</b>
		M.Ed. ( School Management and Leadership)
		B.Ed. ( Primary Education)
		B.Ed. ( Secondary Education)
		B.Ed. ( Dzongkha)
		PGDE ( Dzongkha)
		Diploma (Leadership and Management )
		<b>Future</b>
		M.Ed. ( Primary Curriculum )
		M.Ed. ( Dzongkha )
		Diploma ( Early Childhood Education)
		Diploma ( Coaching and Sports Administration )
		PGDE ( Special Education)
		MEd ( Special Education)
PhD ( Education)		
Royal Institute of Health Science	Thimphu	<b>Current</b>
		B.Sc. ( Public Health )
		Diploma ( General Nursing and Midwifery)
		<b>Future</b>
		B.Sc. ( Nursing)
Samtse College of Education	Samtse	<b>Current</b>
		PGDE in Education
		B.Ed. ( Primary Education)
		B.Ed. ( Secondary Education)
		<b>Future</b>
		PGDE ( School Guidance and Counseling)
		Diploma ( Laboratory management)
		Diploma ( Library Management )
		PGD ( Higher Education)
		MEd ( Science)
		MEd ( English)
Med ( Maths)		

Sherubtse college	Tashigang	<b>Current</b>
		B.Sc. (Computer Science)
		B.Sc. ( Physical Science)
		B.Sc. ( Life Science)
		BA ( Dzongkha and English)
		BA ( Dzongkha and Geography)
		BA ( English and Geography)
		BA ( English and Environmental Science)
		BA ( Economics and Geography)
		BA ( Economics and Environmental Science)
		BA ( Economics and Sociology )
		BA ( Political Science and History)
		BA ( History and Dzongkha)
		BA ( Political Science and Sociology)
		PG Diploma ( English)
		<b>Future</b>
		BA ( Population Studies and Economics )
		BA ( Population Studies and Sociology)
		PG Diploma ( Mathematics)
		MA ( English)
MA ( Economics )		
M.Sc. ( Mathematics)		
Certificate Gross National Happiness ( tailor made)		
BA ( Creative Media and Communication Studies)		
Royal Thimphu College	Thimphu	<b>Current</b>
		BCA
		BBA
		B.Com
		BA ( English and Dzongkha)
		BA ( English and Economics)
		BA ( Environmental Studies and English)
		BA ( Environmental Science and Economics)
		BA ( Sociology and Political Science )
Royal Institute Of Management	Thimphu	<b>Current</b>
		PGDFM
		DIMS
		DFM
		PGDPA
		Masters in Public Administration
		other development and management programs

## Annexure 15

### Foreign workers assessment as of December 2012

SN	Occupations/ Trades	No of foreign workers	Sector	Level of skill
1	Concrete Worker	19760	Construction	technical graduates
2	Mason	8795	Construction	technical graduates
3	Carpenter	4002	Construction	technical graduates
4	Welder	3041	Construction	technical graduates
5	Process Worker	1511	Construction	technical graduates
6	Rod Binder	1419	Construction	technical graduates
7	Helper	1279	Construction	non-skilled
8	Rigger	1062	Construction	technical graduates
9	Electrician (diploma)	1037	construction and power	technical graduates
10	Driller	773	Construction	technical graduates
11	Lecturer, instructor or teacher	746	Education	graduates
12	Plumber	707	Construction	technical graduates
13	Civil Engineer	606	construction and power	graduates
14	Mechanical (Fitter, Foremen, manager, supervisor)	577	construction and power	graduates
15	Mine Worker	538	Production	technical graduates
16	Driver (bus, dumper, LMV, tripper, truck etc)	486	Service	technical graduates
17	Mechanic and technician	466	Service	technical graduates
18	Heavy Machine operator	393	Construction	technical graduates
19	Site Supervisor/foreman	375	Construction	technical graduates
20	Packer	212	Production	semi-skilled
21	Chef/cook	149	Hospitality	technical graduates
22	Painter	145	Construction	technical graduates
23	Transit Mixer Operator	136	Construction	technical graduates
24	Sheet Metal Worker	135	Construction	technical graduates
25	Sewer man	126	Service	technical graduates
26	Heavy Vehicle Driver	121	Service	technical graduates
27	Blaster	113	Construction	technical graduates
28	Gas Welder	113	Construction	technical graduates
29	Wireman	107	Power	technical graduates
30	Account Officer/ Finance Manager/ Finance Advisor	94	General	graduates
31	other trades/occupations	3388	General	mixed
	<b>Total</b>	<b>52412</b>		

## Annexure 16

### List of Stakeholders met/consulted

1. Phub Tshering, Secretary General, BCCI
2. Chime Dorji, Head, Personnel and Administration Division, BCCI
3. BB Chetri, Secretary General, Association of Bhutanese Industries
4. Kiran, Secretary General, ICT Association of Bhutan
5. Pema Dendup, Athang Training Academy
6. Moinara, Chief Information Officer, Media Department, MoIC
7. Yeshey Tshogay, CEO, iTechnologies
8. Jigme Tenzin, Head Application Division, DIT
9. Kinley Wangchuk, Director, Media Department, MoIC
10. Rinzin Namgay, Secretary General, Construction Association of Bhutan
11. Phala Dorji, Director General, Construction Development Board
12. Kinzang Wangdi, Specialist, Department of Roads, MoWHS
13. Officiating Director, Department of Engineering Services, MoWHS
14. Sonam Wangdi, CEO, Bhutan Builders
15. Phuntsho Wangdi, Director General, Bhutan Standards Bureau
16. Kuenga Tshering, Director General, Bhutan Statistical Bureau
17. Tshewang Tandin, Director General, Adult and Higher Education, Ministry of Education
18. Babu Ram, Chief Scholarship Officer, Adult and Higher Education, Ministry of Education
19. Karma Choden, Program Officer, ECCD, Department of School Education, Ministry of Education
20. Yangka, Director, Academic Affairs, Royal University of Bhutan
21. Gajel Lhendup, Registrar, Royal University of Bhutan
22. Kinley Rinchen, Planning, Officer, Royal University of Bhutan
23. Karma Chopel, Mining Engineer, Head, Mines Information Division, DGM, MOEA
24. Nar Bahadur Chetri, CEO, Kala Chakra Consultancy
25. Ugyen Penjore, Director of Cottage and Small Industries
26. Kinzang, Program Officer, Department of Cottage and Small Industries
27. Loknath Chapagai, Specialist, Department of Industries
28. Administration and Finance Manager, Bhutan Agro Products, Wangchutaba
29. Dhanraj Subba, Trade Officer, Department of Trade
30. Karma Letho, MD, Bhutan Hyundai
31. Ugyen Dorji, Proprietar, Yankey Workshop
32. Pushpa Lal Chetri, Deputy Governor, RMA
33. Sonam Tshering, General Manager, Bank of Bhutan
34. Kinzang, General Secretary, Accounting and Auditing Standards Board of Bhutan Secretariat, Ministry

of Finance

35. Namgay Wangchuk Senior HRO, HRD Division, RCSC
36. Thuji Nadik, Acting Director General, Tourism Council of Bhutan
37. Kunzang Dechen, Managing Director, Wood Craft Centre, Bhutan
38. Tashi Tshering, CEO, Tashi InfoCom
39. Lam Kezang, Executive Director, Agency for Promotion of Indigenous Crafts
40. Tshewan Choden, Principal, Druk School
41. Choki Tobgay, Principal, Dr. Tobgayl School
42. Deki Choden, Principal, The Early Learning Centre
43. Thinley Namgyal, Head, Perspective Planning Division, GHNC
44. Director, Royal Institute of Management
45. Director, Department of Revenue and Custom, MoF