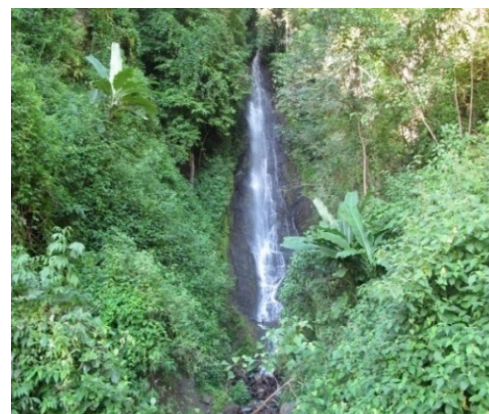


Support to Chin State's Comprehensive 5-year Development Plan and Annual Planning 2016-2021

With Local Social Plan



October 2014

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A note on Myanmar Language Transliterations into English

Please note there is no standardization of transliterating Myanmar language into English, thus place names etc. may be spelt in many different ways. For the purposes of this document, place names are standardised where possible.

Document Series

This document is part of a series of documents, including:

1. Support to Chin State Comprehensive 5-year Development Plan 2016-2021 and Annual Planning with Local Social Plan
2. Support to Chin State Comprehensive 5-year Development Plan 2016-2021 and Annual Planning with Local Social Plan – Volume 2: Development Proposals
3. Local Social Plan for Chin State – A policy document supporting Chin State’s Comprehensive 5-year Development Plan and Annual Planning 2016-2021
4. Local Social Plan for Chin State – A policy document supporting Chin State’s Comprehensive 5-year Development Plan and Annual Planning 2016-2021 – Volume 2: Development Proposals

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TABLE OF CONTENTS

ABBREVIATIONS	V
MAP OF CHIN STATE	VI
EXECUTIVE SUMMARY	1
STRATEGIC CONTEXT	1
CHIN STATE LOCAL SOCIAL PLAN AND SUPPORT TO THE COMPREHENSIVE DEVELOPMENT PLAN	2
PLANNING APPROACH AND METHODOLOGY	2
PLAN COMPONENTS	3
1 INTRODUCTION	10
1.1 METHODOLOGY AND THEMES	10
1.2 DELIVERABLES	11
2. BACKGROUND	12
2.1 CHIN STATE’S HISTORY THROUGH TO THE RATIFICATION OF THE CEASEFIRE AGREEMENT	12
3. CHIN STATE TODAY	13
3.1 GEOGRAPHY AND POPULATION	13
3.2 CLIMATE	14
3.3 LAND UTILIZATION	15
3.4 AGRICULTURAL PRODUCTION	16
3.5 INFRASTRUCTURE AND COMMUNICATIONS	20
3.6 SOCIAL INDICATORS	21
3.7 ADMINISTRATIVE STRUCTURE	22
4. MYANMAR’S PLANNING PROCESS AS IT AFFECTS CHIN STATE	23
4.1 NATIONAL PLANNING DIRECTIVES	23
5. THE PLAN	25
5.1 THE PLANNING PROCESS	25
5.2 CORE PROBLEMS FACING CHIN STATE	28
5.3 DEVELOPMENT VISION	31
5.4 COMPREHENSIVE DEVELOPMENT PLAN AND LOCAL SOCIAL PLAN COMPONENTS	32
5.5 PROJECT PROPOSALS: IDENTIFYING SOCIAL NEEDS AND CONTRIBUTIONS TO THE LSP	36
5.6 EXPECTED OUTCOMES: IMPLEMENTATION OF THE LSP PROGRAM INITIATIVES	39
PART B – SECTOR REVISION	40
AGRICULTURE/NATURAL RESOURCES	40

1. AGRICULTURE: ISSUES AND OPPORTUNITIES	40
1.1 ADDRESSING SHIFTING CULTIVATION	40
1.2 ADDRESSING CLIMATE CHANGE IN AGRICULTURE	41
1.3 IMPROVING AGRICULTURAL OUTPUT	41
1.4 LAND USE AND LAND OWNERSHIP	42
1.5 AGRICULTURAL TECHNOLOGY AND CAPACITY BUILDING	42
1.6 STRATEGY FOR AGRICULTURE	42
1.7 AGRICULTURAL PROJECTS	43
2. LIVESTOCK: ISSUES AND OPPORTUNITIES	44
2.1. THE STRATEGY FOR LIVESTOCK PRODUCTION	44
2.2 LIVESTOCK PROJECTS	44
3. FISHERIES: ISSUES AND OPPORTUNITIES	45
3.1 THE STRATEGY FOR FISH PRODUCTION	45
3.2 FISHERIES PROJECTS	45
4. FORESTRY: ISSUES AND OPPORTUNITIES	45
4.1 THE STRATEGY FOR FORESTRY	46
4.2 PROJECTS FOR FORESTRY	46
SMALL AND MEDIUM ENTERPRISES; TECHNICAL VOCATIONAL EDUCATION AND TRAINING	47
5. SMALL AND MEDIUM ENTERPRISES (SMEs): ISSUES AND OPPORTUNITIES	47
5.1 CREATING A BUSINESS-FRIENDLY ENVIRONMENT	48
5.2 OTHER CHALLENGES TO DOING BUSINESS	48
5.3 DEVELOPING MARKET INFORMATION	49
5.4 STRATEGY FOR EXPANSION OF SMALL AND MEDIUM INDUSTRIES	49
5.5 PROJECTS FOR SMES	50
6. TECHNICAL VOCATIONAL EDUCATION AND TRAINING (TVET): ISSUES AND OPPORTUNITIES	50
6.1 STRATEGY FOR TVET	50
6.2 PROJECTS FOR TVET	51
INFRASTRUCTURE	52
7. PHYSICAL INFRASTRUCTURE: ISSUES AND OPPORTUNITIES	52
7.1 FINDINGS OF FIELD RESEARCH ON INFRASTRUCTURE	52
7.2 STRATEGY FOR ROAD CONSTRUCTION AND MAINTENANCE	60
7.3. PROJECT PROPOSALS FOR ROADS	60
8. AIR TRANSPORT IN CHIN STATE: ISSUES AND OPPORTUNITIES	61
8.1 STRATEGY FOR AIR TRANSPORT	62

8.2	PROJECT PROPOSALS FOR AIR LINKAGES IN CHIN STATE	62
9.	ELECTRICITY: ISSUES AND OPPORTUNITIES	62
9.1	CASE STUDY: POWER SUPPLY TO HAKHA CITY	62
9.2	RENEWABLE ENERGY	63
10.	WATER SUPPLY: ISSUES AND OPPORTUNITIES	64
10.1	CASE STUDY HAKA CITY	64
10.2	RURAL WATER SUPPLY	65
10.3	STRATEGY FOR CHIN STATE’S WATER SUPPLY	66
10.4	IRRIGATION	67
11.	TOURISM: ISSUES AND OPPORTUNITIES	67
12.1	STRATEGY FOR TOURISM DEVELOPMENT	68
12.2	PROJECT PROPOSALS FOR ECOTOURISM	68
13.	INSTITUTIONAL DEVELOPMENT: ISSUES AND OPPORTUNITIES	69
13.1	CAPACITY BUILDING	70
13.2	PROJECT PROPOSALS FOR INSTITUTIONAL DEVELOPMENT AND CAPACITY BUILDING	70
PART C -	OVERALL DEVELOPMENT STRATEGY AND IMPLEMENTATION RECOMMENDATIONS	71
1.	A PEOPLE-CENTERED APPROACH FOR SOCIOECONOMIC DEVELOPMENT	71
1.1	IMPROVING CHILDHOOD NUTRITION	72
1.2	A RESOURCE BASED APPROACH TO DEVELOPMENT PLANNING IN CHIN STATE	72
1.3	COMBINING A <i>PEOPLE CENTERED APPROACH</i> AND A <i>RESOURCE BASED APPROACH</i> TO DEVELOPMENT PLANNING	73
1.4	INCREASING AGRICULTURAL PRODUCTION TO ADDRESS FOOD SECURITY, CHILD STUNTING, POVERTY, HEALTH AND ECONOMIC GROWTH	74
1.5	THE ROLE OF LIVESTOCK – ESSENTIALLY A CASH “CROP” AND A SAFETY NET	75
1.6	LINKING GENDER AND THE EMPOWERMENT OF WOMEN TO THE DEVELOPMENT PROCESS	76
1.7	THE ROLE OF SMES WITHIN THIS PLANNING FRAMEWORK	76
1.8	THE ROLE FOR ECO-TOURISM WITHIN THE PLANNING FRAMEWORK	76
1.9	THE ROLE OF INFRASTRUCTURE WITHIN THE PLANNING FRAMEWORK	76
2.	MOBILIZING OF RESOURCES: EXISTING OPPORTUNITIES	77
3.	CONCLUSION	78
ANNEXES		79

List of Figures

Figure 1	Map of Chin State	VI
Figure 2	Monthly High and Low Temperatures	15
Figure 3	Monthly rainfall and days of rain	15
Figure 4	Breakdown of land use across Chin State, by land use type	15
Figure 5	Type of Agriculture in Sown Area	16
Figure 6	Proportion of each crop produced	17
Figure 7	Food Sufficient Status of Townships in Chin State	19
Figure 8	Chin State Budget 2014-2015	25
Figure 9	Vulnerable Groups	33
Figure 10	Causes of Households vulnerability	33
Figure 11	The Vulnerability of Children	34
Figure 12	The Vulnerability of Women	34
Figure 13	Strategic Plan/LSP Links	35
Figure 14	The Agriculture Economy and Effects on Households Vulnerability	36
Figure 15	Cause of Slope instability	53
Figure 16	Affect of not having proper water management	54
Figure 17	Details of Landslide control	56
Figure 18	Schematic diagram of Low Cost Rock Slope Stabilization	56
Figure 19	Detailed drawing for stabilization of Soil disposal site	57
Figure 20	Cobble pavement Construction Process	58

List of Tables

Table 1	Township Data – Chin State	22
Table 2	SWOT Analysis of Chin State Development Prospects	27
Table 3	Summary of Savings from alternative approaches to design and construction of roads	60

List of Annexes

Annex 1	New Planning Processes	80
Annex 2	Review of Chin State Plans & Budget 2014-2015	81
Annex 3	Township Committee Structure	85

ABBREVIATIONS

ADB	Asian Development Bank
CBO	Community-based Organization
CNC	Chin National Conference
CNF	Chin National Front
CNP	Chin National Party
CDP	Comprehensive Development Plan
ECCD	Early Child Care and Development
EFY	Elephant Foot Yams
FAO	Food and Agriculture Organization
GAD	General Administration Department
GRET	Groupe de Recherche et d'Echanges Technologique
ICIMOD	International Centre for Integrated Mountain Development
ICT	Information Communication Technology
INGO	International Non Governmental Organisations
JICA	Japan International Cooperation Agency
KFW	Kreditanstalt fuer Wiederaufbau [German Bank for Reconstruction]
KOICA	Korea International Cooperation Agency
LIFT	Livelihood and Foods Security Trust Fund
LSP	Local Social Plan
MICS	Myanmar Multiple Indicator Cluster Survey
MIID	Myanmar - Institute for Integrated Development
MDRI	Myanmar Development Resource Institute
MIMU	Myanmar Information Management Unit
NGO	Non Governmental Organization
NSA	Non State Actors
NCDP	National Comprehensive Development Plan
QSEM	Qualitative Social Economic Monitoring
SALT	Sloping Agricultural Land Technology
SEE	State Economic Enterprise
SME	Small and Medium Enterprises
SPPRG	Social Policy and Poverty Research Group
SRG	Self Reliance Group
TMC	Township Management Committee
TMAC	Township Municipal Affairs Committee
TDSC	Township Development Supportive Committee
TPIC	Township Planning and Implementation Committee
USDP	Union Solidarity and Development Party
WFP	World Food Programme
WG	Working Group
WS	Workshop

MAP OF CHIN STATE

MIMU



Myanmar Information Management Unit

District Map - Chin State

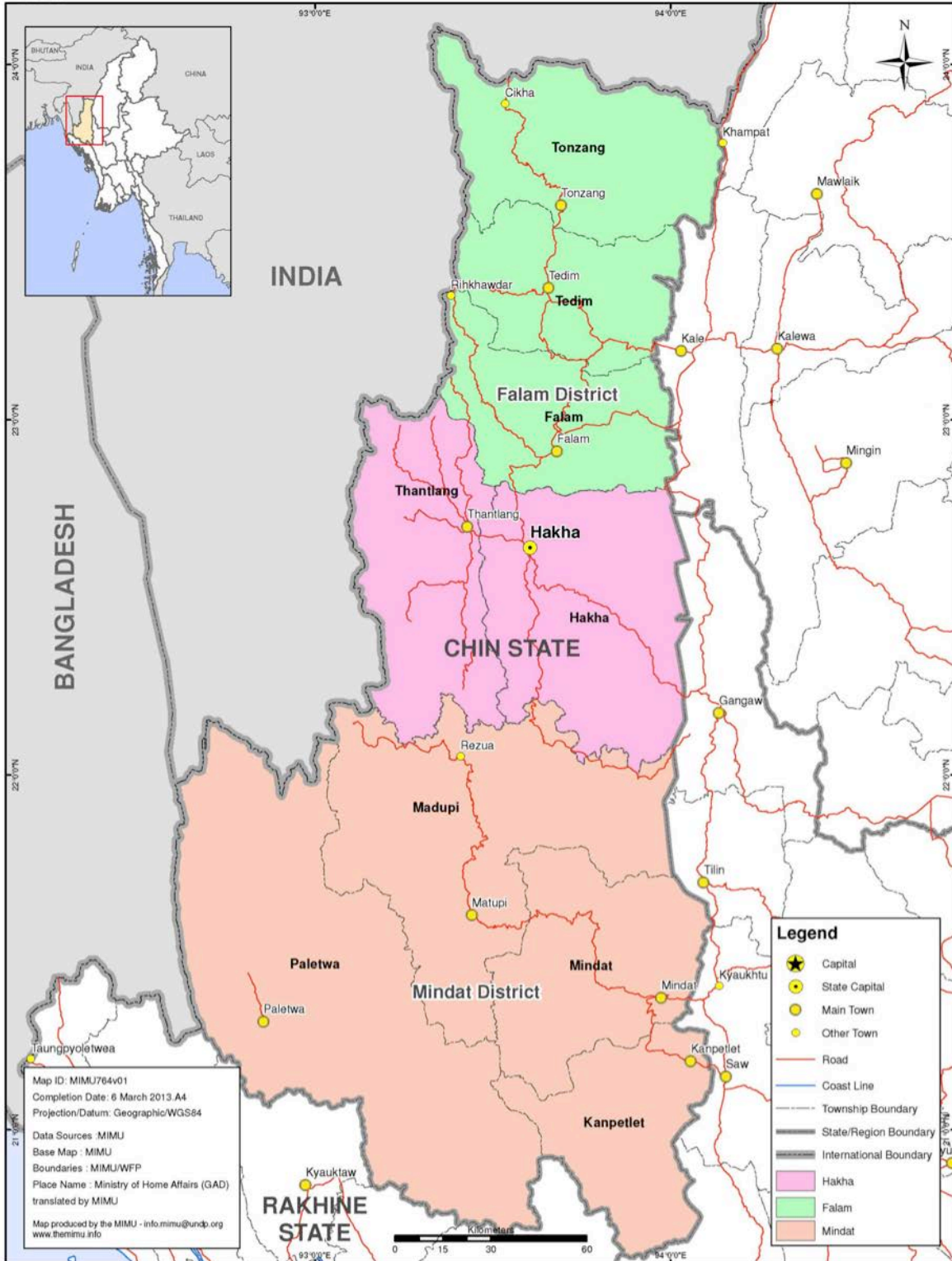


Humanitarian Aid and Civil Protection



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Embassy of Switzerland in Myanmar



Disclaimer: The names shown and the boundaries used on this map do not imply official endorsement or acceptance by the United Nations.

EXECUTIVE SUMMARY

The Comprehensive Development Plan for Chin State (CDP) and accompanying Local Social Plan (LSP) results from an agreement between the Myanmar Institute for Integrated Development (MIID) and the Chin State Government. Financial support to conduct economic planning and social protection studies was provided by DANIDA and UNICEF. The plans produced include project proposals selected and prioritized by the people in Chin State and the Chin State Government on the basis of needs identified by them. They are designed to be integrated into the Chin State Government's planning process and to support finalization of the Chin State's Comprehensive 5-year Development Plan 2016-2021 for submission to the Union Government and inclusion in the National Comprehensive Development Plan (NCDP).

STRATEGIC CONTEXT

Chin State is located in the western part of Myanmar and shares borders with India and Bangladesh as well as with Rakhine State and Sagaing and Magway Regions. With an estimated population of only 478,690¹, it is the second smallest State in the Union (about 1% of Myanmar's total population). Its population density is very low and has been a significant determinant of the Chin peoples' social and economic status.

Chin State is known as the "Chin Hills" due to its mountainous geography. Its mountain ranges run north to south throughout the length of the State and have an average elevation of 5000 to 8000 feet, with the highest point being Nat Ma Thaung or Mount Victoria at 10,500 feet (3,200 m). The mountains are steep with very narrow valley floors, providing little flat land for agriculture. The terrain is extremely rugged, creating major problems for road construction and agriculture and is affecting all aspects of peoples' lives.

After years of conflict, the ratification of the ceasefire agreement between the Chin National Front (CNF) and the Government of the Republic of the Union of Myanmar on the 9th of December 2012 provided the opportunity to address long-standing political, military, ethno-cultural, religious and human rights issues affecting relations between the Union Government and the Chin people. It has contributed to the creation of an environment that is supportive of cooperation between the Government and the people of Chin State. Such an environment is conducive to economic and social advancement of the communities throughout Chin State. It is strategically important to seize this opportunity to put in place development initiatives that will consolidate the peace process and advance the social and economic wellbeing of the Chin people.

The agreement signed between the Union Government and the CNF focused on a number of social and economic priorities that the Union Government is committed to deliver. These include the following:

- Participation of Chin peoples in determining development priorities
- Promotion of ICT use and computer skills
- Promotion of tourism
- Provision of, and access to, basic public services (water, electricity, health, education, food security)
- Establishment of a Special Economic Zone within the Chin state
- Construction of at least one airport

These expressed priorities provide the overarching framework within which the planning of the State's development should be viewed. Of particular relevance to the current planning process is the first of the Agreement's stated objectives: "*Participation of Chin peoples in determining development priorities*". This *inclusive* approach to planning and setting priorities has been kept at the forefront of the work process.

¹ Source: Population and Housing Census 2014

CHIN STATE LOCAL SOCIAL PLAN AND SUPPORT TO THE COMPREHENSIVE DEVELOPMENT PLAN

The goal of the LSP and the Support for the Comprehensive Development Plan is to introduce community participation into planning processes employed by the Chin State Government in preparing annual and medium-term plans for economic and social development. This has been initiated by the Chin State Government in response to Union Government's policy initiative, to focus on people-centred development. As defined by President U Thein Sein, this approach focuses specifically on the importance of the sub-national level (State/Regions, Districts and Townships) for the continued reform and economic development. The ten-month research and planning period was designed to help stakeholders identify activities needed to achieve their vision of the measures necessary for their own social protection and economic advancement.

PLANNING APPROACH AND METHODOLOGY

A plan period of 5 years was adopted in line with the national planning cycle and the Plans were designed to support the development of Chin State's Comprehensive Development Plan 2016 -2021. Preparation of the Plans was undertaken during the period November 2013 to September 2014 and involved a bottom-up, participatory approach engaging all stakeholders from both Government and civil society. A Launching Workshop that introduced the process was conducted in November 2013, opened by the Chin State Chief Minister, his Excellency U Hung Ngai, and attended by several members of the cabinet. The Joint General Secretary of the Chin National Front (CNF), Dr. Sui Khar, in his speech emphasized the rights-based development concept and underscored that peace building should be part of the planning process. The workshop included a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis identifying priority development themes that became the basis for subsequent detailed investigations.

SWOT Analysis of Chin State's Development Prospects	
<p>Strengths – to build on</p> <ul style="list-style-type: none"> • Strong and Diverse Civil Society – Including the Churches • Diversity and Value of Natural Resources • Agricultural Potential and land availability • Natural beauty and clean environment for Tourism • Stability, social harmony – the Ceasefire Settlement • Human Resources – Education 	<p>Weaknesses – to be addressed</p> <ul style="list-style-type: none"> • Poor road infrastructure and communication • Weak Social Infrastructure (schools and health facilities) • Weak Technical Infrastructure (WASH, Telecom, and Electricity) • Poor Market Access • Physical and intellectual isolation <p>Other Weaknesses</p> <ul style="list-style-type: none"> • Limited access to education (all levels) • Insufficient labour force, scarcity of skilled labour, brain drain • Limited access to capital for SME • Inadequate (access to) technology/skills • Underutilization of land resources, low productivity (shifting cultivation) • Ethnic and language diversity ('Tribalism') • Forestry and environmental degradation - fires, shifting cultivation, deforestation
<p>Opportunities - to seize</p> <ul style="list-style-type: none"> • Proximity to India for cross-border Trade • Natural Resource for investment in agriculture, eco-tourism • Attractive for External Assistance • Strong free media • Telecom and Internet - could reduce isolation 	<p>Threats to manage and mitigate</p> <ul style="list-style-type: none"> • Severe climate - landslides • Complex geography – remoteness • Climate change • Out-migration – brain-drain • Lack of learning facilities • Poor teaching quality

PRIORITY DEVELOPMENT THEMES INVESTIGATED IN DETAIL

The themes identified are as follows:

- Social protection
- Agriculture
- SMEs and Vocational Training
- Eco-tourism
- Infrastructure
- Institutional development

These themes were investigated by teams of national and international specialist working with local experts from Government and the NGO/CBO and consulting with communities throughout the nine townships that make up Chin State. The consultations with the community identified the problems being faced by the Chin people in their daily lives and provided them with a forum in which to articulate their aspirations and development priorities. Based on the needs and aspirations expressed by the communities, the specialist teams then prepared a series of development proposals for each development sector. These proposals were reviewed and endorsed by the main stakeholders at a Prioritization Workshop held in March 2014. A draft Local Social Plan and Planning Reports were prepared based on the outcome of this workshop. A summary of these reports was presented to a joint meeting of the Chin Cabinet and Heads of Departments in June 2014. The Chief Minister chaired the meeting and endorsed the proposals. Decision was made to incorporate the main proposals present in the reports in the Chin State's Comprehensive Development Plan.

PLAN COMPONENTS

Social Protection: UNICEF has supported the development of a Local Social Plan (LSP) for Chin State as an integral part of the State's overall Comprehensive Development Planning process. The LSP for Chin State is the first developed in Myanmar and its preparation was designed to pilot the methodology and learn from the experience in order to guide replication of the process in other states and Regions. Through this process UNICEF is supporting the Union Government's efforts to roll out a child sensitive social protection policy throughout Myanmar.

The preparation of a LSP involves consultations with key stakeholders - problem identification and prioritization (SWOT) - field research planning - project prioritization as presented in the following steps:

- Securing ownership with state government and civil society
- Identifying key stakeholders and understanding the legal and strategic context
- Document review, including available statistics and data
- Field research in townships and villages
- Identification, prioritization, verification of findings and endorsement of interventions

The consultative process identified the main vulnerable groups in Chin State as being: a) children; b) women; c) people with disabilities (PwD); and, d) the elderly. Children are particularly vulnerable if they are orphans or are disabled and many children suffer from: a) poor nutrition; b) poor health (particularly malaria and diarrhoea); and, c) poor access and low quality of education (particularly for children with disabilities). Women were found to be disadvantaged because: a) women's rights are not understood or accepted; b) they do not have property rights and have little control over household income; c) they are subject to domestic violence; d) they have little or no voice in public decision making; and, e) their reproductive rights are severely restricted due to limited access to family planning and pre- and post-natal care. Persons with disabilities were found to be particularly vulnerable due: a) there is little recognition of the rights of the children with disabilities in schools, health institutions and by the general public; b) there are no government sponsored social protection mechanisms for the persons with disabilities; and, c) there is only limited organizational infrastructure to advocate on behalf of the persons with disabilities. Elderly people are disadvantaged because: a) there is very little state support for the elderly; b) elderly people depend on family members and any households

supporting an elderly person themselves become economically vulnerable; and, c) there is only very limited provision for elderly people within the health system.

While the LSP focuses on these specific social issues, most elements in the economy impinge on social outcomes for the people involved. The Local Social Plan therefore needs to take into consideration economic factors that affect the lives of people and the services they can access within their communities. For this reason the findings of the LSP has been integrated into the overall planning process and have been presented as part of this report.

The LSP proposes a strategy to respond to the social issues that have been identified by these vulnerable groups and the community based organizations that are working with them. It includes a number of development proposals designed to support and empower vulnerable groups. These have been presented from the perspective of: a) capacity building; b) children's rights; c) women's rights; d) the rights of persons with disabilities; and, e) the overarching issue of health and nutrition. Investments are proposed in each of the following areas.

- Capacity building – investment focuses on improving the understanding of Social Protection and the rights of vulnerable groups and on increasing access to education and improving the quality of teaching
- Children's rights – investment focuses on improving nutrition and expanding access to early childhood development including teaching in Chin language.
- Women's rights – investment focuses on women's reproductive rights; improving their social status and increasing their role in decision making; and supporting expansion of women's organizations.
- The Rights of Persons with Disabilities - investments focus on ensuring that children with disabilities have access to education and supporting advocacy on behalf of PWDs.
- In Health – investments focus on alleviating the impact of the shortage of trained health professionals by the deployment of trained volunteers and supporting programs to control and reduce the impact of infectious diseases – including malaria, gastro-enteritis and the main diseases of childhood.

In all, a total of 14 project proposals have been prepared under the LSP for a combined investment of US\$ 8.3 million.

Agriculture: Agriculture is the mainstay of the Chin State economy and the majority of Chin people depend on agriculture for their livelihood. Strategic investment in smallholder agriculture is likely to provide substantial returns in terms of economic growth and in terms of poverty reduction.

At present most households practice-shifting cultivation and essentially they do not produce sufficient food to meet their family's subsistence needs. The traditional system of agriculture is in decline due to increased population density around administrative centres, resulting in reduction in the fallow period and subsequent decline in soil fertility. This is leading to lowering of crop yield to the point that most households experience food shortages for several months in every year and Chin State now relies on imported and donated grain to meet about 30% of its total requirements. This is an insidious situation that is having profound consequences for the population – lack of food is currently causing more than half of the children in Chin State to be *stunted*. Clearly this is very serious and resolving this issue should take precedence over any other development priority.

The proposed strategy for agriculture places great emphasis on measures to increase food production. In the first instance this would be achieved by maximizing output from the current production system by use of improved seed and increased fertilizer application. The longer-term need is to find an *economic alternative* to the system of *shifting cultivation*, which is in decline. The current approach of constructing terraces and focusing on cultivated grain production is not likely to provide an *economic alternative* – in many areas

establishment costs are too high and grain yields are too low to make it worthwhile for the farmers to construct terraces. If no irrigation is possible the farmers in those locations will have no alternative but to continue shifting cultivation. The proposed strategy therefore focuses on identifying more cost effective and economically viable alternatives to shifting cultivation – these are likely to involve permanent horticulture, ruminant livestock production and smallholder/community based commercial forestry. All of which would require administrative provisions for longer-term land tenure within the smallholder sector.

Increasing irrigated agriculture is the most effective way to increase food security because it is less sensitive to the vagaries of the climate. At present Chin State has only a very small proportion of its cultivated land that is irrigated and the rugged terrain is not conducive to broad-acre irrigated farming, however, there would appear to be considerable potential for expanding the area under irrigation by establishing low-cost small-scale irrigation schemes on a very selective basis. This approach would assist in climate proofing the State's agriculture and food supplies and could provide access to "Climate Adaptation" funding.

There is considerable potential for cash cropping as evidenced by the great expansion in Elephant Foot Yam (EFY) production in recent years. Cash cropping is seen as an alternative approach to resolving the State's household nutrition problems because the income generated can be used to purchase food. It is likely that the move out of shifting cultivation will tend to be towards *cash crop alternatives* – horticulture, commercial timber and livestock production.

In all, a total of 9 project proposals have been prepared for Agriculture involving a combined investment of US\$ 8.4 million.

Livestock: Most rural households keep livestock and they play an essential role in the subsistence economy. They are part of the coping strategy of poor households and they reduce risk in the event of crop failure as they can be sold to purchase food. Their sale also supplies cash to pay school fees and medical expenses.

The main constraints on livestock production relate to: a) lack of effective support for disease control; b) poor nutrition and husbandry at farm level; and, c) lack of credit for starting or expanding a livestock enterprise. In relation to both pig and poultry production, there is considerable potential for increasing small-scale backyard production, but there is no livestock feed industry operating at a scale necessary to support small-scale commercial production of pigs or poultry. The importation of pig and poultry feed would be prohibitively expensive given the freight charges in Chin State.

The potential for livestock production lies in: a) large amounts of land currently left fallow as part of the shifting cultivation cycle which could produce vast amounts of green fodder to feed cattle, Mithun and goats; b) improving the delivery of disease control procedures that could substantially increase production in all species at a minimum cost; c) intensive livestock production with the move to permanent agriculture that would maintain soil fertility through the recycling of manure.

A total of 5 project proposals have been prepared for Livestock development involving a combined investment of US\$ 4.4 million.

Fisheries: Backyard fisheries are considered to have the potential to improve household/local community nutrition. At present there is some small-scale fish production in Chin State, however, the technology applied is weak and there has been little effort made in selecting species that would best suit the environmental conditions. With Chin State's abundant rainfall there is considerable potential to expand fish production.

The aim of the fisheries project is to improve nutrition in poor households and provide an opportunity to earn income from fish sales. The pond water will also be used for household vegetable production.

1 project is proposed for the expansion of Backyard Fisheries involving investment of US\$ 855,000.

Forestry: The issues facing Chin's forestry sector are: a) the shortening of shifting cultivation cycles, which means less secondary forest for household fuel wood; b) land issues that impede the establishment of

community forests in some areas; c) uncontrolled burning for shifting cultivation causing significant loss of permanent forest; and d) the need to substantially upgrade technical knowledge of sustainable forest management, from the household level to the State level.

The potential of the Chin's forestry sector is substantial. It has the potential to make a major contribution to the State's economy. The forests are possibly the State's largest economic resource and there is considerable potential for: a) increased benefits from the introduction of sustainable forest management practices; b) investment in community forest initiatives; and c) investment in the sustainable use of the rich diversity of forest products such as pine resin and medicinal plants including orchids and Elephant Foot Yam.

Three projects are proposed for the forestry sector involving a combined investment of US\$ 2.2 million.

Small and Medium Enterprises (SMEs): There is very little industrial production in Chin State and the SME sector is small and poorly developed. Development of SMEs faces a number of constraints: a) poor infrastructure; b) lack of credit for investment; c) limited technical knowhow; d) variable agricultural production and poor post-harvest handling; e) lack of market intelligence; f) poor business skills; and f) a difficult regulatory environment and lack of effective government support systems. However, while the impediments are considerable the Chin State does have a comparative advantage in a number of areas. Opportunities include: a) climatic conditions for producing high value crops, i.e., spices, fruits and vegetables; b) proximity to market in India and Bangladesh; c) good potential for producing construction materials (timber and masonry); and, d) unique traditional woven textile products that could be in demand by tourists.

The strategy for SME development focuses on creating a business friendly regulatory environment and identifying locations where the infrastructure can be upgraded quickly and at relative small cost to meet the requirements of businesses and industry. In particular there is a need to further investigate the potential for attracting investment from India that have the potential to supply products to the rest of Myanmar and possibly China. In terms of local investment the greatest potential lies in adding value to local agricultural production.

Two projects are proposed for the SME sector involving a combined investment of US\$ 2.3 million.

Technical Vocational Education and Training (TVET): There are a number of vocational training institutions operating in Chin State, but they rarely provide students with the practical skills necessary to gain employment or to support growth in the Chin economy. Many facilities lacks essential teaching laboratories and/operational workshops where students can obtain hands-on experience to enter the work force. Most programs are *certificate* oriented and not geared to meeting requirements of industry, farming or the business sectors they are supposed to be servicing.

The strategy for TVET development involves first carrying out a detailed review of existing facilities in close consultation with students, former students and potential employers. The facilities would then be upgraded in a manner that ensure training programs meet the requirements of industry and business and that graduating students have the necessary skills to move directly into employment. The second element of the strategy is designed to fill a major skills gap in the construction industry (particularly the housing sector). The third element of the strategy is designed to support and add value to agricultural output by establishing training for employment at food processing facilities.

Three Projects proposed for TVET involving combined investment of US\$ 4.7 million.

Road Infrastructure: The high cost of constructing roads is a major impediment to economic growth in Chin State. Budgets for road construction and maintenance consume a high proportion of the State's financial resources. The strategy for road infrastructure includes the development of a transport master plan for expansion of the state road network. Road construction should be delivered in the most strategic and economical manner to meet the needs of Chin State's expanding economy, and particular focus on needs in potential growth centres. The second element of the strategy is to establish a better balance between new

construction and road maintenance, so as to achieve more with the funds available. There are issues with design and construction in which considerable cost savings could be achieved: – slope stabilization and landslide prevention; provision for more effective cross drainage; and improved road surfacing.

The project proposals for road infrastructure are designed to address the need for effective planning and for the introduction of improved design and construction techniques that will reduce initial construction cost and/or maintenance requirements.

Three projects are proposed involving combined investment of US\$ 37 million.

Air Transport: For Chin State to move from being a mainly subsistence agricultural economy to having a viable commercial economy – one which can generate employment for its young people – creation of air connection with the rest of the country, and internationally should be of the highest priority. The Plan includes a project proposal for a study to determine the feasibility and economic viability of establishing air services within Chin State and linking Chin State to the domestic air services throughout Myanmar. The cost of the study is estimated at US\$ 350,000.

Water Supply: Improving the domestic water supply is a development priority with social consequences. A lack of clean drinking water is the cause of gastro-enteric disease and Chin State experiences the highest incidence of water borne disease in the Union. In rural areas where reticulated systems have not yet been developed, Chin women spend more time collecting water from rivers and springs than in any other state in the Union². The Government is addressing these issues by improving both rural and urban water supply systems but consideration should be given to creating supply systems capable of supporting household nutrition gardens as well as standard domestic water supplies. The strategy should be supported by education and awareness raising to reduce incident of water borne diseases.

Energy: There is considerable scope for developing renewable resources in Chin State in the energy sector. Mini-hydro schemes and wind power provides potential for rural electrification in areas where connection to the National Grid is not economically feasible. It would be strategic for the State Government to adopt a “green agenda” approach to many aspects of its development. This would be consistent with a move away from shifting cultivation, the development of sustainable forest management practices and adaptation to climate change. This approach could then tap into international funding for climate change adaptation and the reduction of CO2 emissions (See Resource Mobilization below).

Tourism: There are a number of sites and attractions in Chin State that could be of interest to international tourists, but very few actually make the journey. The main challenges Chin State faces in attracting tourists relate to: a) lack of direct air linkage to the rest of Myanmar; b) weak tourism administrative structure; c) poorly defined tourism products; d) lack of tourist infrastructure/accommodation; and, e) lack of effective promotional material to promote the State as a tourist destination.

The strategy for tourism focuses on: a) developing an organizational structure that can act as a vehicle for the promotion of tourism; b) the development of management plans for key tourist attractions; c) development of infrastructure; and, e) training at all levels of the industry.

A total of 5 project/study proposals for tourism development are being proposed requiring total investment of US\$ 535,000.

Institutional Development: While the planning framework introduced by the Union Government is elaborate and detailed, many states and regions lack the capacity to implement new processes and are struggling to deliver results, especially at the Township level. There is a need to introduce a comprehensive program to build planning and implementation capacity within the Chin State and Township administrations.

² UNICEF/MICS “Myanmar Multiple Indicator Cluster Survey 2009 – 2010”

It should focus on effective delivery of the Union Government's new planning and development approach to maximize budget flow from the Union Government to Chin State and ensure efficient and effective utilization of resources. At the same time, the Union Government's reform process has opened the way for the State Governments to receive more direct assistance from the international donor community. It will become increasingly important for State Government Officials to be proficient in preparing development proposals for donor funding.

The Plan includes a project proposal for Institutional Capacity Building which is designed to improve all aspects of Chin State's planning, budgeting, implementation and monitoring capacities and to support the Government's endeavours to increase funding from both the Union Government and from the donor community.

The Project requires investment of US\$ 280,000.

Mobilization of Resources: A large number of project proposals have been prepared for inclusion in the Chin State's Comprehensive Development Plan and Local Social Plan. The proposals, while contributing to the overall development plan, are presented as stand-alone modules for the State Government to include in the different sectors of its development plan and to use to solicit donor support for particular development initiatives.

There are five categories of donors/development agencies supporting Myanmar's economic and social development: a) Bilateral donor governments supporting Union and State government and CBO initiatives; b) International multi-lateral organizations – UNICEF, WFP, UNDP, ILO, EC.; c) INGO and CBO; d) International Finance Institutions – World Bank, ADB and IFAD; and, f) Global funds such as the Global Environmental Facility (GEF), the Adaptation Fund, which are generally managed through the UN agencies or the IFIs. Each have particular requirement in terms of project preparation and implementation. It is important for the State Government to understand these requirements and preferences in order to target particular project proposals at specific donors.

Conclusion: The planning report is the result of a participatory process involving key stakeholders associated with the economic and social development of Chin State. During the planning process all sectors of the Chin State economy has been examined and a forum in which the Chin people and Government could articulate problems and aspirations were created. The project has endeavoured to construct a development program addressing the main issues facing the economy and the people.

The planning process has included the formulation of a Local Social Plan (LSP) that has directly affected the way the overall plan has evolved. The analysis carried out in preparing the LSP highlights the great difficulties the Chin people face in their daily lives – the shortage of food, the lack of resources to support children's education, and the poor access to health services. In recognition of the seriousness of these issues – particularly the lack of food security – the Plan has focused its development approach on resolving the problems of hunger and food shortages, using the nutrition of children as a marker for development progress.

The aim of the planning process and resulting plans has been to bring together the various sector strategies and establish a coherent and balanced approach to the overall development of Chin State. This overall strategy must also be aligned with the national priorities established by the Union Government i.e. *people centred development*. The analysis has focused on two overarching development themes: **Social Protection and the need for Economic Growth**.

In practice these two themes are inextricably linked and dependent on each other. When viewed in the context of the Union Government's desire to have **people-centred development**, the State plans need to address Chin State's serious shortage of food as a first priority. The food shortage is not just a social problem it is also a political problem.

The Plan has attempted to bring together the economic activities and opportunities and focus them on achieving people-centred development that can deliver improved social indicators. The result is a large number of initiatives presented in the form of project proposals at an estimated cost of US\$ 70 million. They have been designed, selected and prioritized in close cooperation with and involvement of representatives of Chin Civil Society, the Chin State Government and Chin National Front (CNF) for incorporation in the State Government's annual and medium term plans and the Union Government Comprehensive National Development Plan and budgets and also for presentation to the international donor community for possible funding.

Part A – The approach

1 INTRODUCTION

The Comprehensive Development Plan for Chin State (CDP) and accompanying Local Social Plan (LSP) results from an agreement between the Myanmar Institute for Integrated Development (MIID) and the Chin State Government. Financial support to conduct economic planning studies was provided by DANIDA and UNICEF provided financial support for the development of the Local Social Plan (LSP). These plans are to be integrated into the Chin State Government’s planning process and to support finalization of the Chin State Government’s Comprehensive Development Plan for submission to the Union Government and inclusion in the National Comprehensive Development Plan (NCDP).

In carrying out this work with State Government and Community Based Organization (CBO) counterparts, the MIID research team worked within the Government of Myanmar’s new planning guidelines as articulated in the Union Government’s Framework for Economic and Social Reform and the 8-point plan for rural development and poverty alleviation policy directive of the President of the Republic of the Union of Myanmar, H.E. U Thein Sein. MIID has adopted a participatory, people-centred approach in identifying problems, finding solutions and planning for project implementation.

1.1 METHODOLOGY AND THEMES

Preparation of the plans involved a bottom-up, participatory approach engaging all stakeholders from both Government and civil society. A Launching Workshop was conducted in November 2013 and this included SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis identifying priority development themes for detailed investigation. The themes identified are as follows:

- Social protection
- Agriculture
- SMEs and Vocational Training
- Eco-tourism
- Infrastructure
- Institutional development



Launching Workshop (Chief Minister, Ministers, CNF Joint General Secretary, MIID & UNICEF teams)

The Launching Workshop was opened by the Chin State Chief Minister, His Excellency U Hung Ngai, and attended by several members of the cabinet. The Joint General Secretary of the Chin National Front (CNF), Dr. Sui Khar, in his speech emphasized the rights-based development concept and that peace building should be part of the planning process. He said that *long-term planning for sustainable socio-economic development of Chin State should not neglect to take cognizance of short-term needs of the population*.

Field Research Teams, including both national and international specialists, were established to investigate each theme and propose investments addressing problems identified in each sector. Field investigations were launched at a Planning Workshop in January 2014. Planning methodology was explained at the workshop and participants from government and civil society decided where fieldwork should be undertaken to effectively cover all issues and opportunities related to each sector.

Field Research was conducted in January, February and March 2014 and covered the nine Townships that comprise Chin State. Following completion of the field research each Field Research Team prepared a detailed sector report that included sector analysis and development proposals designed to address the main problems and/or opportunities identified. Those proposals were reviewed by a wide range of stakeholders during a Prioritization Workshop conducted in March 2014.

Findings contained in the Sector Reports and the priorities articulated by participants at the Prioritization Workshop - as well as an outline of the consolidated findings and the strategies for dealing with each of the issues - were prepared and presented to an Endorsement Workshop in June 2014³. This planning document has been designed to capture the concerns and aspirations of stakeholders as expressed throughout the participatory planning and prioritization process. In particular, it tries to reflect advice provided by the Chief Minister, UNICEF and the CBOs during the Endorsement Workshop.

The major output of the planning support program is the contribution made to the planning process in Chin State. It has strengthened the Government's bottom-up planning process and created space for the views of Civil Society to be expressed and reflected in the Government's plans, which will contribute to both local and national development.

1.2 DELIVERABLES

The documents produced through the Project include the following:

- Report on the Launching Workshop, SWOT analysis and study methodology
- Local Social Plan and project proposals to support resolution of identified Social Protection issues
- Plan for Agricultural Development and projects proposals to address Food Security and Poverty Alleviation and improve the sustainability of the Agricultural production system
- Review of the potential for Ecotourism and Responsible Tourism in Chin State and project proposals for laying the foundations of a viable and sustainable tourism industry in the future
- Report on how to promote Small and Medium Enterprises (SME) and establish the necessary Vocational Training support structures – including investment proposals
- Report on Transport Infrastructure and project proposals for improved Road Planning, Construction and Maintenance
- Draft Report on Infrastructure for Power, Domestic Water Supply and Irrigation in Chin State
- Report on the Prioritization Workshop
- Report on Endorsement Workshop

³The Workshop was implemented in two sessions. The first session was chaired by the Chief Minister of the Chin State Government and was attended by the Cabinet and the Heads of all State Government Departments. The second was attended by representatives from NGO, INGO and CBOs operating in Chin State. UNICEF participated in each of these meetings.

2. BACKGROUND

2.1 CHIN STATE'S HISTORY THROUGH TO THE RATIFICATION OF THE CEASEFIRE AGREEMENT

2.1.1 Early History to Independence from Britain

The Chin people are descendants of the Tibeto-Burman people who populated the Chin Hills in the first millennium AD. After the Third Anglo-Burmese War of 1885, British troops arrived in the area and finally, after having met with strong resistance from local chiefs, the British were able to gain control over the Chin Hills in 1896 and from then on administer the region under the Office of the Frontier Areas Administration. American Christian missionaries arrived and by the middle of the 20th century most of the Chin People had converted to Christianity. The Japanese occupied the area from 1943 until the end of World War II. Britain regained control of Burma in the immediate post-war period and, while moving towards independence for the Bamar people of the plains, continued policies to administer the Frontier Areas (including the Chin Hills). In 1947, the Panglong Agreement was signed between Shan, Kachin, and Chin leaders, and General Aung San, and on 4 January 1948 - when Burma gained its independence from Britain - the Chin people joined the Union of Burma.

2.1.2 The Post-Colonial Period – a period of conflict

Post-colonial Myanmar has struggled to achieve national unity and mould its more than 100 ethnic and tribal communities into a cohesive mutually supportive unit. Independence from Britain was essentially negotiated by the Bamar people of the plains, while the separate ethnic groups in the surrounding highland regions - the Chin among them – agreed to the terms of independence to free themselves from British rule, but without a real commitment to the national entity that was Burma.

Burma's independence movement was rooted in socialist principles and the central government felt strongly that national unity meant conformity to a common, centrally designed, regulatory and operational code of conduct. This was disagreed by the States that evolved on ethnic and tribal lines applying an ideology built on a strong sense of separate identity. They felt they needed to preserve this. In this environment of opposing ideologies, clashes were inevitable, especially when it came to the control of resources. One side believed all resources belonged to the Union and the other side believed that they were part of the heritage that defined their separate ethnic identity. The result has been decades of disunity and conflict in Myanmar, which has placed enormous strain on the economy, diverting resources from much needed national development programs and preventing the effective development of Myanmar's vast natural resources that could have funded the developments essential for improving the living standards for all Myanmar's people.

At the time of independence, Burma was considered the rice bowl of Asia. It had abundant natural resources: jade, oil, and, enormous mineral resources. Of all the countries in South East Asia, Burma was considered to have the greatest potential to become an economic success, but, decades of internal conflict and political instability undermined the economy.

2.1.3 December 2012: The Ceasefire Agreement

After years of conflict, a peace process was ushered in with the ratification of the ceasefire agreement between the Chin National Front (CNF) and the Government of the Republic of the Union of Myanmar on the 9th of December 2012. This agreement addressed long-standing political, military, ethno-cultural, religious and human rights issues. It also made a number of pronouncements on the development of the State.

2.2 Cementing the Peace

2.2.1 The Chin National Conference, November 2013

In the spirit of the ceasefire agreement, the Chin National Conference (CNC) was held in Hakha from the 12 to 16 November 2013. It was the first such conference held since 1948 in which all the various Chin groups and parties came together to discuss issues pertinent to the Chin State and its people. This Conference involved 571 participants, representing 27 groups, parties, NGOs and religious organizations, including persons of Chin origin living overseas.

2.2.2 A Peace Dividend

It now seems to have been realized by all sides, with only a few exceptions, that conflict is not a solution for Myanmar's ethnic problems. Real unity cannot be achieved by force and nor can force deliver a separate identity for those states with separatist ambitions. Ceasefire agreements have been reached with most ethnic groups in Myanmar and there is acceptance by the international community that the country is on a more democratic path, as well as brighter, economic future. In the case of Chin State, the agreement signed with the Chin National Front focused on a number of social and economic priorities that the Union Government is committed to deliver. These include the following:

- Participation of Chin peoples in determining development priorities
- Promotion of ICT use and computer skills
- Promotion of tourism
- Provision of, and access to, basic public services (water, electricity, health, education, food security)
- Establishment of a Special Economic Zone within the Chin state
- Construction of at least one airport

These expressed priorities provide the overarching framework within which the planning of the State's development should be viewed. Of particular relevance to the current planning process is the first of the Agreement's stated objectives: "*Participation of Chin peoples in determining development priorities*". This *inclusive* approach to planning and setting priorities is central to both UNICEF's formulation process for the LSP and the *participatory agenda* set by the President. In preparing the LSP and the drafting of support for the CDP this principle has been kept in the forefront of the work process.

3. CHIN STATE TODAY

3.1 GEOGRAPHY AND POPULATION

Chin State is located in the western part of Myanmar and shares borders with India and Bangladesh as well as with Rakhine State and Sagaing and Magway Regions. With an estimated population of only 478,690⁴, it is the second smallest State in the Union (about 1% of Myanmar's total population). In area, Chin State is 13,907 square miles (36,019 km²), or 5.3% of total area of Myanmar. Its population density is very low, <35/square mile (< 14 persons per km²). Low population density has been a significant determinant of the Chin peoples' social and economic status.

Chin State is known as the "Chin Hills" due to its mountainous geography. Its mountain ranges run north to south throughout the length of the State and have an average elevation of 5000 to 8000 feet, with the highest point being Mount Victoria at 10,500 feet (3,200 m). The mountains are steep with very narrow valley floors

⁴ Source: Population and Housing Census 2014

providing little flat land for agriculture or even for establishing airfields⁵. The terrain is extremely rugged, creating major problems for road construction and agriculture and affecting all aspects of peoples' lives.

3.2 CLIMATE

The climate is monsoonal in character; April and May are the hottest months, with average, daily maximum temperatures in excess of 30 degrees C; November to January are cold with minimum temperatures as low as minus 4.4 degrees C. Monthly high and low temperatures are presented in Figure 1 below. Temperature has a significant effect on agricultural production. Cooler temperatures provide an opportunity to grow many vegetables and fruits (e.g. strawberries) and horticultural crops (e.g. grapes and stone fruit) that will not grow in Myanmar's hotter, Dry Zone plains. But low temperatures can cause frost, which limits crops and prevents double cropping of crops like rice, which are particularly sensitive to frost in the flowering stage.

Temperature also has an effect on human health with the *malaria* parasite being sensitive to low temperatures in the mosquito host during its non-breeding part of the year. Unusually, Chin State experiences a very high incidence of malaria even though the climate is not conducive to its persistence in the area. The temperature pattern needs to be further investigated when adopting malaria control procedures.

Rainfall patterns⁶ are monsoonal with most rain occurring in the warmer months from May to October and peaking in August⁷. The average total annual rainfall across the state is about 1800 mm⁸. The dry months are November to January and in 2013 no rain was recorded during that period. The average monthly rainfall and the number of wet days per month are presented in Figure 2 below. However, it should be noted that rainfall varies across the State according to topography and elevation, and this impacts crop yields in each area. Chin State has very little irrigated land and any prolonged dry period during the growing season is a high risk-factor impacting food security in households throughout the State.

Rainfall is also a major factor in road construction and maintenance, making many un-surfaced earth roads unusable in the wet season and frequently causing landslides that put even the roads surfaced with bitumen out of service, sometimes for days at a time. Topography and the intensity of the rainfall need to be considered in road design, necessitating additional drainage works and special provisions to prevent landslides. This all adds to the cost of road construction and maintenance and consumes resources needed for other development activities⁹.

⁵ Chin State currently does not have any domestic airfield or air linkages with the rest of Myanmar although a number of small airstrips were established during World War II and the Union Government has promised to provide an air strip and air linkages with the rest of Myanmar as part of the Ceasefire Agreement

⁶ Source: DOA, Chin State

⁷ August receives 500mm on average in total and on average 23 days in August there is rain.

⁸ Due to the topography there is substantial variation in annual rainfall across the Townships - in 2013 Mindat had just 66 inches while Paletwa received 114 inches. The rainfall in Tonzang, Tedim and Hakha was around 68 inches, while Kanpetlet and Matupi townships (situated in the southern part of Chin State) received 91.0 and 95.6 inches respectively.

⁹ The M-IID Infrastructure Team has presented a number of alternative design features to address the problem of drainage and landslides – See working Paper on Road Infrastructure.

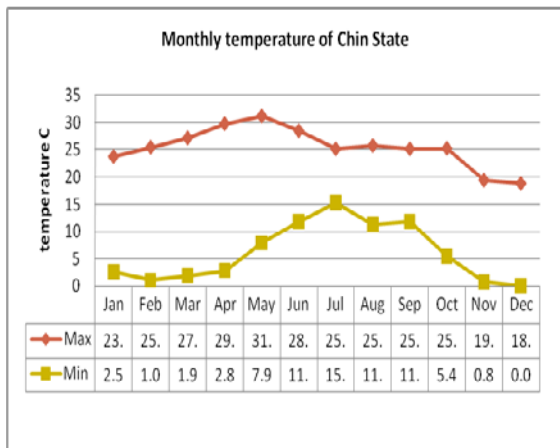


Figure 1 - Monthly high and low temperatures

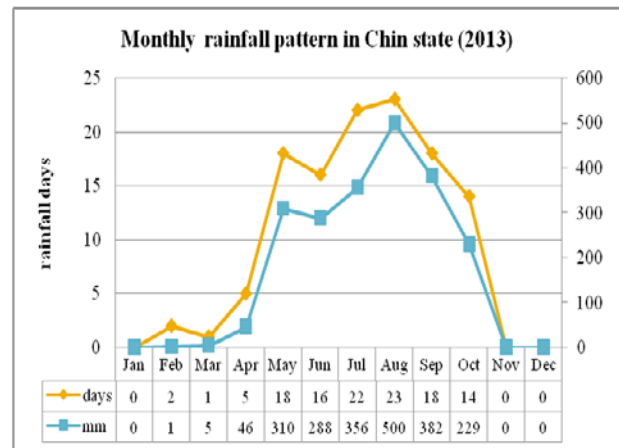


Figure 2 - Monthly rainfall and days of rain

3.3 LAND UTILIZATION

The breakdown of land use in Chin State is presented in Figure 3 below. The State’s primary natural resources are forest-based, although severe long-term deforestation means just 16% of land is covered with “reserved forest” and 13% with “other forest”. Forestland is declared and administered by the Union Government through the Ministry of Environmental Conservation and Forestry in accordance with the ‘Forest Law’. Permission is required from the Ministry for the extraction of timber, cutting firewood, producing charcoal or catching fish from a ‘Reserved Forest Area’. Most of the population depends on agriculture for their subsistence, while only 3% of the land area is actually cultivated. An estimated 34% of land is designated by the Government as “Cultivable Wasteland”, making it suitable for agriculture such as paddy (rice land), ya (dry land), and garden land. The government can grant this land to state-owned economic organizations, joint-ventures, other organizations and private individuals to use for agriculture, livestock breeding or aquaculture enterprises. Under the category “Other land”, grazing ground, roads, towns, villages, railways, dams and irrigation canals, factories, mines, ponds, lake and river, etc. are included.

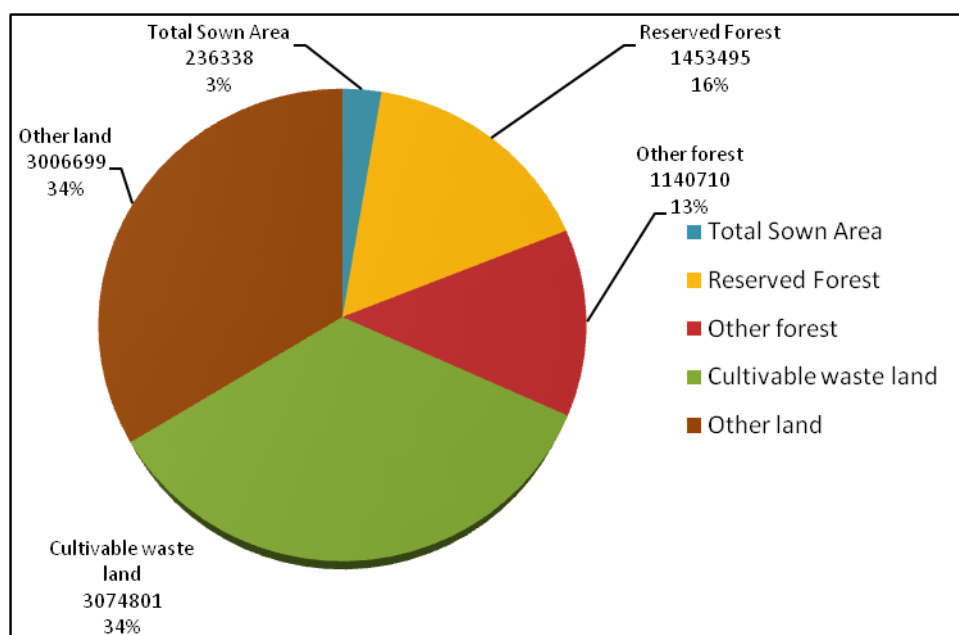


Figure 3 – Breakdown of land use across Chin State, by land use type

3.4 AGRICULTURAL PRODUCTION

Only 3% of the total area is currently cultivated. The breakdown of sown areas, statewide, is presented in Figure 4 below.

Within the sown areas there are five categories of farming: a) wet land farming (paddy cultivation) or *Le'*; b) dry land farming or *Ya*; c) horticulture land; d) alluvial land, or *kiang* or *kyun*; and, e) *Taung Yar* (hill plot).

An estimated 80% of the sown areas are occupied by *Taung Yar* (hill plots). Of a total sown area of 236,338 acres, approximately 80% is under shifting cultivation. All of the townships have a very low ratio of total sown area. *Cultivable waste land* is highest in Hakha, Paletwa and Matupi Townships, where there appears to be potential for increasing the area cropped. Thangtlang, Tonzang, Kanpetlet and Mindat Townships have only limited *cultivable waste land* and little room for expansion of agriculture. This situation needs to be taken into consideration when planning agricultural activities and/or creating alternative employment opportunities.

The crops grown¹⁰ are determined primarily by elevation. Figure 5 below presents the proportion of land devoted to each of the major crop types. Cereals make up 63% of total crop production. The category "Culinary crops" (3% of the total area) consists of onion, chilli, garlic and ginger. The category "Other crops" (<1% of land area) consists of perennial crops, fruit trees and vegetables.

54% of the cereal production is rice. Other production includes maize, red millet and yellow millet. Rice and maize are grown for home consumption but with larger holdings, some may be sold. Maize is mainly used for human consumption with some used to feed pigs and poultry. About 18,000 acres of millet is planted and used mainly for alcohol production or is sold for cash. Rice is planted both in shifting cultivation (*upland rice*) and on terraces (*wet land rice* – either rain-fed or irrigated. The main cash crops are potatoes, sunflower, groundnut, lentil bean, soy bean, and niger. They are sold in local markets or in Kalay in Sagaing Region.

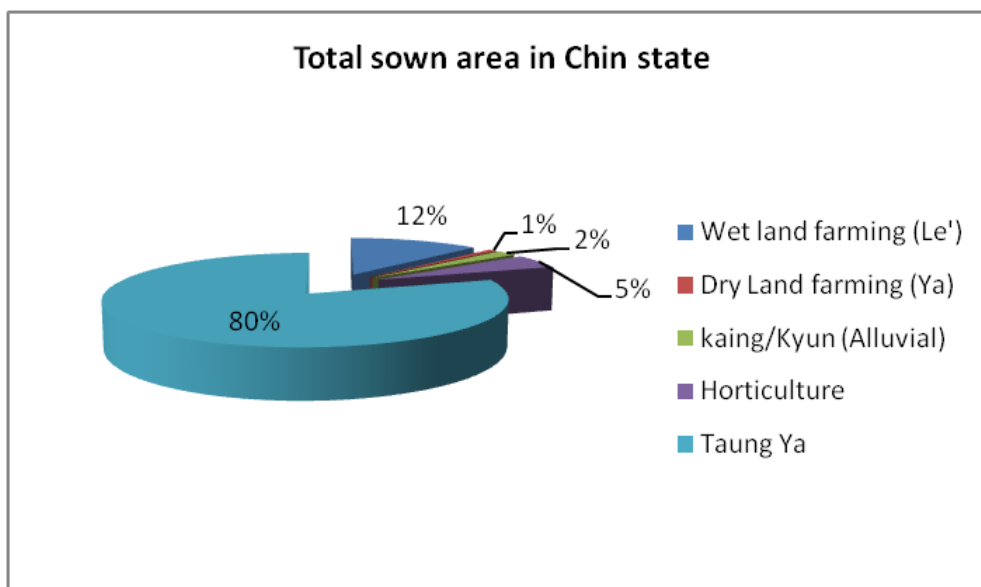


Figure 4 – Type of Agriculture – in sown area

¹⁰ Source: DOA, Chin State

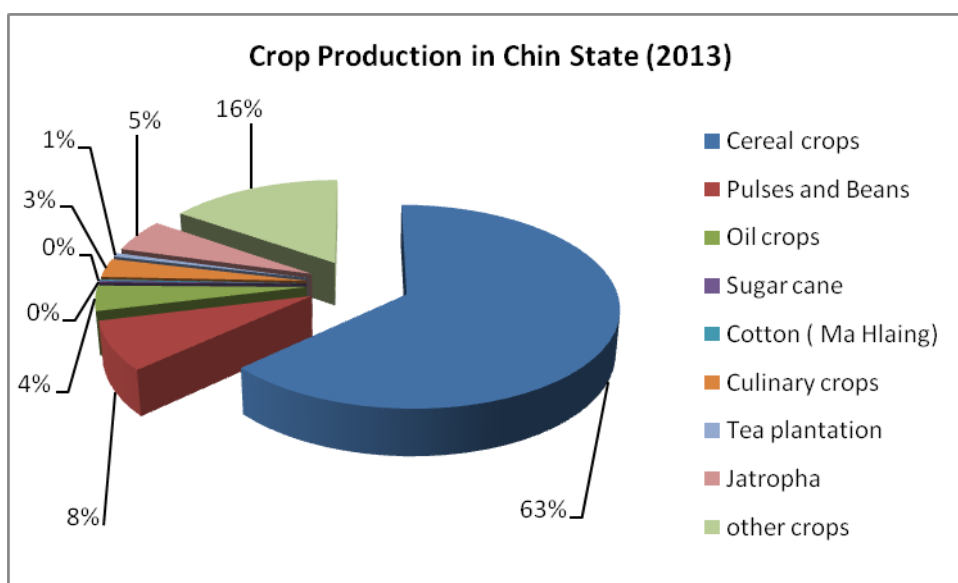


Figure 5 - Proportion of each crop produced

3.4.1 Cropping Patterns

An estimated 80 % of cultivation in Chin State is *shifting cultivation*. The cutting of the trees commences in September/October and is completed in February. The area is burnt in February/March and sowing follows the first substantial rains, which generally come in April (in March if early). Some fertile areas with good rainfall practice double cropping of maize (rainy season) and pulse and beans (winter). Occasionally, paddy and maize seeds or soy bean and rice bean are mixed together for cash crops in the same plot, although harvest times differ. Where water is available, vegetables are grown as winter crops. This practice enables an annual double cropping arrangement in some areas, such as Falam, allowing more crops to be sold for cash at the Kalay market.

In southern Chin State, farmers start their growing season around March or April. Yellow millet, red millet, pulses and beans are broadcast in the same plot simultaneously, whereas maize seeds and oil seeds are planted separately and are spaced. Yellow millet is the first crop to be ready for harvest, with maize, red millet and pulses harvested August to December, and finally mustard (oil-seed) is harvested in April. The details of the cropping patterns of all major crops grown are presented in the Working Paper on Agriculture.

Crop yields for paddy and maize in Chin State are among the lowest in Myanmar¹¹. This is due to poor soil, poor access to improved seeds, limited use of chemical fertilizers and poor water availability and management in paddy production. In relation to the use of improved seeds it is noted that the Government program for seed distribution in the 2014- 2015 Plan caters to only 150 kg of open pollinated; 1330 kg of hybrid rice seed; 99 kg of open pollinated maize; and 3750 kg of hybrid maize seed. These quantities are insignificant when compared to the area that needs to be planted. There is considerable potential to increase production in most of the crops currently being grown through the use of improved seed/planting material and where appropriate applying the correct amount of chemical fertilizer¹².

¹¹FAO/WFP Special Report on Crop Food Security Assessment – 22 January 2009

¹²Project proposals have been presented to support the introduction and multiplication of the seeds of improved crop varieties – See Volume 2

3.4.2 Land Tenure

The system of land tenure and land allocation in Chin State is based on traditional systems and is somewhat different to that practiced in the rest of Myanmar. As a result, the level of landlessness in Chin State is much lower than in the other States. In making plans for agricultural development and for community forests it is important that this traditional system is retained. Some modification may be needed to cope with requirements of permanent agricultural practices.

The allocation of areas to be cultivated by individual households is decided collectively and annually by the community. A Land Administration Committee or the Village Tract Administrator manages this process but in some areas the “*inheritance land owner*”¹³ is also involved. In some villages, the *inheritance land owner* distributes land to any landless people for a token payment such as a bottle of rice wine. Plots are 1 to 4 acres and are distributed to households based on family size, available labour, and past record in using the plot. Even if land is distributed by the *inheritance land owner*, the Village Tract Administrator must still be informed.

Land purchasing has not been part of traditional practice but has started in some villages in Kanpetlet Township. With the increased interest in the highly profitable cultivation of Elephant Foot Yam (EFY) business people from the main town have been buying land in surrounding rural villages. Land values are increasing and there is a danger that village people are being disinherited by the process, resulting in deeper poverty levels. In planning the expansion of this activity, concerned State and Township Departments need to ensure that the poor are not disinherited.

3.4.3 Gender, decision-making and division of labour in agriculture

In addition to their multiple roles as caregivers and providers in the family, the main occupation of the vast majority of Chin women is related to agricultural production. Women decide which products to sell or keep for family consumption. Women and men make joint decisions on selling in the urban market centres but decisions on hiring, borrowing or the selling of property (such as land or livestock) are generally made by men alone.

According to customary laws, women have no right to inherit land or housing. In most cases, inheritance goes to the eldest son and the youngest son, with the other sons sharing the remainder.

The division of labour: Men do the heavy work (cutting and burning of trees) and women do the lighter work (e.g. planting, weeding, harvesting). Although most agricultural work is shared, the daily wages for men are higher than for women. The MIID Agricultural Team identified gender roles and responsibilities for the main farming activities; the findings are presented in detail in the Working Paper on Agriculture. Women are responsible for a higher proportion of labour on routine tasks and men take responsibility for the more technical/skilled activities - e.g. pruning, thinning or circle weeding in apple cultivation, or use of draught animals. Surveys on the collection of water for domestic use have shown that, among all the states, Chin State has the longest water collection times and Chin women bear 89.8% of the responsibility for the collection.¹⁴

3.4.4 A declining Agricultural system

Land appears to be plentiful in Chin State but extremely rugged terrain means there is limited agricultural practice of traditional systems of low-input/low-output *shifting cultivation*, which requires very large areas to sustain an individual household. Farming practices require the population to be widely disbursed, making it very difficult for the government to establish administrative control and provide social services. Traditionally remote areas are sites for opium poppy cultivation and in seeking to control opium production the

¹³The family that is the traditional owner of the land

¹⁴ UNICEF/MICS “Myanmar Multiple Indicator Cluster Survey 2009 – 2010”

government had to establish an administrative presence. This usually involved creating small settlements with connecting roads or tracks, often accompanied by government schools and health clinics.

In the modern era, farming households seek health services and education for their children and have tended to congregate around villages where the Government and/or the churches/NGOs have established roads, clinics and schools to service them. This provides a form of social security in terms of health and education for the children, but a localized concentration of the population is accompanied by increased land pressures, shorter rotations within the *shifting cultivation* system, lowering of soil fertility, declining crop yield, food insecurity, hunger, stunting of children and increased poverty.

One of the most critical issues for the Chin State Government in planning for the future is to identify a socially acceptable and financially sustainable alternative to shifting cultivation in order to meet the nutritional needs of the population. A decline in production from shifting cultivation creates a need to introduce more permanent forms of agricultural production. Unfortunately, most of the land in Chin State is so steep that it is only suitable for forest production or shifting agriculture. A move to permanent agriculture is becoming inevitable, but the land is too steep to cultivate on a permanent basis or even to construct terraces on. Where terraces can be constructed, the input and other costs are generally too high for poor households to undertake without substantial support¹⁵. As a result, agricultural production is static or even in decline, and poverty and food insecurity is increasing.

3.4.5 Agriculture and food security: Hunger and stunted children

Most villages in Chin State experience food shortages every year, usually in March and April, immediately before the arrival of the monsoon. Coping strategies include the growing of cash crops and/or the cutting of firewood for sale in order to purchase food. The MIID Agriculture Team visited a number of villages during their field investigations and discussed with households and village leaders their situation in relation to food security. Most reported not having sufficient food for several months each year. The period of insufficiency and hunger was generally reported as being for about 3 – 4 months in the period from March to August. The Chin State Department of Agriculture assessed the level of rice sufficiency of townships visited by the Team as being between 32% and 94% - see Figure 6.

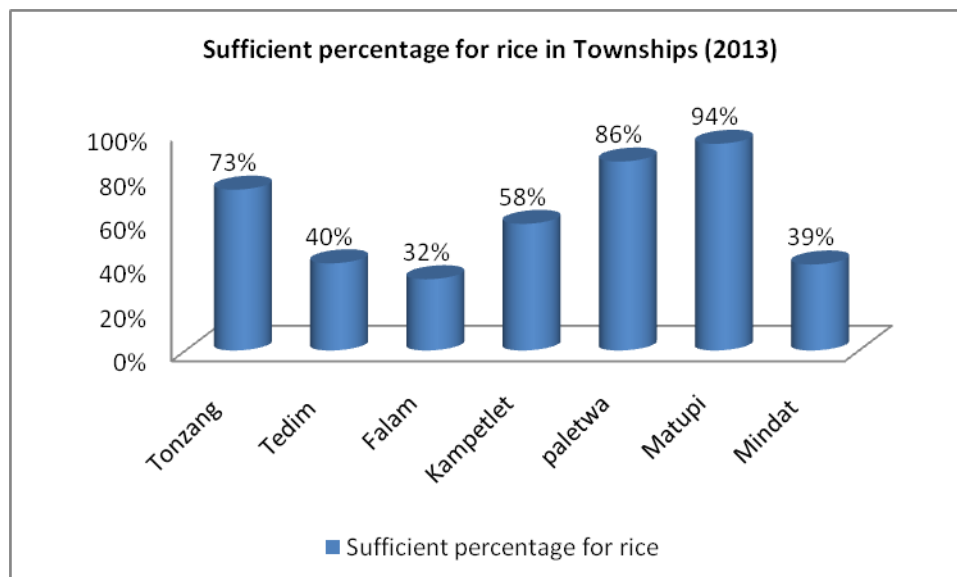


Figure 6 - Food sufficient status of Townships in Chin State¹⁶

¹⁵The Agricultural Team estimates that it would cost US\$ 2,000 worth of labour to develop one acre of terraces.

¹⁶Source : DOA, Chin State

This insufficiency of food production is reflected in the health of the children of Chin State— A UNICEF/MICS “Myanmar Multiple Indicator Cluster Survey 2009-2010” found 9.4% of Chin children are under 2500 g (5.5 lbs) at birth, ranking Chin State as the state in the Union with the worst indicators of underweight babies. More than 30% of children are undernourished and 58% suffer severe to moderate stunting. These are also the poorest nutritional indicators of any state in the Union. They are very disturbing and indicate an agriculture and food production system that is failing to meet the most fundamental needs of the people. The system cannot provide sufficient food for the children. The numbers also indicate that government support structures for these households are insufficient and that the government is unable to cope with the magnitude of the problem of providing food relief to children. In planning for the future, monitoring children’s nutritional status is essential and priority must be given to nutritional and health needs, as well as agriculture and food production.

From a planning perspective it would appear that effective monitoring of childhood nutritional status and defining the greatest areas of food shortage would be an important targeting tool for planning government interventions to support agricultural production. At present, less than 3 % of the State’s budget is devoted to the agriculture sector and there needs to be substantially more investment in agriculture if progress is to be made on the social and economic issues highlighted above.

3.5 INFRASTRUCTURE AND COMMUNICATIONS

3.5.1 Roads

The feature that dominates all aspects of the economic and social environment in Chin State is the extremely rugged terrain and the high cost of constructing and maintaining roads. Chin State lacks effective road infrastructure and this affects everything from agriculture and industry to health and education. Poor roads make exporting agricultural or industrial goods very expensive and often, not competitive on the open market. Imports are also expensive, increasing production costs for agriculture and industry and adding to living costs for the entire population. This is especially difficult for those communities that are not self-sufficient in food. Lack of roads also makes it difficult to provide health and education services to remote communities reflected in Chin State having some of the poorest health and education indicators in the Union.

From a planning perspective investment in roads is essential. Road construction and maintenance consumes almost half the State’s budget. In future plans it will be important to focus on improving the efficiency of the current levels of investment, rather than simply adding more money to the road sector. Roads that do get approved for construction need to be effectively targeted to provide the maximum economic and social benefits. It will be necessary to develop a comprehensive integrated plan for developing the State’s road network and set priorities. The MIID Infrastructure Team has also identified several construction techniques which if adopted could result in considerable cost savings in road construction and maintenance (details of these are presented in the Working Paper on Road Infrastructure).

3.5.2 Air links

Chin State does not have an airfield or an airport to provide connection by air to the rest of Myanmar and the outside world. Air linkage was promised under the Ceasefire Agreement and it should be established as a matter of priority in order to support the development of tourism and any external investment in business and industry.

3.5.3 Water Supply

Compared to other States in the Union, Chin households are relatively well off in terms of domestic water supply. An estimated 31.3% of households have piped water connected to their houses (poorer households only 25.2%). For households that do not have access to reticulated water supplies the picture is not so positive. The time taken to collect water by hand from springs and rivers is the highest in the Union. A domestic water

supply shortage problem is also emerging in the major towns, but State Government and Township Administrations have plans in place to address this issue.

3.5.4 Electricity Supply

There are very few towns in Chin State that have reliable 24-hour electricity supplies. Much of the current generating capacity is hydropower and nearly all schemes do not have sufficient capacity to meet the demand, forcing a need to rotate supply to consumers. The Union Government is expanding the National Electricity Grid into Chin State, to at least Hakha Township. In terms of rural electrification, there are some mini-hydro schemes in place that are mainly privately developed and operated. There is considerable potential for developing additional mini-hydro schemes, solar systems and wind turbines to supply more remote communities considered too expensive to connect to the national grid.

3.6 SOCIAL INDICATORS

With regard to social and material wellbeing, Chin people record among the lowest figures of all the States and Regions in the Union. For the year 2013-2014 the Gross Domestic Product (GDP) per capita for Chin State was only MK 330,000 (US\$ 336) compared to about MK 730,000 (US\$ 745) for Myanmar as a whole¹⁷. The overall employment rate in Chin State is estimated at only 54% and there appears to be a significant level of underemployment for a large proportion of the population¹⁸.

The poverty rate in Chin State is 73%: the highest in the Union¹⁹. The State only produces about 70% of the grain it needs and hunger is common in poor households for several months each year, resulting in a *child stunting rate of 58%*, also the highest in the Union. The rugged geography and scattered population makes it difficult to provide education and health services in rural areas. It is difficult to retain teachers and medical staff and this is reflected in high dropout rates in schools and a high incidence of many common and preventable diseases.

Health indicators in Chin State are among the worst in Myanmar. With 342 sanctioned positions for medical doctors, only 64 doctors have been appointed and are actually working in the State. The situation is similar for nurses where there are 888 sanctioned positions and only 413 nurses in position. Chin State has the highest incidence of *malaria* and *enteric diseases* of any State in the Union. The UNICEF/MICS “Myanmar Multiple Indicator Cluster Survey 2009-2010” showed the State has the lowest proportion of mothers (50%) receiving anti-natal care by a skilled operator. In childbirth, 25.1% of all births are attended by only a Traditional Birth attendant; 10.4% of births are without any assistance at all; and only 5.6% of births are in a “*healthy facility*”. Neo-natal tetanus vaccination coverage is only 76.4% (the third lowest in the Union) Hepatitis B1 vaccination coverage is the second lowest in the Union.

In terms of family planning only 7.8% of women who have been married use any form of contraceptive: the lowest in the Union. Regarding HIV and AIDS, only 3.3% of women knew where they could get a diagnosis and only 22.2% could identify all three ways to prevent HIV transmission.

Statistics reflect a lack of health personnel and the difficulties health providers faces connecting with the population in remote areas. It would seem that additional financial incentives provided by the Union Government to entice doctors and nurses to work in Chin are not working and a new approach is needed. There is no point increasing the number of positions for doctors and nurses if the positions cannot actually be filled.

¹⁷According to the Government’s Official figures

¹⁸Based on the UNDP Household Survey conducted in 2010

¹⁹UNICEF/MICS “Myanmar Multiple Indicator Cluster Survey 2009 – 2010”

3.7 ADMINISTRATIVE STRUCTURE

3.7.1 Administrative Boundaries – Districts, Townships and Villages

The administrative capital of Chin State is Hakha and the State is divided into three *Districts* with a total of nine *Townships*, as follows¹⁰:

- Falam District: Falam, Tedim and Tonzang Townships
- Hakha District: Hakha and Thantlang Townships
- Mindat District: Mindat, Madupi, Kanpetlet and Paletwa Townships

Each Township is made up of a large number of villages. Villages are grouped into Village Tracts led by a Village Tract Administrator elected or publicly chosen by villagers. Village leadership is vested in village elders and persons of trust, who –with other stakeholders - form the Village Development Committee.

Table 1 – Township data Chin State

Chin State Data					
	Township	Population** 2014	Area* (Sq.mile)	Cultivable-land* (acres)	Per capita income* (Kyat) 2012
1	Tedim	87,389	949.69	29,021	219,565
2	Tonzang	21,261	969.73	10,561	324,383
2a	Kyikha (sub Tsp)	11,139	390.62	3,452	
3	Thantlang	50,363	1371	28,489	263,953
4	Falam	41,395	914.87	24,925	240,779
4a	Rih (sub Tsp)	6,622	75.25	2,731	
5	Hakha	48,266	1608.2	25,173	329,409
6	Kanpetlet	21,259	963.82	9,583	456,695
7	Paletwa	64,806	3127	51,064	232,408
7a	Sami (sub tsp)	32,093			
8	Matupi	39,355	1906.4	21,235	287,982
8a	Rezua (sub Township)	12,202	410.4	6,210	
9	Mindat	42,540	1219.9	23,849	327,900
	State total	478,690	13906.88	236,293	275,028

Source: *GAD, Chin State , 2013 and ** Census 2014

3.7.2 State Parliament (Hluttaw) and State Executive¹¹

Since 2010, Chin State has had a partially elected parliament consisting of 24 members, 18 of whom are elected and 6 who are non-elected representatives of the military. The State Executive is headed by the Chief Minister and is composed of 10 ministers, two of which are appointed by the Chief Minister.

3.7.3 Township Governance Framework

Profound changes have taken place in Myanmar’s Township and village level administrative arrangements as a result of the Union Government’s reform drive to decentralize and establish a *bottom-up* planning process involving *the people*. Important changes include:

- The passing of the **Village Tract Administration Law** provides for the election of Village Tract Administrators;

- The State Parliament passed **The Municipal Law** creating Municipal Administrations at the Township level. These Administrations have a level of autonomy and their own revenue raising powers from license fees, user fees, etc.²⁰
- Within each Township Administration, three committees have been established: the Township Management Committee; the Township Municipal Affairs Committee; and, the Township Management Support Committee. These committees are composed of both civil servants and representatives of the community. See Annex 3 for the Chin State Planning Structures - Chin State - Township Committees: Overview of Structure.

4. MYANMAR'S PLANNING PROCESS AS IT AFFECTS CHIN STATE

4.1 NATIONAL PLANNING DIRECTIVES

President U Thein Sein has proposed a radically new approach to planning in Myanmar. Previously the Government operated a centralized “*command economy*” where nearly all decisions were made at the Union level and the role of the States and Regions was only to *implement* those parts of the National Plan that affected their State. The Union Government’s new approach to planning is “*bottom-up*” and the responsibility for planning each State’s operations and budget has moved to the State Governments²¹. The Union Government is currently preparing a National Comprehensive Development Plan, which will be implemented over a five year period beginning in fiscal year 2016 until mid-2021. Each State and Region is preparing its own State Comprehensive Development Plan (CDP). This Project being implemented by Myanmar Institute for Integrated Development is supporting Chin State to develop its CDP.

4.1.1 Planning in States and Townships

Within the States, the Townships are now the *basic planning unit*. Within the Township Administration there are four main committees (see Annex 3):

- Township Management Committee (TMC). Controlled by the General Administration Department, the TMC occupies the executive position within the Township. It is responsible for formulating Township Plans and Budgets and their implementation; the provision of public services; revenue collection; and all procurement. All positions on the TMC are filled by Government/Administration personnel. The TMC has 6 subcommittees reporting to it: a) Peace and Security; b) Planning and Finance; c) Commerce and Production; d) Education, Health, and Human Resources Development; e) Rural Development and Poverty Reduction; and, f) International Aid and Investment Coordination and Management. These Sub-Committees serve an advisory function to the TMC and provide the necessary inputs for the planning process. All Sub-Committees have two Government/Administration people and seven *selected or elected* representatives from the community, the private sector and/or community organizations.
- Township Municipal Affairs Committee (TMAC). Includes an elected chairperson, up to nine Members and an Executive Secretary who is the Head of the Township Municipal Department. Two are from Government/Administration and seven members from the community. Its role is to assist in the management of urban and rural affairs; collection, administration and spending of township-sourced revenue and public services for roads, water and markets.

²⁰ The Municipal Administration was previously called the “Municipal Department” at township level and was part of the Department of Rural Development of the Ministry of Border Affairs and National Races within the State Government (Dep. of Rural Development now under Ministry of Livestock, Fisheries and Rural Development).

²¹ Responsibility for planning some sectors such as Health and Education has stayed at Union level.

- Township Development Supportive Committee (TDSC). There are nine members responsible for electing their chairperson. The TDSC includes two Government/Administration members and seven selected/elected members from the community. The head of each of the Government departments becomes the Executive Secretary of a series of subcommittees covering the activities of their department. The main roles of the TDSC are: community consultations; providing two-way communication with the community; supporting bottom-up planning; promoting SME development; participating in rural development and poverty reduction activities; and, acting as the channel through which the community can express any grievances to the Government.
- Township Planning and Implementation Committee (TPIC). This is chaired by the Administrator and is responsible for data collection and reporting to the TMC.

The planning process is expected to be initiated at the village level with support provided by the TDSC. Village Development Committees have been formed and are expected to submit ideas/proposals to the township for possible inclusion in the Township Plans.

4.1.2 Possible impact of new planning process on resource allocations to Chin State

With the shift of planning responsibilities to the States and Townships, their resource allocations now depend on the State's ability to present an acceptable plan and budget to the Union Government for funding. The various States and Regions are now competing with each other for Union Government resources and for resources from the donor community. A State's ability to plan effectively and to present their plans in a manner that is convincing to the Union Government and/or the donor community will determine the quantity of development resources they receive.

Chin State is somewhat disadvantaged in the new approach to planning and budgeting because, unlike the mineral rich states, it has very limited means of raising revenue within the State and is highly dependent on Union Government funding for its development budget. However, the Union Government recognizes Chin State's problem and provides additional funds through grants such as the Poverty Reduction Fund.

Decentralization and the shifting of planning responsibility to the States and Townships is a positive move and will provide considerable governance and economic efficiency benefits. During this transition period, considerable strain is being placed on Township and State administrations. It is for this reason that the Chin State Government has sought the assistance of MIID to support its planning processes.

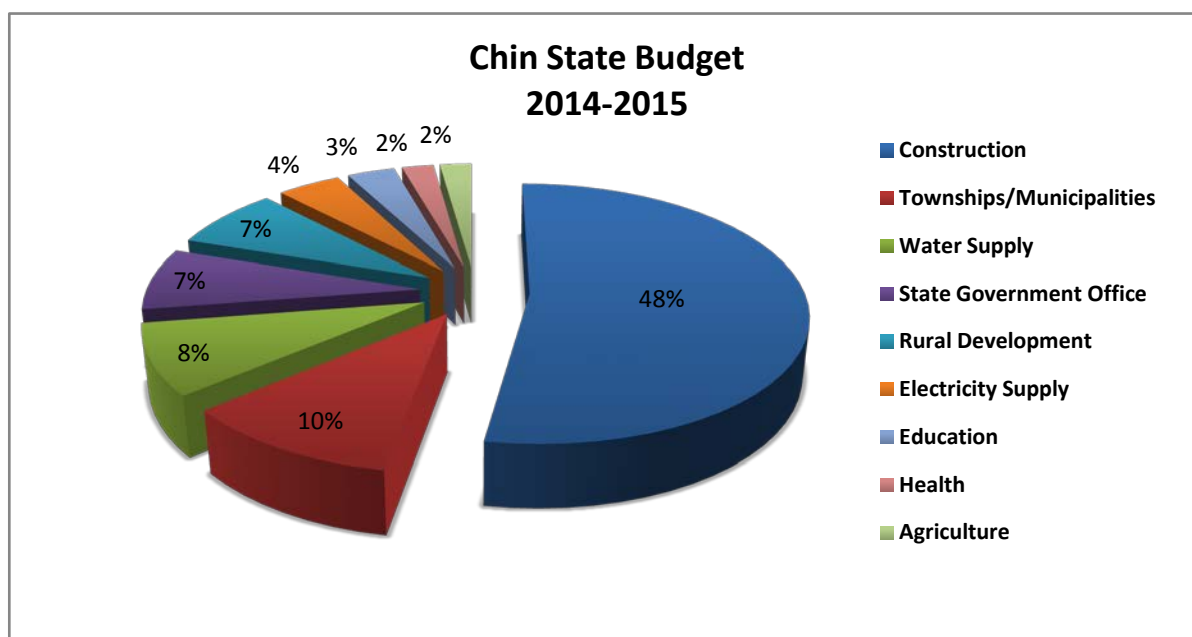
4.1.3 Chin State's Plans and Budget for 2014-2015

The MIID research team received and reviewed "Annual Development Plans and Objectives" prepared by the Department of Chin State, Union of Myanmar 2014-2015 and the Budget for Chin State. The document reaffirms the State's commitment to implementing the national economic reform policies being promoted by the Union Government, stating – "*It is imperative that the Chin State government affirms and implements the regional sustainable development policies and objective as formulated by the Union Government*".

The State Plan 2014-2015 sets the following policy objectives:

- I. *To expand agriculture and livestock breeding, and to develop and support upland farming (terraced farming).*
- II. *To develop Small and Medium Industrial Enterprises.*
- III. *To develop a better road and communication system.*
- IV. *To develop Human Resources*

The Budget for 2014-2015: Chin State's total budget for the current year is MK 122,797 million (US\$110.5 million) of which the major *expenditure items* are as follows:



The share of 48% allocated to Construction reflects the very high cost of building and maintaining roads in Chin State. A summary of the main planning targets for 2014-2015 and the expenditure allocations is presented in Annex 2 – Review of Chin State Plans and Budget 2014-2015.

5. THE PLAN

5.1 THE PLANNING PROCESS

5.1.1 Support to the Chin Government's Planning Process

The planning support provided to the Chin State government has four objectives:

- To contribute to the Chin State Government's planning process for the State's development and provide inputs for the National Comprehensive Development Plan.
- To assist the State to attract donor funding by presenting the government's development proposals in a manner used by donors when identifying projects for funding.
- To develop a methodology for preparing a Local Social Plan (LSP) for use by UNICEF in other parts of Myanmar. This LSP initiative in Chin State will contribute and add value to the State's overall planning processes and put the State in the forefront of social sector planning and funding.
- To improve the planning capacity and facilitate the development of future Township and State plans in a more participatory manner.

5.1.2 Setting objectives and defining outcomes

In preparing the Plan, the MIID research team has worked in partnership with its State and CBO counterparts and has been guided by the Government of Myanmar's new approach to planning. The planning process commenced with a Launching Workshop, attended by a wide cross-section of stakeholders from government and civil society. At this workshop, a SWOT analysis was undertaken in which all the stakeholders defined the framework within which the planning study would operate. They also established the following hierarchy of *objectives*; *outputs* and *outcomes*:

Strategic Objective

- To contribute to on-going decentralization reform and the peace consolidation process at the national level and in Chin State.

Expected Outputs

- Contribution to a Comprehensive Socio-Economic Development Plan for Chin State, including a Local Social Plan (formulated, discussed and approved);
- A documented multi-stakeholder, bottom-up planning process that increases the institutional capacity for needs assessment and planning of the Chin State Government and other stakeholders;
- A Local Social Plan for Chin State that serves as a reference for social protection policy and budgeting at national level and for replication in other States/Regions.

Expected Outcomes from the documents prepared and the implementation of the Plans, include the following:

- Greater participation of Chin people in determining development priorities;
- Increased financial flow from the Union Government and increased opportunities to access International Assistance;
- Improved access to basic public services for the Chin people: roads, water supply, health, education, food security;
- A holistic approach to social protection and its integration into the processes of economic development;
- Improved social indicators in health, education, the empowerment of women, the rights of children and persons with disabilities (PWD);
- A new approach to agriculture, shifting cultivation, food production and food security;
- Increased agricultural production resulting in increased income and food security for farming households;
- A more coordinated and cost effective approach to infrastructure development, particularly for roads;
- Increased development of SMEs;
- The foundations on which to develop a sustainable eco-tourism industry;
- Increased institutional capacity to manage the new planning and development environment.

5.1.3 SWOT Analysis of Chin State’s Development Prospects

Table 2 - SWOT Analysis of Chin States Development Prospects

<p>Strengths – to build on</p> <ul style="list-style-type: none"> • Strong and Diverse Civil Society – Including the Churches • Diversity and Value of Natural Resources • Agricultural Potential and land availability • Natural beauty and clean environment for Tourism • Stability, social harmony – the Ceasefire Settlement • Human Resources – Education 	<p>Weaknesses – to be addressed</p> <ul style="list-style-type: none"> • Poor road infrastructure and communication • Weak Social Infrastructure (schools and health facilities) • Weak Technical Infrastructure (WASH, Telecom, and Electricity) • Poor Market Access • Physical and intellectual isolation <p>Other Weaknesses</p> <ul style="list-style-type: none"> • Limited access to education (all levels) • Insufficient labour force, scarcity of skilled labour, brain drain • Limited access to capital for SME • Inadequate (access to) technology/skills • Underutilization of land resources, low productivity (shifting cultivation) • Ethnic and language diversity ('Tribalism') • Forestry and environmental degradation - fires, shifting cultivation, deforestation
<p>Opportunities - to seize</p> <ul style="list-style-type: none"> • Proximity to India for cross-border Trade • Natural Resource for investment in agriculture, eco-tourism • Attractive for External Assistance • Strong free media • Telecom and Internet - could reduce isolation 	<p>Threats to manage and mitigate</p> <ul style="list-style-type: none"> • Severe climate (change) - landslides • Complex geography – remoteness • Climate change • Out-migration – brain-drain • Lack of learning facilities • Poor teaching quality

5.1.4 Strategic Context

The most important strength and opportunity identified by the analysis is the strong sense of Chin identity and community. Churches are a powerful influence in Chin State and have played an important role in past development. The challenge will be for the government to harness the churches’ and the CBOs’ organizational strengths to deliver on the *people-centred development agenda*²².

Agriculture is seen as the main economic strength, but it is not performing optimally. This sector will need substantial support if food self-sufficiency and poverty alleviation are to be achieved. Chin State has the lowest population density of any State or Region in the Union. Its low population density is a *strength* needed for expansion of agricultural production (and also forestry). However, this *strength* is tempered by difficult terrain, which limits the agricultural, livestock and forestry development options, allowing only for activities that will not result in soil erosion and landslides. While there are a number of development options that can meet these criteria, they involve a radical change from the *shifting cultivation system* on which the vast majority

²²The subsequent field research and community consultations highlighted the need to more coordination and cooperation between the State Government and the vibrant NGO, INGO and CBO communities in order to increase the financial efficiency of investments in development and to maximize their impact on improving the lives of the Chin people.

(around 80%) of Chin farmers currently depend for their subsistence. They also require levels of investment that the average Chin farmer does not have access to (up to US\$ 2,000 per acre).

The main weakness that emerged is poor road infrastructure, which impacts all aspects of Chin life; from the marketing of agricultural products to the importation of food. It also makes access to schools and health services difficult. It creates “*remoteness*” and *intellectual isolation*. This, in turn, has led to a low technical capacity at all levels, particularly at the grassroots level where there has been little innovation and the traditional system of shifting cultivation persists - even where yields are declining due to reduced rotation lengths and declining soil fertility.

The threats identified relate to Chin’s severe climate and topography seen as causing soil erosion, which undermines agriculture, and landslides which block roads and reinforces isolation. These climate related risks are only likely to increase with climate change. However, in a perverse way, in Chin State, climate change is likely to create a funding opportunity through access to Adaptation Fund: More money. Few places in Myanmar would be likely to be so adversely impacted by climate change as Chin State and this make the State a prime candidate for receiving Adaptation Fund support if a properly structured project were prepared.

5.1.5 Field Research

Based on the SWOT analysis, the priority areas for further research and development identified by stakeholders were:

- Social Protection
- Agriculture
- SME and Vocational Training
- Eco-tourism
- Infrastructure
- Institutional Development

MIID formed thematic teams to research each of these areas at field level and to prepare project proposals designed to address the issues and opportunities encountered in each sector. These were presented to a Prioritization Workshop in March 2014 and all the main stakeholders from the State, Township Administrations, NGOs and CBOs had the opportunity to verify the findings of the research teams and to establish their own development priorities.

5.1.6 Plan Formulation

From the findings of the field research and the Prioritization Workshop, a strategy has been developed for each of the sectors studied, and proposals to address problems have been identified in each sector. These sector strategies and projects have then been amalgamated to create the Strategic Development Plan and the Local Social Plan. The following sections identify the core problems in each sector and propose a strategy for dealing with those problems. In each case, project proposals have been prepared to provide concrete interventions action to the strategy proposed.

5.2 CORE PROBLEMS FACING CHIN STATE

The core development problems faced by Chin State include:

- Declining agricultural production system leading to poverty, hunger and very poor nutritional outcomes for children;
- Remoteness and the very difficult terrain for road infrastructure and agriculture;
- Some of the worst social conditions (particularly in health, nutrition and education) of any State in Myanmar; and,
- A lack of technical capacity and technical innovation in most areas of the economy over several decades.

5.2.1 A declining agricultural system

The vast majority of Chin's population is dependent on agriculture for their livelihoods. The root cause of poverty and poor social conditions in the State is the failure of the agricultural system to both, provide enough food to maintain basic nutrition and provide the incomes necessary to send children to school or purchase medicines to treat the sick. The agricultural system is failing because, over the last 50 years, there was a concentration of the farming population around villages with schools, clinics and other amenities. However, the farmers were still practicing their traditional system of *shifting cultivation*. As the population grew in these administrative centres, the pressure on the farmland close to the villages increased, leading to more frequent cropping of the land. The shortening of the fallow period resulted in a decline in soil fertility, which inevitably led to lower crop yields and the current situation of annual food shortages, hungry people and stunted children.

5.2.2 The impact of the rugged terrain on life in Chin State

Chin State's remoteness and very difficult terrain, affect all aspects of the lives of the people as well as the State's economy. Because the State is so mountainous and hillsides are so steep the cost of constructing roads is very high. Financial constraints have made it impossible to establish a comprehensive road network. In the places where roads have been constructed they have not been sealed and therefore, cannot be used throughout most of the wet season. Most villages are only accessed by tracks suitable only for motorcycles or packhorses. This makes it extremely difficult to move agricultural produce out to markets or to bring health and education and other services in.

Farming is very difficult due to the acutely sloping hillsides and the very narrow valleys that do not provide significant areas of flat land suitable for the development of irrigated agriculture. Remoteness also impacts on income from agriculture. The marketing of any surplus production of cash crops is difficult and expensive due to the poor road system. This reduces the cash incomes of farmers, which reduces the household's ability to buy food, pay for medicine and send children to school.

Remoteness and the very scattered population make access to quality education difficult. Teachers appointed from other parts of Myanmar are reluctant to work in Chin State because of its remoteness and poor communications. About one half of the established teaching positions are currently vacant. In many locations there are too few children per square mile to justify the investment in a school and in most areas many children have difficulty accessing schools due to the distance they must travel from their home. This leads to poor educational outcomes and limits the opportunities for employment or further education for Chin children. Dropout rates from school are high due to poverty and a shortage of labour. It is often necessary for the family to eke out its existence from a poorly performing subsistence agricultural system.

In the health sector doctors and nurses will not take up positions in Chin State due to its isolation and difficult living conditions²³. Rural clinics are difficult to access and there is a high incidence of diseases such as malaria and gastroenteritis. The problem is particularly acute for women in childbirth. More than 10 percent of births occur without any form of assistance and only 5.6 percent occur in what can be classified as a clean facility. If a mid-wife is available in the village and decides to refer a mother to a health facility, a complicated birth becomes even more complicated because of remoteness and a lack of roads and/or transport. Saving the mother and/or child is extremely difficult when it involves moving the mother in childbirth to a health facility where she can get proper care in such a life threatening situation. If a serious medical situation cannot be effectively dealt with locally, or if it occurs in the state's administrative capital, Hakha, the patient faces a 7-hour drive to Kalay for treatment.

²³Only 64 of the 342 sanctioned positions for Doctors have been filled and less than half the sanctioned positions for nurses are actually staffed

5.2.3 Poor social conditions and the impact on children, women and PWDs

As described above, Chin State has some of the poorest social indicators in the Union. Children are the most seriously affected in terms of education, nutrition and health conditions. Regarding education, children often have a considerable distance to walk to get to school and many do not attend any form of preschool. When children first enter school they have difficulties with the Burmese language (Burmese is not the mother tongue of most Chin children). Many schools are poorly staffed as teaching positions in Chin State do not attract teachers from other states of Myanmar. Household poverty and the demand for labour in the failing agricultural system put children under pressure to dropout from school. Moreover, if they do complete their studies, there are virtually no employment opportunities within the state and they will almost certainly have to leave home (and the State) in order to get a job. In the health sector the outlook for children is just as bleak. Most children can expect to experience hunger for several months a year and have a higher than 50 percent chance of being stunted due to malnutrition. Rates of diarrhoea, malaria and other infectious diseases are also higher than anywhere else in Myanmar.

Women in Chin State live a particular difficult life. In addition to looking after the children and ensuring there is sufficient food for the table and water to drink; they fill full-time roles in agricultural production and marketing. Because agricultural production is usually insufficient to meet the nutritional needs of the family, the shortfall has to be made up from off-farm employment. This is usually done by the husband, mostly in the neighbouring states of India. In this situation women have to take on additional farming work normally carried out by the husband. As in most societies around the world, women eat the least when food is short and experience the most hunger of anyone in the family, which is reflected in the low birth weight of their children. As explained earlier, women in Chin State bear their children under the most hazardous of conditions, generally the worst in Myanmar. Chin women also have the poorest access to family planning measures and the least understanding of HIV/AIDS of anywhere in Myanmar. In addition, women go without recognition in society – their voice is rarely heard or listened to in community matters. Under traditional law they are not recognized in the inheritance of the farm or the family home. Most disturbingly, women are also commonly subject to domestic violence.

People Living with Disability (PWDs) are poorly cared for through the social service system in Chin State. There is little understanding of the needs and rights of PwDs either in the community or within the government. Most children with disabilities are not protected in the education system and, if they do attend school, are often discriminated against and subject to ridicule. There is a need to increase the understanding of PwD in the community and in all sections of the government. PwDs need to be informed about their rights and supported to form self-help organizations. There should be a forum in which the PwDs can voice their concerns to the government. Most importantly, people living with disability need to be recognized within the government's planning processes.

In examining Chin State's social indicators, it must be recognized that the figures recorded are not a reflection of lack of commitment to address many of these pressing social issues on the part of the State or Union Governments. Rather, many of the situations are a reflection of *the high cost of doing business in Chin State*, the physical impediments confronting the administration in delivering essential services to the population and a general lack of administrative and technical capacity. The Union Government, in allocating MK5 billion of its Poverty Fund to Chin State in the 2014-2015 Budget, has singled out Chin in its drive to alleviate poverty in Myanmar. The allocation to Chin State is the highest provided to any state or region – most other states were only allocated MK 1 billion, despite having much higher populations than Chin State.

5.2.4 Technical and academic isolation

Another core problem identified during the field research is the lack of technical capacity in most sectors of the economy and in the planning process. The new planning process adopted by the Union Government is much more demanding on the States and townships and the planning capacity at the township level is quite limited. Township and Village Committees still need considerable support to develop the plans required by the Union Government before funds are allocated.

In agriculture, the hill areas of Myanmar have been relatively poorly served in terms of agricultural technology and innovation as the focus of national research efforts has been on the more productive rice culture of the lowlands. Chin State lacks access to improved planting material designed specifically for its climatic conditions, altitude and soils. Substantial production gains can be achieved with more appropriate genetic material, particularly in relation to upland rice and maize but also in fruit trees and grape vines.

With regards to information technology, Chin State has very limited connectivity to the Internet and mobile phone coverage is poor. However, the government has plans to improve this situation in the near future. Given the massive investment required to develop the road network and the inevitable time delays in providing road connections to villages, investing in internet and mobile phone connections is likely to be the most economical way to communicate with outlying villages. In education, and in other sectors, information technology offers an opportunity to provide support to teachers in remote locations and also the possibility of remote learning programs for students without access to a high school. Similar opportunities exist for further education of post high school students in more remote areas or for specialized subjects not readily available at regional universities or other institutions.

In developing medium term plans (5 to 10 years), it is important to look to the future and not just rely on the solutions developed in the past. It will be important to make the most of all planned investments in information technology and improved mobile phone coverage. The plan needs to be built in parallel with an investment in infrastructure and should not wait for design process of new procedures to start or until the communication infrastructure has been completed.

There is a need for a comprehensive program of retraining. In all sectors there is need to introduce subject matter specialists and extension workers trained in the latest technologies through an intensive program of in-service training. The Union Government is now advocating a radical shift in the way plans are made and implemented. The command economy which dominated the approach to extension in the past is gone, and the President is demanding *a more people and community centred approach* to planning and extension. To deliver the results the President requires will need a quantum shift in the way government officers deal with the community. To achieve effective results they will require re-training in the new approaches being advocated. In addition it will be important for government officers to team-up with NGOs and INGOs already practicing a *people-centred approach* to their work. Both the Government and the NGOs have a lot to gain from working together, but it is the farming communities that will be the real beneficiaries of more cooperative and coordinated approaches to extension.

5.3 DEVELOPMENT VISION

The Development Vision for the Chin State has been articulated in its Annual Development Plans and Objectives 2014-2015:

“To achieve balanced and sustainable development that will benefit all the Chin people and their communities.”

The Chin State Government has embraced a *people-centred approach to development* that is being promoted by the President and in the 2014-2015 Plan it has set itself some ambitious targets for the reduction of poverty and improvements in health and education.

The vast majority of Chin's population is dependent on agriculture for their livelihoods and subsistence. The root cause of their poverty and poor social condition is the failure of the agricultural system to provide enough food to maintain basic nutrition and to provide the cash income necessary to send children to school or purchase medicines to treat the sick. At a practical level the development vision includes:

- Ensuring that Chin State can achieve self-sufficiency in food grain production
- Ensure that each household is able to produce or purchase sufficient food to maintain a satisfactory level of nutrition for all its members and have sufficient surplus to fund the education of its children and the medicine necessary to keep them in good health.

5.4 COMPREHENSIVE DEVELOPMENT PLAN AND LOCAL SOCIAL PLAN COMPONENTS

The Local Social Plan (LSP) is an initiative that UNICEF has been successfully developing and implementing in a number of countries²⁴. The work carried out in Chin State by MIID with UNICEF's assistance is designed to develop a LSP for Chin State and establish a LSP methodology that may be replicated in other parts of Myanmar.

The LSP is designed to address social and economic vulnerability in the area selected for its implementation. Its development is based on extensive consultations with stakeholders, particularly those working in this field in civil society. It employs a needs and rights-based intervention strategy. It is anchored with both government and non-state stakeholders and on completion of the design, consists of a number of project proposals prepared to address the priority vulnerabilities identified in the design process. UNICEF's principles on social protection are based on: a) progressive realization of universal coverage; b) national systems and leadership; and c) inclusiveness. Social protection aims to prevent, reduce and eliminate social and economic vulnerability. Social protection schemes can include: risk mitigation and management; labour market initiatives and food for work; pension and subsidy schemes; and, support to vulnerable groups.

²⁴UNICEF has recently successfully rolled-out a LSP in Armenia and the UNICEF Officer responsible to implementing that program participated in the Chin State LSP Prioritization Workshop and advised the LSP Team on aspects of the work.

5.4.1 Characteristics of Vulnerable Groups and Households in Chin State

The field research identified the following groups to be most vulnerable within the Chin community: a) the children; b) the elderly; c) PwDs; d) the women; e) the poor; and, f) the sick.



Figure 9 - Vulnerable Groups

Field research established that the characteristics of vulnerable households included: (a) not being able to send children to school; (b) not having money for food; (c) not having an economic safety margin; (d) having no land or property; (e) having many children; and, having unproductive family members (old or with disabilities). See Figure 10:

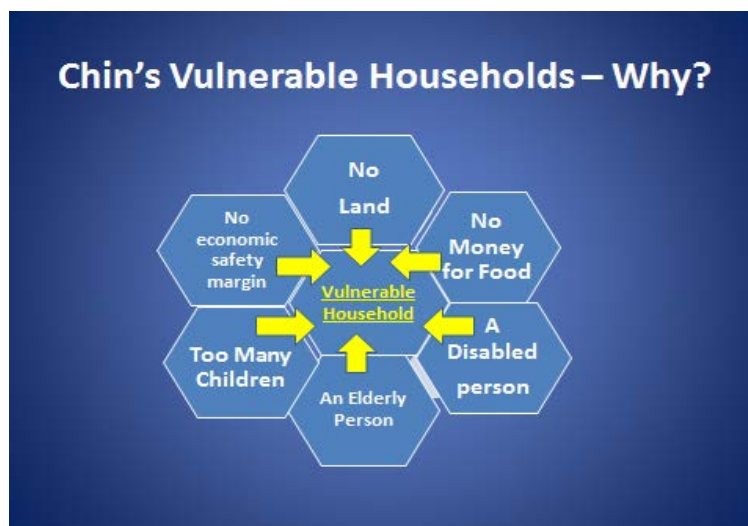


Figure 10 -Causes of Household Vulnerability

Research found that children were vulnerable to: poverty; food insecurity, marginalization; and, deprivation of rights. The most vulnerable children are seen as being; orphans; children with disabilities; and, children subjected to child labour. Inability to attend school was seen as a particular vulnerability with intergenerational implications – see Figure 11.



Figure 11 - The Vulnerability of Children

Women’s rights and gender equality was also a subject of detailed investigation during field research. The field work found that: (a) there was very little knowledge or recognition in Chin State of women’s rights; (b) they had limited voice, little economic empowerment, almost no property rights and often had limited education; (c) marriage practices were often discriminatory; (d) outward migration and possibly human trafficking were seen as problems; and, (e) domestic violence was widespread.



Figure 12- The Vulnerability of Women

With regard to the PwDs the study found that: (a) there is no systematically prepared data on the number and type of disabled persons in Chin State; (b) there are no government sponsored social protection mechanisms for PwDs; (c) households with a member with disabilities are more vulnerable; and, (d) there is little recognition of the rights of PwDs in schools, health institutions and by the general public.

Regarding the elderly the field research found that: (a) the elderly were mainly dependent on family members and any households supporting an elderly person themselves became economically vulnerable; (b) there is very little State support for the elderly without relatives and Churches are their main refuge; and, (c) there is only very limited provision for the elderly within the health system.

5.4.2 Existing social protection mechanisms (the lack of)

The review concluded that social protection mechanisms in Chin State and government institutions are under-staffed, under resourced and has limited implementing capacity. As a result of this, church-based CSOs are responsible for providing most of the social welfare activities in the State.

Regarding Health, the review found that in the Public Health Sector at the village level there is poor coverage, a low level of service and often, the services provided are of poor quality. This is due to lack of financial resources and shortage of personnel when allocated positions are not being occupied. Similarly hospitals were found to be poorly equipped. Identified areas of concern includes: poor nutrition and under nutrition, malaria and other infectious diseases and limited coverage of reproductive health measures.

Regarding Education the review highlighted: (a) lack of access to pre-schools, particularly for children from poorer households; (b) the problem of many children dropping out from school, often because of the family's financial difficulties; (c) many teaching positions are not filled due to the harsh conditions and isolation at many rural schools in Chin State; (d) the curriculum needs to be improved and there is need for a curriculum in the main Chin language for children first entering the schooling system; and, (e) teacher training should be improved and a system of in-service teacher training established to support improvement of the quality of teaching.

5.4.3 The LSP as a strategy for intervention

The LSP has been prepared as a stand-alone document in order to present the methodology, but it is essentially only one element of an integrated planning process. It has been designed as a component of the Chin State Comprehensive Development Plan, prepared to feed into the National Comprehensive Development Plan. The Chief Minister of Chin State has indicated that the provisions contained in the LSP will be incorporated into the Chin State budget for 2015/2016 that will be submitted to the Union Government for funding. This process will become part of all subsequent budgets prepared in Chin State.

It must be emphasized that while the LSP does focus on a number of specific social issues, most elements in the economy impinge on social outcomes for the people involved. The Local Social Plan needs to take into consideration economic factors that affect the lives of people and the services they can access within their communities. Economic and social elements are inextricably intertwined. *Figure 13* below illustrates the LSP brings these factors together:



Figure 13 – Strategic Plan/LSP Links

5.4.4 The Impact of Agriculture on the social conditions in Chin State

Most of the Chin people depend on agriculture for their livelihood, providing food; covering the cost of health treatment; and sending children to school. Agriculture creates opportunities for a better life. Some reasons for *poor health indicators* in the State are its isolation from health services because of poor or non-existent roads. The planning process needs to provide an integrated and coordinated response to both the economic and the social conditions to ensure the State achieves balanced development. Success must be measured at the level of improvement in the lives of all the people, not just the number of miles of road constructed.

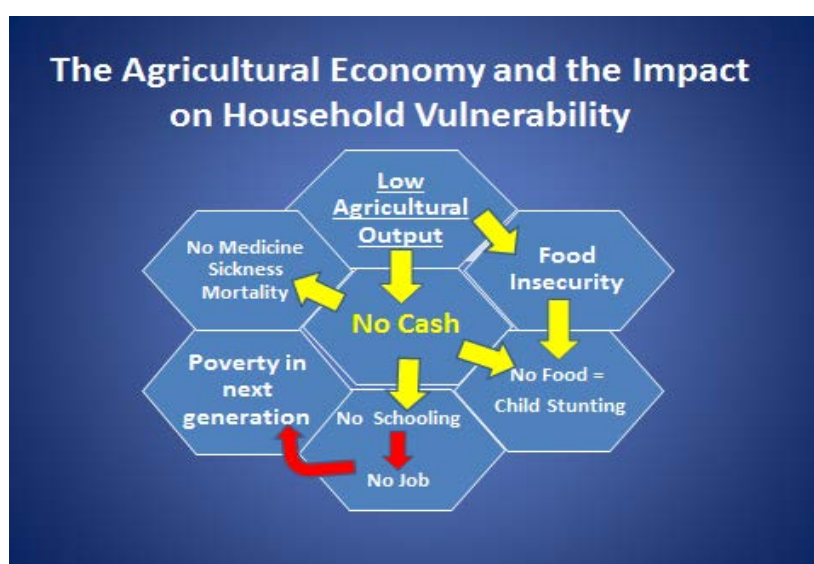


Figure 14- The Agricultural Economy and Effects on Household Vulnerability

The LSP will be integrated into the State Government's Plans and Budget for 2015/2016. For future years, the LSP must become an integral part of the planning process and needs to be funded within the Government's normal budget process. To the extent that additional donor funding may become available it should be seen as being *additional* to the Government's normal budget – not a replacement for it. The LSP must also incorporate the activities of the NGOs and CBOs in a manner that produces coordinated and cost effective outcomes for the community. It is in the *social sector* that this coordination and cooperation with *civil society organizations* is most necessary and in which the benefits are likely to be most evident.

5.5 PROJECT PROPOSALS: IDENTIFYING SOCIAL NEEDS AND CONTRIBUTIONS TO THE LSP

The project proposals that address the problems and priorities identified are the result of extensive consultation with stakeholders in Chin State. The proposals are based on a number of criteria:

- They address needs and key vulnerabilities identified
- They are designed for state and township level implementation
- They reflect a rights-based approach to social protection.

There is not necessarily a linear connection between needs identified and a specific project proposal, as these often address contextual problems and may have a multi-sector scope. Therefore the immediate response for some problems is catered for under the overall Chin State Development Plan, e.g. initiatives related to improving primary health services. In the following, project proposals are presented under four main groups of: capacity building, children's rights, disability rights and women's rights, fully elaborated in Volume 2.

5.5.1 Projects to Increase Institutional Capacity

In relation to institutional capacity, the key problems identified by CBOs and Government departments working in the field of social protection were: a) a basic lack of knowledge in the community of the existing social protection framework; b) staff shortages regarding the delivery of services in health, education and social protection; and, c) low skill levels amongst teaching staff. The projects designed to address these problems are listed below and presented in detail in Volume 2.

- A Project to build capacity of Government institutions on Social Protection and the Rights of Vulnerable Groups - **US\$ 350,000 over 3 years**
- A Project to address the shortage of teachers for post-primary level classes by deploying mobile teaching teams - **US\$ 750,000 over 3 years**
- A Project to address the problem of low Teaching and Learning Quality and high dropout rates from schools in Chin State - **US\$ 900,000 over 3-5 years**

5.5.2 Project Proposals to Meet the Need and Protect the Rights of Children

Children have been identified as being highly vulnerable in the economic and social environment of Chin State, particularly in the poorer and more remote rural areas. They bear the brunt of an insufficient educational system and health and food production systems. Field level workers in the health and education system, as well as in individual households, have identified problems being faced by children as being: a) periods of insufficient food, malnutrition, stunting and poor health; b) poor access to education, particularly at the pre-school level; c) failing to understand the language used in teaching at the point of entering the school system; and, d) poor health due to deficiencies in the system for disease control and poor access to health facilities, with a focus on gastroenteritis and malaria. The following list of projects has been proposed to address these issues. They have been presented in detail in Volume 2.

- A Project to address the problem of Low Quality of Early Childhood Capacity Development Programs and Limited Access to Pre-Schools - **US\$ 900,000 over 5 years**
- A Project to improve the learning efficiency of Chin children entering primary school without sufficient knowledge of Myanmar language; Chin language curriculum development - **US\$ 150,000 over 1 year**
- A Project to improve Children's and Women's food rights and nutritional status – **US\$ 500,000 over 5 years**

5.5.3 Projects to Meet the Needs and Support the Rights of people with disability (PwD)

The current problems of PwDs in Chin State start from childhood. In most cases, they are denied access to the educational system. Further, the system does not cater to diversity in the population and the school environment is non supportive and often discriminatory against PwDs. There is a need to increase the understanding of issues relating to PwDs in both the community and in the institutions of government, and PwDs should be supported to form organizational structures that will give them a voice in the community and in the decision making forums of government. Project proposals listed below are designed to address these issues and they were prepared in close consultation with PwDs and their organizations. The detailed proposals are presented in Volume 2.

- A Project to increase access to primary education for children with disabilities - **US\$ 750,000 over 3-5 years**
- A Project to advocate the needs of PwDs and disseminate information on their rights - **US\$ 350,000 over 2 years**

5.5.4 Projects to Support the Rights of Women

The issues relating to women that were identified through detailed discussions with women and women's groups, CBOs and women working in government included: (a) an administration that lacks knowledge of or recognition of women's rights; (b) women's limited voice in public and household affairs; (c) lack of economic empowerment and almost no property rights; (d) often poor education; (e) marriage practices that are often discriminatory; and, (f) outward migration and possibly human trafficking; and, (g) possibly most importantly widespread domestic violence against women. The project proposals that have been prepared to address these issues are listed below and presented in detail in Volume 2.

- A Project to improve women's access to reproductive health and rights - **US\$ 700,000 over 3 years**
- A Project to improve the social status of women and promote their rights - Paralegal advisory training for women - **US\$ 215,000 over 2 years**
- A Project to support a Chin Women's Organization Network and to strengthen existing women's organizations in Chin State - **US\$ 85,000 over 1 year**
- A Project to promote gender equity and promote the role of women in community development and public decision-making - **US\$ 65,000 over 1 year**

5.5.5 Projects to Address Priority Areas for Development of the Health Sector

Access to health in remote areas and the topic of communicable diseases have been identified as the major issues during the research phase. Healthcare in rural areas is limited due to the lack of manpower. It is also necessary to address the issue of communicable diseases like Malaria, TBC, HIV, etc. to avoid spreading and raise awareness of preventive measures. The detailed project proposals are presented in Volume 2.

- A Project to address technical manpower shortages in rural health sector through greater use of trained volunteers – US\$ 1.575 million over 5 years
- A Project to provide increased support for preventing priority communicable diseases – US\$ 1.030 million over 3 years

5.6 EXPECTED OUTCOMES: IMPLEMENTATION OF THE LSP PROGRAM INITIATIVES

The LSP addresses problems identified by engaging relevant and available resources and applying specific strategies as described above. Practical implementation as concretized in project proposals, each with specific objectives, activities and expected outcomes represents a comprehensive response to the multiple problems identified and lead to the following expected outcomes:

Capacity building	<ul style="list-style-type: none"> • Increased knowledge and awareness of vulnerable groups' rights • Improvement of post primary education in villages • Increased teaching and learning quality and reduced drop-out from schools
Children's rights	<ul style="list-style-type: none"> • Improved learning for children at the primary school level through better quality teaching and better access to subjects (Chin language curriculum) • Improved coverage and access to Mother and Child Health care in villages • Improved nutritional status for women and children • Access to preschool for poor children and children in remote villages • Application of ECCD standards
Disability rights	<ul style="list-style-type: none"> • Establishment of social protection schemes for PWDs and elderly persons • Access to education, for children with disabilities and vocational education for PWDs
Women's rights	<ul style="list-style-type: none"> • Reinforcement of reproductive health services through staff training and an extension of reproductive health services • Decision-making improved for women as well as access to justice programs • Realization of a Women's conference in 2015 • Overall awareness raised on gender equality
Health	<ul style="list-style-type: none"> • Improved conditions for health services in remote areas through trained volunteers • Awareness on disease transmission and preventive measures improved • Increased support to disease prevention programs like Malaria, TB, HIV etc through mobile vaccination schemes, improved conditions for diagnosis and treated mosquito net distribution

PART B – SECTOR REVISION

AGRICULTURE/NATURAL RESOURCES

1. AGRICULTURE: ISSUES AND OPPORTUNITIES

Agriculture is the mainstay of the Chin State economy and the majority of Chin people make their living from agriculture. It is the sector that contributes most to Chin State's GDP and investment in small-scale agriculture has the potential to deliver more, in terms of economic growth. Information on land tenure, land use, crops grown, cropping patterns and yields is presented in the "Background Section". Issues that need to be addressed in planning agriculture development for the next 5 years are summarized in the following sections.

1.1 ADDRESSING SHIFTING CULTIVATION

The high dependence on *shifting cultivation* and the decline in yields is possibly the most important problem facing farmers and government planners in Chin State today. Shifting cultivation accounts for 80% of the land under cultivation at present. Shifting cultivation was sustainable in the past when farmers had access to an unlimited amount of land and the crop rotation allowed for a 10 to 15 year fallow period. Soil fertility could also be maintained and crop yields were relatively high. However, in the modern era farming households have congregated around village centres where health and education facilities are available. This has caused a concentration of farming activity and, as the population has increased in these areas, cropping intensity had to increase to feed it. This has resulted in greatly reduced fallow periods and in many areas the land is cropped every three years. This level of cropping intensity is leading to a rapid decline in soil fertility and crop yields. These areas are no longer sustainable and farming households are not producing enough grain to feed themselves. Hunger, inadequate nutrition and child stunting is a serious problem in many villages in Chin State.



Example of alternative approaches to agriculture like terracing

The government urgently needs to find a new approach to agricultural production. To date efforts to do this through simply terracing the land have not produced a sustainable result and it is likely that the situation will reach crisis point within the next 10 years if solutions are not found. The biggest challenge facing Chin State is turnaround of the small holder agriculture sector to the point where households are producing a surplus for their own needs and that surplus can be sold to contribute to the economic growth of the State.

In seeking alternative agricultural options to counter the decline in production from *shifting cultivation* it will be necessary to explore a number of less costly and more sustainable systems. Systems involving terracing may be technically viable provided irrigation is available, but it is unlikely that this solution is economically viable. It is also unlikely that the Government and farmers will have access to the financial resources required to address a problem of this magnitude. In addition to the use of irrigated terraces developed for grain

production on the land that is less steep alternative schemes that should be piloted include: a) permanent pastures and fodder trees for intensively feeding cattle and Mithun; b) horticulture such as fruit trees and grape vines; and c) commercial forestry. These developments would require less overall investment and would be more suitable on the land that is too steep for developing terraces.

1.2 ADDRESSING CLIMATE CHANGE IN AGRICULTURE

Chin State's agricultural production system is highly vulnerable to the vagaries of the climate. Irrigation is the most effective way to "*climate-proof*" agriculture but less than 3% of the State's cultivated land is irrigated²⁵. Thus most of the farming community is essentially dependent on high-risk rain-fed agriculture for its food supply, making it vulnerable to droughts. The effects of climate change mean there will be a likely increase in this vulnerability. In order to reduce the risk to food security, increasing the practice of irrigated agriculture needs to be a planning priority.

Water storage facilities need to be developed for irrigation and would be the most effective way to address the problem. This would allow double cropping whereas run-of-river irrigation schemes only provide irrigation during the wet season and usually for a single crop. If considered in conjunction with hydropower, storage systems could fill dual roles of generating electricity and providing water for irrigation, particularly dry season irrigation. Sales of electricity could be used to cover the development costs and increase in agricultural production from irrigation would benefit both farmers and the economy of the State²⁶.

1.3 IMPROVING AGRICULTURAL OUTPUT

Increasing the output of crops currently being grown should be a priority. Throughout the fieldwork, both farmers and local technicians highlighted the need for improved planting material, whether that be for maize, upland rice, paddy rice or for fruit trees or grape vines. While some improved rice and maize seed does get distributed each year by the Department of Agriculture and Irrigation, it is not sufficient to meet demand or make a significant contribution to an increase in production. A concerted effort to select varieties that are well adapted and high yielding must be made in the Chin Hills environment. There is further a need to establish a system of on-farm seed multiplication to ensure sufficient improved seed are available to supply all farmers willing to use it. The same applies for fruit tree crops where there exist significant price differences and market preferences for modern superior tasting varieties of fruit. It is important to plant the best available varieties because of substantial establishment costs and long growing periods for trees. The new Agricultural College in the state would be an ideal site for testing and organizing seed multiplication initiatives.

The second and most important aspect of crop yield and total state production is the supply of plant nutrients in the form of fertilizers. Unfortunately, there has been some incomplete advice being disseminated in relation to the use of chemical fertilizers resulting in many farmers' reluctance to use them. This is damaging to agriculture and the Government's efforts to promote food security. The judicious use of chemical fertilizer on rice and maize has been shown to provide a 30% increase in grain yield and it is ironic that Chin currently has a shortfall of about 30% meeting its grain requirements. While organic farming techniques will help to improve soil structure and go part of the way to meeting nutritional requirements, farmers are unlikely to take on the substantial additional workload necessary for them to significantly increase their production. There is a need to embark on a campaign to rectify the farmers' misconceptions about chemical fertilizer. Greater and better use of chemical fertilizers should be an integral part of the

²⁵ There are 39 irrigation schemes one of these is fed by storage dam and 38 are diversion weirs. A total of 500 acres is watered by the storage dam and 6,576 acres from diversion weirs - run of river schemes - operating only when the river is running - usually will only be for one crop per year

²⁶The State Government is already considering such a scheme in Hakha Township.

strategy towards food security for Chin State and maximizing agricultural production in order to increase the State's economic growth.

1.4 LAND USE AND LAND OWNERSHIP

A lack of access to land is a key determinant of social and economic vulnerability. Security of land tenure is seen as an essential element in accessing credit for agricultural development through the formal credit system. It is the key factor in the farmer's decision-making process, especially if he/she needs to invest in terracing and/or invest in long-term crops such as fruit trees. The issues relating to land concern shifting cultivation and the State and Union Government's drive to prevent farmers from using shifting cultivation as their main means of production. A more strategic and targeted approach to this issue is needed in order to reduce the risk of Chin State becoming even more food insecure.

The Chin people have their own traditional system of allocating land and in Chin State the level of "landlessness" is lower than in other states in the Union. The traditional system has clearly worked in the past and it needs to be preserved in the future, but perhaps it needs to be slightly modified to accommodate more permanent forms of agriculture such as terracing, establishment of tree crops and community forests. The laws recently passed by the Union Government which declare land that lies fallow for more than three years as "vacant land" would not be helpful if applied in Chin State as they could result in a substantial increase in the level of landlessness, increased food insecurity and increased poverty. This law may be designed to *stop* shifting cultivation but it could have dire consequences if applied in Chin State. What is needed is a strategic approach to moving away from shifting cultivation.

1.5 AGRICULTURAL TECHNOLOGY AND CAPACITY BUILDING

Chin State will soon have an Agricultural College providing a 3-year diploma course. The effective use of this facility would provide the State with an excellent centre for agricultural technology. It could be used to introduce new and improved crops and to train current field-staff in new technologies. It will be very important for this facility to be fully integrated into the extension services within the state. Cooperation could possibly be sought with similar agriculture research and education institutions in Mizoram State in India.

To be *strategic*, future budget allocations to Agriculture should be larger in order to reflect the importance of this sector that is responsible for the livelihoods of the majority of the Chin people. In the Chin State Budget for 2014-2015, Agriculture's share of the budget was less than 3% of the total allocation. Because Agriculture is the main source of income and of food security for over 70% of the Chin people, deficiencies in this sector have immediate impact on social parameters of the population as a whole. There is also a direct impact on food security and on the statistics for child malnutrition/stunting.

1.6 STRATEGY FOR AGRICULTURE

No matter how weak the Agricultural sector may appear to be at present, it accounts for most of the economy in Chin State. It employs most of the population and most of the population is dependent on it for the bulk of their food supply. If small improvements can be made to the production of individual households across the State there will be a substantial impact on the economy of the State. Low agricultural production is a key determinant of poverty, nutritional status, health status and educational status in Chin State. Currently it receives only 2.8% of the State's budget allocation and this will need to be increased if any real progress is to be made in reducing poverty and improving all the other social indicators. The following are key strategic initiatives proposed for improving agricultural output and the rural economy:

- Use the traditional system of land allocation to create a system of tenure that operates at the village level and establishes a tenure system supporting individuals and community groups;
- Encourage groups to embrace permanent agriculture and the establishment of tree crops and agro-forestry;

- Increase the area under irrigation;
- Repair and improve existing irrigation schemes;
- Ensure that all irrigated areas produce to their full potential by applying best practices in crop husbandry and fertilizer use;
- Ensure that all types of agricultural production are utilizing the most suitable planting material;
- Locally test and multiply improved planting material for grain production, fruit trees and agro-forestry;
- Ensure optimum use of chemical fertilizer in all areas where it is economically viable;
- Adopt a new approach to shifting cultivation that optimizes output from existing areas of long rotation shifting cultivation while in the process of converting land already on short rotation into permanent agriculture;
- Investigate further least cost options for converting shifting cultivation to permanent forms of agriculture, animal husbandry and forest production in a manner to maximize incomes and food security for individual households;
- Establish coordination mechanisms by which the State Government and the INGO/NGO sector can combine effort to provide agricultural extension and credit to farmers;
- Consider cooperation with agriculture research and education institution across the border in India's Mizoram State.

The strategy recognizes large gains can be achieved at a low cost, with the State Agriculture and Irrigation Department and INGO/NGO groups working together in a mutually supportive and coordinated manner.

1.7 AGRICULTURAL PROJECTS

1.7.1 Projects to address shifting cultivation

The vast majority of rural households are dependent on shifting cultivation for their food. Yields are in decline due to reduced fallow periods brought on by a concentration of the population and land use around administrative villages and along roads. To date, efforts to move from shifting cultivation to permanent agriculture have not been successful due to declining soil fertility and yields. This is due in part, to lack of inputs and limited access to irrigation. The project will pilot three different approaches to dealing with the problem and test the comparative economic viability and social acceptability of each method. The approaches to be evaluated include: a) terraced cultivation with and without irrigation; b) fodder production for livestock production; c) horticulture – tree crops and vines; and, d) household –owned commercial forestry. In addition the Project would include a component to establish the legal framework within which individuals that are changing from shifting cultivation to more permanent forms of agriculture or forestry could obtain secure long-term tenure of the land involved. The project is estimated to cost **US\$ 1.5 million and be implemented over a period of 5 years**. The detailed proposal is presented in Volume 2.

1.7.2 Projects to increase food production

Establishing household food security is the most basic social security measure. Projects listed below are designed to improve household food security by producing more food, maize, rice and pulses in a sustainable way. Full project proposals are presented in Volume 2.

- A Project to improve maize production - **US\$ 760,000 over 3 years**
- A Project to improve up-land rice production - **US\$ 750,000 over 3 years**
- A Project for expanding wet-rice land development - **US\$ 2.6 million over 3 years**
- A Project to rehabilitate irrigation schemes and to identify additional schemes - **US\$ 1.5 million over 3 years**

1.7.3 Projects for income generation

Cash cropping can be as important as actual food production, as cash can be used to purchase food. In some situations, returns from cash cropping are greater than from direct subsistence food production – i.e. one can buy more grain from returns on the sale of a cash crop than one can produce on the same amount of land producing grain for home consumption. The following set of projects are designed to expand and increase returns on existing cash cropping activities or to undertake feasibility studies and prepare project proposals for additional, identified cash cropping opportunities. The projects are presented in detail in Volume 2.

- A Project for the production and marketing of Elephant Foot Yam - **US\$ 1.1 million over 3 years (+ Inception phase)**
- A Project to investigate the feasibility of re-establishing Sericulture - **US\$ 50,000 over 2 months**
- A Project to investigate replacement for Opium Poppy Cultivation - **US\$ 65,000 over 3 months**
- A Project to investigate the potential for Organic Farming - **US\$ 55,000 over 4 months**

2. LIVESTOCK: ISSUES AND OPPORTUNITIES

Livestock play an essential role in the subsistence economy of rural households in Chin State. They are part of the coping strategy of poor households and reduce risk in the event of crop failure as they can be sold for cash that can be used to purchase food. Their sale supplies cash to pay school fees and medical expenses.

At present the main constraints facing livestock producers relate to: a) lack of effective support for disease control; b) poor nutrition and husbandry at farm level; and, c) lack of credit for starting or expanding a livestock enterprise. In relation to both pig and poultry production, there is considerable potential for increasing small-scale backyard production, but there is no livestock feed industry operating at a scale necessary to support small-scale commercial production of pigs or poultry. The importation of pig and poultry feed would be prohibitively expensive given the freight charges in Chin State.

The potential for livestock production lies in: a) large amounts of land currently left fallow as part of the shifting cultivation cycle which could produce vast amounts of green fodder to feed cattle, Mithun and goats; b) improving the delivery of disease control procedures that could substantially increase production in all species at a minimum cost; c) intensive livestock production with the move to permanent agriculture that would maintain soil fertility through the recycling of manure.

2.1. THE STRATEGY FOR LIVESTOCK PRODUCTION

The strategy for livestock production is to increase ruminant livestock through increased fodder production on land formally used for shifting cultivation. It is proposed to plant fodder trees and permanent pastures and to reduce the risk of losses from disease by improving vaccination and disease control measures.

2.2 LIVESTOCK PROJECTS

The Plan proposes a number of livestock initiatives to increase income and reduce the vulnerability of poor households. These are listed below and presented in detail in Volume 2.

- A Project to improve Animal Health Services and Livestock Extension - **US\$ 830,000 over 5 years**
- A Project for Smallholder Pig Development - **US\$ 730,000 over 3 years**
- A Project for small-scale Cattle and Mithun Fattening - **US\$ 1,350,000 over 3 years**
- A Pilot Project to increase Goat Production - **US\$ 600,000 over 5 years**
- A Pilot Project for small-scale Dairy Production - **US\$ 875,000 over 5 years**

3. FISHERIES: ISSUES AND OPPORTUNITIES

Backyard fisheries are considered to have the potential to improve household/local community nutrition. At present there is some small-scale fish production in Chin State, however, the technology applied is very weak and there has been little effort made in selecting species that would best suit the environmental conditions. With Chin's abundant rainfall there is considerable potential to expand fish production.

3.1 THE STRATEGY FOR FISH PRODUCTION

The strategy for fish production is to improve production by selecting more productive fish species and applying more appropriate feeding regimes. The fish produced would mainly be used to improve household nutrition and to be sold within the village. The ponds constructed would be used both for fish production and watering household food gardens during the dry season, provided sufficient water was available.

3.2 FISHERIES PROJECTS

The aim of the fisheries project is to improve nutrition in poor households and provide an opportunity to earn income from fish sales. The pond water will be used for household vegetable production. The project below is presented in detail in Volume 2.

- A project for expansion of backyard fisheries – **US\$ 855,000 over 3 years**

4. FORESTRY: ISSUES AND OPPORTUNITIES

Forestry is already a major contributor to the household economy in Chin State. All households rely on locally cut wood for their heating and cooking and nearly all engage in cutting and selling some firewood for cash. Most of this activity *is informal and unregistered* and there is some danger of the resource being depleted if sustainable systems of planting and harvesting are not introduced. In particular, mountain rain forests need to be protected to stop erosion and it is necessary to ensure that valuable forest products such as medicinal plants, valuable orchids and other important plants like the Elephant Foot Yam (EFY) are not lost through over harvesting. There is a need for community education rather than community regulation, and care needs to be taken to preserve the right of all households to cut firewood essential for cooking and heating during the winter months.

The Plan provides for an expansion of community wood lots and forests designed to produce both fuel-wood and timber for the purpose of construction and sale. It will be required to further investigate the regulatory environment from a perspective of maximizing community benefits under a sustainable system of forest management.

The issues facing Chin's forestry sector are: (a) the shortening of shifting cultivation cycles, which means less secondary forest for household fuel wood; (b) land issues that impede the establishment of community forests in some areas; (c) uncontrolled burning for shifting cultivation is causing significant loss of permanent forest; and (d) the need to substantially upgrade technical knowledge of sustainable forest management, from the household level to the State level.

The potential of the Chin's forestry sector is very significant. It has the potential to make a major contribution to the State's economy. The forests are possibly the State's largest economic resource and there is considerable potential for: (a) increased benefits from the introduction of sustainable forest management practices; (b) investment in community forest initiatives; and (c) investment in the sustainable use of the rich diversity of forest products such as pine resin and medicinal plants including orchids and elephant foot yam.

4.1 THE STRATEGY FOR FORESTRY

The strategy for forest production would be to put the community and individual households in a position of jointly owning trees as a long term asset in areas converted from shifting cultivation. Secondly to maximize returns from existing forest products by exploring methods to cultivate high value species and protect them from overexploitation in the wild.

4.2 PROJECTS FOR FORESTRY

Forestry projects focus on community-based sustainable forest management. This will be achieved by expanding the State Government's current community forest initiatives and by investigating methods for cultivation of medicinal plants and other valuable forest products that are in danger of overexploitation in the natural forest. The projects listed below are present in detail in Volume 2.

- A Project to expand Community Forests in Chin State - **US\$ 2.050 million over 3 years**
- A Project to study the Medicinal Plant Industry – **US\$ 55,000 over 2 months**
- A Project for a Pine Resin Development study – **US\$ 70,000 over 2 months**

SMALL AND MEDIUM ENTERPRISES; TECHNICAL VOCATIONAL EDUCATION AND TRAINING

5. SMALL AND MEDIUM ENTERPRISES (SMEs): ISSUES AND OPPORTUNITIES

There is very little industrial development in Chin State and the SME sector is small and poorly developed.

Development of SMEs will face a number of challenges:

- Poor infrastructure: roads, electricity and water supply;
- Lack of medium term credit for investment;
- Lack of knowledge on processing, hygiene and marketing techniques;
- Supply difficulties in the agricultural system;
- Poor post-harvest handling;
- The high cost of doing business: transport, registration fees, rents and electricity;
- Poor business skills;
- Lack of support mechanisms in government;
- Poor connectivity between farmers, traders, processors, and government regulators.

While the challenges are considerable, Chin State may have a comparative advantage in a number of areas.

Opportunities include:

- Good climatic conditions for producing high value crops, i.e., spices, fruits and vegetables;
- Good local demand for production of local construction materials, i.e., stone quarries, brick making, and timber milling²⁷;
- Chin State is well located to market its products to India and Bangladesh;
- Chin State has unique traditional woven products that could be in demand by tourists.



Small village shop

There is a need to increase awareness of market requirements and develop value chain links for both existing products and new products proposed for development under the Plan. Lack of access to credit is an impediment in all development sectors at present, but is most serious in the SME sector. There needs to be a concerted effort by the State Government to encourage more formal credit institutions to establish operations in Chin State.

²⁷Local production of these bulky construction materials will have a comparative advantage given the high freight cost of bringing them into Chin State from outside.

5.1 CREATING A BUSINESS-FRIENDLY ENVIRONMENT

The Chin State Government should review regulations and procedures relating to the registration and establishment of SMEs. This needs to be done in a holistic manner covering all aspects of starting a business, from acquiring land to business registrations, electricity and water connections etc. through to operational charges, inspections and reporting requirements. The timeline and a cost stream for establishing and operating a business should be established to identify who or what is impeding progress and where costs are occurring.

A business-enabling environment should be created where all unnecessary Government regulations are removed or are reformatted to reduce delays and costs. Within the system there should be established approval deadlines for each procedure.

The review process is recommended to be carried out by a Parliamentary committee in a transparent manner with full involvement of the business community and the concerned Government departments. The committee should be required to report to the Cabinet on gains made and regulations actually simplified. To speed this process up it is suggested that Chin State should identify another state in the Union which is seen as business-friendly and has been successful in promoting business. A Chin State delegation, including the private sector, should undertake a study tour of that state/area and see if their approach would be applicable in Chin State.

Once it is considered that a business friendly regulatory framework has been established, a monitoring/tracking system within the Government on the registration and establishment process should be created. There also needs to be a transparent appeals process through which businesses can apply and concerned officials can be accountable.

Cooperation between the business sector and the Government should be promoted. The business community should establish a strong Business Association to exchange ideas, create linkages along value chains, jointly approach the government regarding simplification of the regulatory system and reduce the cost of doing business.

5.2 OTHER CHALLENGES TO DOING BUSINESS

Apart from the regulatory framework there are numerous other impediments to doing business in Chin State. These relate to access of a reliable, 24-hour power source and the cost of transportation²⁸. Improvement of the electrical power system and the road network is clearly the long-term objective but to get businesses moving, the State Government should focus its efforts in specific locations to meet the needs of business within a much shorter timeframe.

To attract outside investment, the State Government should identify an area (or areas) within the State where it is able to guarantee 24-hour power and a road system not subject to disruption from landslides²⁹. If no such place exists, the Government should identify one or two areas that could meet these standards within the shortest possible timeframe and at the lowest cost. It should focus on these areas when planning road and electricity networks in the future. This is also in line with the ceasefire agreement with the Chin National Front where the Union government committed to establishing a special Economic Zone within Chin State.

²⁸High grade internet connection would also be an important consideration for more sophisticated enterprises.

²⁹This exercise should possibly be undertaken from two aspects: a) supply to India and b) supply to the rest of Myanmar, China and the rest of the world.

Proximity to India and opportunities for international border trade could create opportunities. An Indian company may find it advantageous from a tax perspective to operate outside the borders of India. For companies with good access to areas of Chin State and ambitions to supply China and Myanmar, it may be advantageous to locate part of their production within Chin State. This would require thorough investigation identifying interested companies before the State Government makes investment in infrastructure.

If Chin State is successful in creating a business-friendly regulatory environment, it must let the world know that it exists and that Chin State is open for business. This could be achieved at low cost via the State Government's website with a link to the Chin State Business Association's website. Other low cost ways to promote the Chin State would be a well-developed display backed by well informed business persons and government officials at trade fairs within Myanmar and in the neighbouring states of India.

5.3 DEVELOPING MARKET INFORMATION

Market information is vitally important for all levels of business; from the farmer-producer to the entrepreneurs marketing value added or finished products. In the case of Chin State there are two issues impeding progress on supplying market intelligence: The first is the small size/volume of Chin States production and the second is poor development of market chains or organizational structures within any of those market chains. At present no one business can justify the cost of monitoring its market. The role of Government is to take the lead in developing market information on products relevant to the Chin economy. This is possible by working in conjunction with the private sector and - once the systems are fully operational and a particular industry has developed - the role should be handed over to the private sector.

There are few products Chin is producing that are not already visible in the market within Myanmar or on the internet. In designing market information systems it is important not to rely too much on collecting large amounts of expensive and time consuming data. Market information has a very limited shelf life and most of it becomes irrelevant within one or two weeks.

Transmitting information on markets does not need to be a stand-alone exercise. The Government transmits information for all sorts of reasons – administrative/regulatory; safety/disaster management; meteorological; agricultural extension messages; health warnings and planning; etc. The information is specific even if the platform from which the information is transmitted is centralized. Information bites are transmitted to a different, often very specific audience. It is easy to target a narrow or wide audience using computer based mobile phone texting technology. The Government should consider designing and implementing such platforms to deliver its messages to the people as soon as mobile networks are rolled out in Chin State. Costs are minimal if it can be done in partnership with a mobile phone service provider.

5.4 STRATEGY FOR EXPANSION OF SMALL AND MEDIUM INDUSTRIES

The proposed strategy for SMEs is to add value to Chin State's agricultural and forest products. This would be done by establishing a business friendly regulatory environment and promoting its virtues throughout Myanmar and the neighbouring states of India. An element of the strategy is to select and develop the *Special Economic Zone area* negotiated under the ceasefire agreement. Key sites would have the following amenities:

- Good access to India
- Good all-weather roads
- High-quality, 24-hour electrical power
- High quality internet and phone connections
- A reliable water supply
- Easy access to land on which to build small-scale industries

The strategy also includes promotion of small scale agricultural processing at the village level, e.g. driers, grain grinders, rice milling. The plan would further develop a market information system and carry out detailed value chain analysis on key products such as EFY to identify parts of the chain that could be implemented within Chin State and add value to the product.

5.5 PROJECTS FOR SMES

In identifying projects to stimulate and encourage the expansion of the SME sector the SME Team was mindful of existing difficulties associated with establishing and operating SMEs in Chin State. It has proposed the projects listed below in order to address both the administrative issues and to pilot actual SMEs. These projects have been presented in detail in Volume 2.

- A Project to improve the Business Environment for SMEs – **US\$ 800,000 over 3 years**
- A Pilot project to develop SMEs in selected Value Chains for Agricultural Products – **US\$ 1.5 million over 4 years**

6. TECHNICAL VOCATIONAL EDUCATION AND TRAINING (TVET): ISSUES AND OPPORTUNITIES

Chin State is at a disadvantage in terms of vocational training. There are a number of vocational training institutions operating in the State, but they are not established to provide students with the practical skills necessary to gain employment or to support growth in the Chin economy, rather they provide general vocational education. Many facilities lack essential teaching laboratories and/operational workshops where students can obtain hands-on experience to enter the work force. Most programs are *certificate* oriented and not geared to meeting requirements of industry, farming or the business sectors they are supposed to be servicing. Once trained, the majority of certificate holders leave Chin State for other parts of Myanmar where work opportunities are better.

The Union Government is carrying out a major reform on the National Qualification Framework with assistance from ILO, GIZ and UNESCO. This is proceeding in the right direction but it will take time before it will have impact on the ground. The Plan targets training in the sectors that are growing or have potential for growth, and to tailor courses especially to meet the needs of the private sector in Chin State. This requires constant consultations with employers in the targeted sectors when designing courses. It also requires more hands-on practical work so graduates can make a meaningful contribution when they leave the training institutions.

The Plan identifies the potential of expanding SME operations in two areas: (a) food preservation and agro-processing; and, (b) construction and house-building trades.

6.1 STRATEGY FOR TVET

The vocational training institutions operating in Chin State have been assessed by the MIID SME/TVET team and a number of them are not turning out trainees with the skills necessary to gain employment. It relates to the curriculum and a lack of equipment necessary for students to gain practical skills needed to meet the needs of employers. The first element of the strategy is to carry out a detailed review of existing facilities in close consultation with students, former students and potential employers. There is also a need to redevelop facilities so students leave the institution with the necessary skills and move into employment. The second element of the strategy fills a skills gap in two areas where there is demand for workers –the construction industry, particularly the housing sector and the food processing for agricultural products sector, designed to add value to Chin State’s agricultural output.



Weaving School in Mindat

6.2 PROJECTS FOR TVET

Projects for TVET has taken into account the substantial investment the Government has already made in its existing TVET system and the need to maximize returns from existing facilities. Further, the need to meet emerging skills requirements has been prioritized. The proposed projects are listed below and presented in detail in Volume 2.

- A Project to rehabilitate existing Vocational Training Centres in Chin State – **US\$ 1.3 million over 3 years**
- A Project for awareness creation and training in Food Preservation and Agro Processing - **US\$ 1.5 million over 4 years**
- A Project for upgrading of Artisans’ Competencies in Construction and House -Building Trades - **US\$ 1.9 million over 4 years**

INFRASTRUCTURE

7. PHYSICAL INFRASTRUCTURE: ISSUES AND OPPORTUNITIES

All stakeholders involved in the development of Chin State recognize that a lack of infrastructure (roads, electrical, communications, school building and health clinics) is the most important impediment to economic and social progress for the State.

The geography and topography of the State creates great challenges in constructing and maintaining roads, which are essential for conducting commerce, market goods and delivering services to the population. The cost of constructing and maintaining a mile of road in the hills of Chin State is many times more than the same length of road in the lowlands. Because the population density is very low it is even more difficult to justify the costs of roads in strictly economic terms. Construction consumes a very large proportion of the Chin State Government's budget (around 48% of the total budget) and as a result there is very little money left to promote economic activity such as improving agriculture to reduce high levels of rural poverty.

An expansion of the electricity grid in such rugged terrain is challenging, as is establishing connections to very scattered villages with small populations. It is difficult to justify this type of expansion because the communities would never be able to pay the real cost of creating connections and delivering power. It is more economical to use local solutions for the electricity supply rather than trying to connect remote communities to the grid. There are a number of mini-hydro plants operating effectively in Chin State and there is potential for wind and solar power generation. By choosing renewable energy solutions it may also be possible to attract funding from the Adaptation Fund (see further below).

The impact of climate change is likely to be severe in Chin State. The state is expected to experience an increase in spontaneous and severe rainfall, resulting in an increased risk of soil erosion and landslides. This will further undermine the agricultural economy and increase road maintenance costs, as well as disrupting commerce and communications. The State Government needs to consider the impact climate change will have. Modifying road design features to cope with intense rainfall, specifically, road drainage systems will be necessary.

International funding is available to assist communities adapting to the effects of climate change. Chin State is an area that "fits" high priority criteria for receiving money from the Adaptation Fund, much the same way as the Dry-Zone has recently received funds from that source through UNDP.

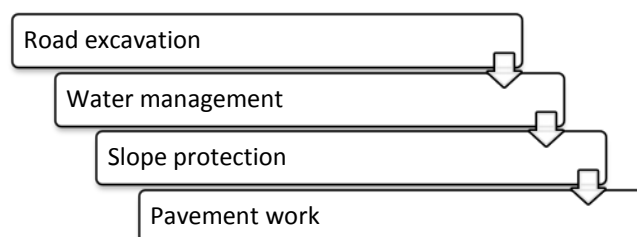
7.1 FINDINGS OF FIELD RESEARCH ON INFRASTRUCTURE

The MIID infrastructure team has identified the most serious issues related to infrastructure in Chin State. Their findings are summarized in the following headings:

7.1.1 Construction Approaches and Techniques for Roads

There are a number of ways in which construction costs could be reduced, the life of roads extended, and the risk of landslides mitigated. It is recommended that the following procedures should be adopted:

The sequence of hill road construction should be as follows



More emphasis needs to be placed on slope protection and water management in the very severe conditions experienced in Chin.

To create “road width” in steep situations a 50/50 cut-and-fill procedure should be adopted rather than the current practice of creating roads width 100% by excavation. This will reduce the cut height and lower the risk of landslides. The current practice is based on lowering the initial cost of construction and the high cost of concrete masonry retaining walls.

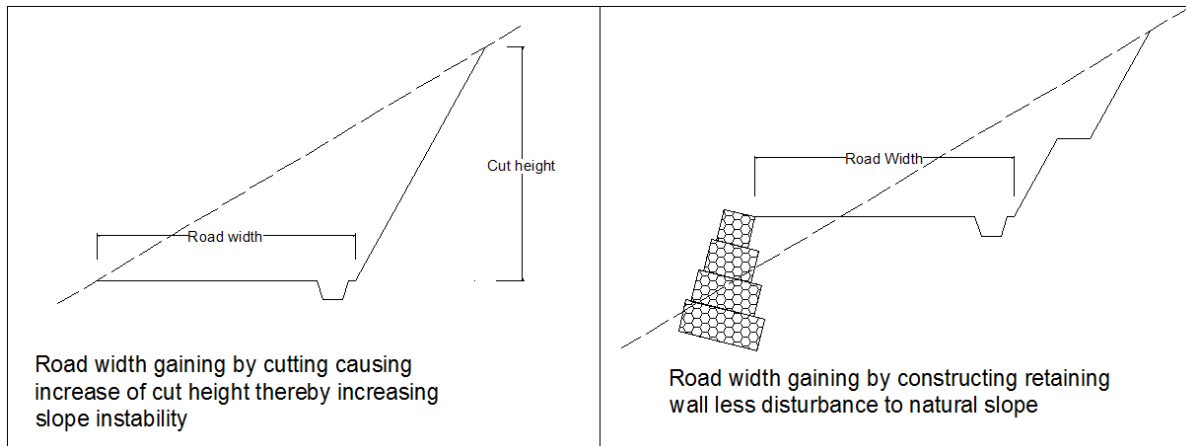


Figure 15 - Cause of slope instability

- Lower the cost of construction of retaining walls by using *gabion walls* instead of cement masonry retaining walls. Costs could be reduced by 75% for the same length of wall and the life of the wall will only be reduced by 25%.
- Excavated materials should be managed better to reduce gullying and the risk of landslide. The excavated material should be properly stabilized by applying low cost bioengineering techniques.
- There is a need for additional equipment for bitumen road construction. The life of bitumen roads could be substantially increased if the basic equipment such as a bitumen boiling plant, a bitumen spreader and an aggregate spreader were available instead of using manual techniques.
- To maintain quality assurance and control of road construction it is recommended to establish a road material testing laboratory in Chin State.
- The Public Works Department should adopt more of a management role – at present Public Works must fill many roles and it is recommended that many of these could be outsourced allowing the Department more time to carry out its crucial management role.

7.1.2 Road Geometry

With the exception of the Tedim-Rih road, the infrastructure team found that the selection of road alignment was well done and appropriate gradients were applied. Road width was an issue in many areas, which can be attributed to steep terrain and high costs.

7.1.3 Water management on roads

The most important component of road construction in areas of high rainfall is the greatest weakness identified on Chin State’s roads. A majority of roads have simple earthen side drains that are not functioning well due to insufficient cross drainage. As a result, water is accumulating in side drains and undermining road pavement and hill slopes. A lack of cross drains is resulting in the formation of gullies in the side drains and this leads to landslides from the up-hill slope. In the absence of effective cross drains, water simply washes across roads and creates rills and gullies on the downhill side.

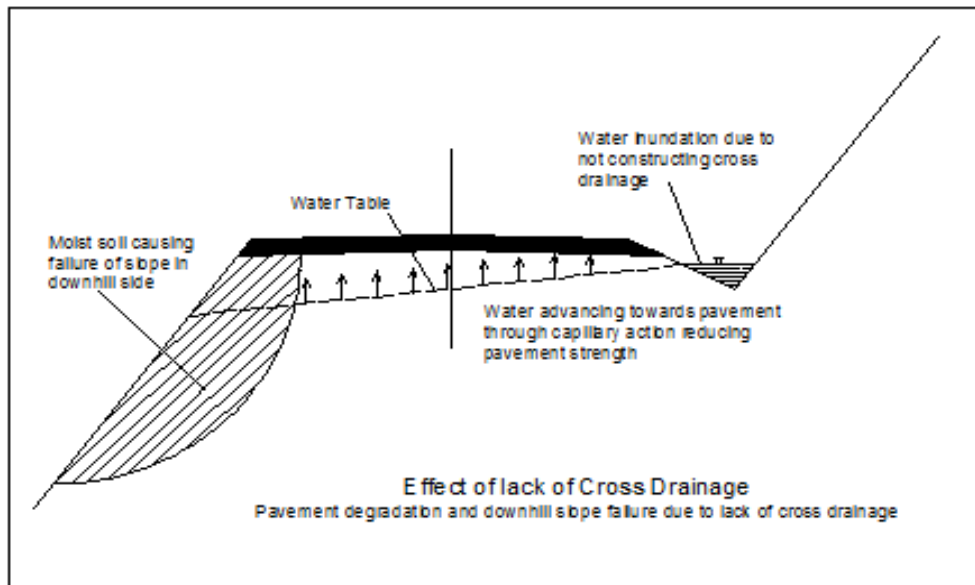


Figure 16 - Affect of not having proper water management

Figure 16 shows how run off water accumulates and seepage moves across the road, affecting the road pavement and causing added lateral earth pressure due to soil saturation. This also causes structures to fail on the downhill side.

Water-management issues are the most important problems in road construction. Incorporating a properly designed and constructed drainage system into new roads will greatly increase the life of roads and minimize road maintenance costs. It will also clear landslides. Correcting drainage systems on existing roads should be the first priority. Without effective drainage, expenditure to resurfacing existing roads is wasted because sections of new surface will be undermined by water in the next wet season.



Pavement Failure due to insufficient cross drainage (Hakha-Gangow Road)



Retaining wall failure due to seepage and runoff of accumulated water (Kalay-Hakha Road)



*Paved Road with poor water management
(Hakha - Gangaw Road)*



*Paved road with proper water management
(Kyaukhtu-Mindat Road)*

7.1.4 Slope stabilization measures

Stabilization measures to protect roads need to be taken. Retaining walls have been constructed to prevent or repair damage from landslides, but given the very severe weather conditions in Chin State, this structural engineering approach alone is often insufficient to prevent further landslides. The infrastructure team has proposed a series of additional measures to address this problem. These include the use of: bioengineering; support drainage; removal of overburden; armouring; catching the moved soil; and, anchoring and reinforcing in order to stop the mass-movement that leads to landslides. Bioengineering is a technique using living plants for engineering purposes. The engineering function of the vegetation armours, catches, reinforces, anchors, supports and drains the slope. It acts as the engineering structures revetment, catch wall, reinforced earth, soil anchor, retaining wall and French drain, respectively.

Civil engineering structures are at their maximum strength in the initial stages and vegetation has its maximum strength later when the plated material is fully established. By integrating bioengineering with civil engineering structures, the civil engineering structure functions well until the vegetation grows and vegetation functions takes over when civil engineering structure start to decline.



Retaining wall construction for landslide control. This retaining wall failed because additional drainage and other measures were not in place (Hakha- Gangaw Road)

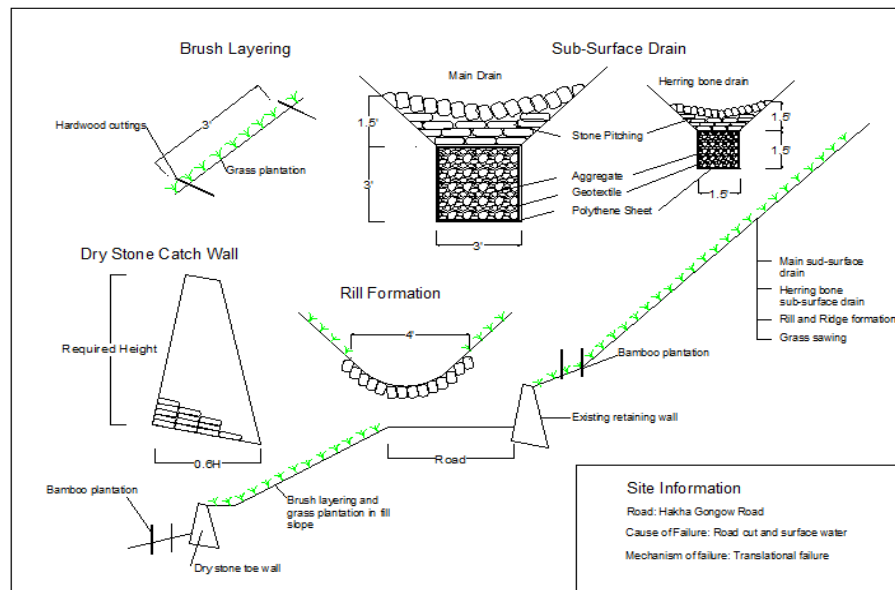


Figure 17 – Details of landslide control

Bioengineering is suitable where the surface consists of soil, but it will not work where the surface is rock that will not support plant growth.

Figure 18 below provides a diagrammatic representation of a low cost solution to rock stabilization.

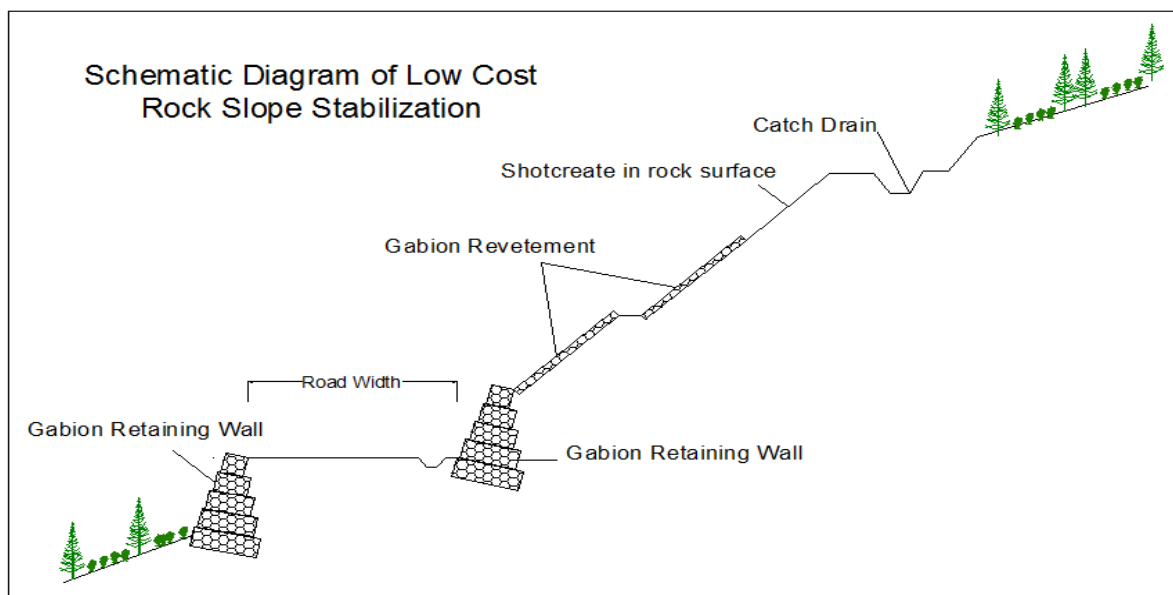


Figure 18 – Schematic diagram of Low Cost Rock Slope Stabilization

7.1.5 Stabilization of Soil Disposal Sites

Stabilizing of soil disposal sites needs to receive sufficient attention at road construction sites or when roads are being cleared after landslides. Soil simply pushed to the side of the road without anything done to stabilize it will lead to the formation of rills and gullies as seen in Photo No 6 of a site on the Kalay–Hakha–Falam road. To mitigate such problems soil mass from landslides needs to be held in place and erosion must

be prevented. This can be achieved by *brush layering and planting grass* to stop soil erosion and the construction of toe walls to retain the soil and prevent another landslide. Planting bamboo just on the downside of the wall will act as a vegetative retaining wall in the long run.



Site on the Kalay-Hakha-Falam road

This approach is presented schematically in Figure 19:

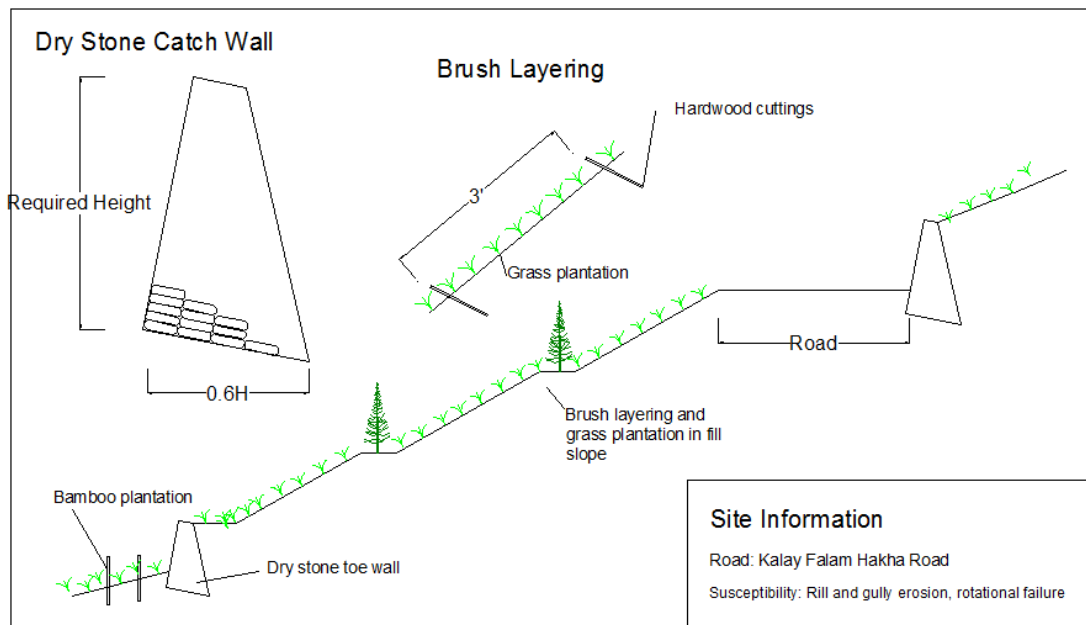


Figure 19: Detailed drawing for stabilization of soil disposal site

7.1.6 Road Surfacing

The infrastructure team found that the life of the pavement on roads is short and could be improved by applying improved design and water management features. In the case of bitumen surfacing, it is recommended that equipment be purchased to heat bitumen and lay the surface properly. A relatively small investment in this equipment would be repaid many times over through an extended life of the surface and reduced maintenance costs.

Photographs below show the bitumen surfacing technique:



Sub-base/base course laying



Laying of seal coating

The Infrastructure Team also identified the potential for using “*cobbled pavement*” in certain urban and rural situations where there is a low volume of traffic. Cobble roads are seen as being quite durable. The procedure has the advantage of using local materials, the necessary skills are easy to acquire, the system is labour intensive so it would create local employment opportunities, it has a lower maintenance cost than gravel roads and the only equipment required is a roller for compaction and a truck to transport the stones. Figure 20 illustrates the construction process.

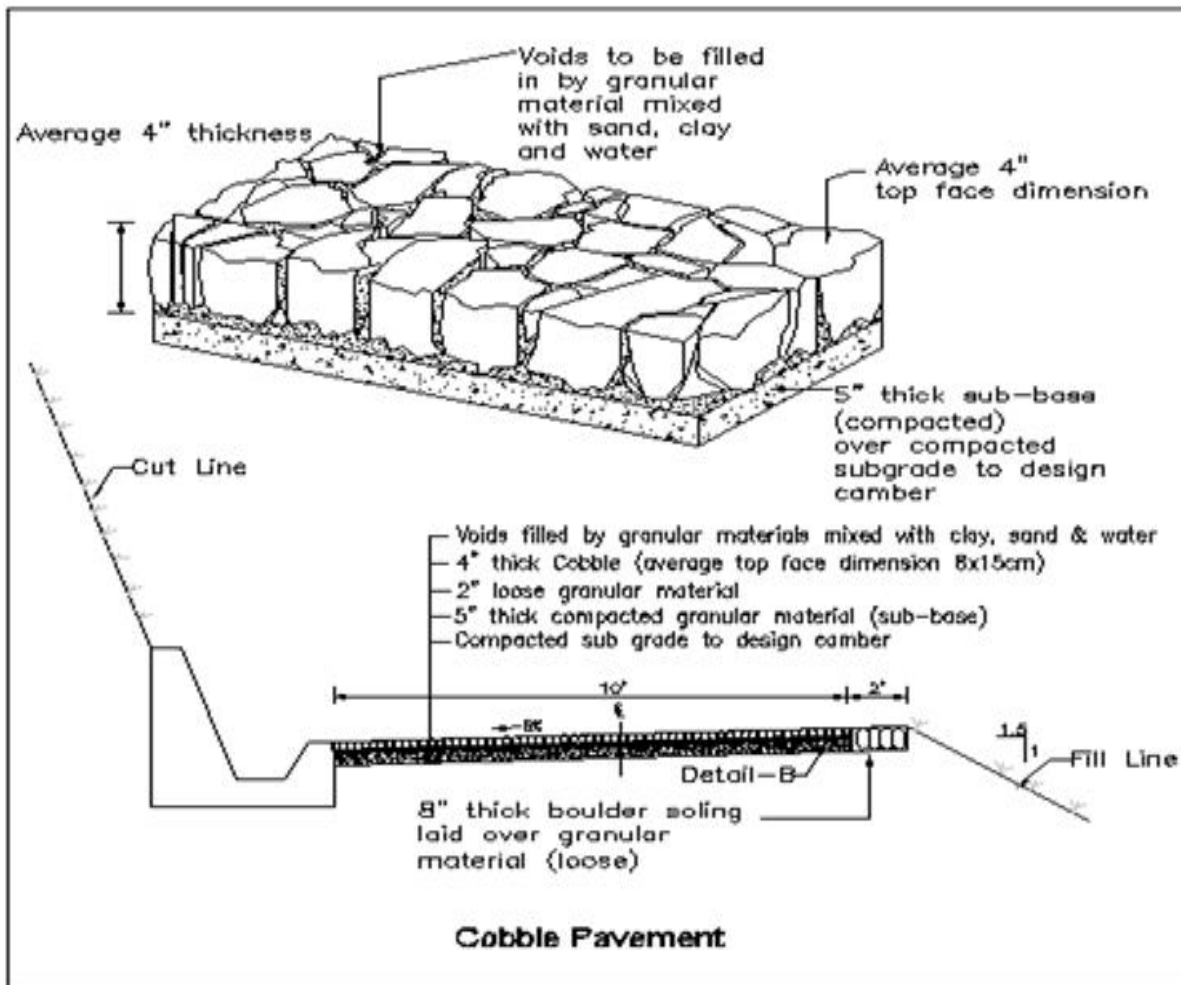


Figure 20 – Cobble pavement construction process



Photographs show the before and after situation of cobble road construction in Nepal

7.1.7 Maintenance

Road maintenance is the biggest challenge for the road sector in Chin State. The sector is caught in a vicious-cycle of high construction and maintenance costs. Cost of constructing roads is extremely high in Chin State and there are never enough funds to develop roads needed to open-up the local economy. Funds are allocated at the Union level and there may be a lack of awareness as to how high construction costs actually are. Chin State engineers are forced to design roads to meet a cost requirement rather than an engineering requirement to achieve the planned length of road. This places limitations on the incorporation of design features during initial road construction. It then leads to increased maintenance costs and less funds available for the construction of new roads. Until enough funds are available to construct new roads to a standard that will require less maintenance, the situation is likely to get worse.

The MIID Infrastructure Team considers funds allocated for road maintenance to be insufficient. There is a backlog in the maintenance program and therefore, minor damage that could have been repaired cheaply and easily during routine maintenance quickly deteriorates, necessitating early rehabilitation of the whole surface at a much higher cost. It is recommended to develop a long-term maintenance strategy with annual maintenance plans that are properly funded.

7.1.8 Environmental and Social Safeguards

Environmental and Social Safeguards are not embedded in Chin State's approach to road construction. Such measures are important and will become essential for accessing funding for road projects with the entrance of donors such as the Asian Development Bank (ADB) and the World Bank. These issues cannot be addressed in an ad-hoc manner or retrofitted to on-going construction processes. To facilitate additional funding for roads, Chin State should take a proactive stance on this matter. The Infrastructure Team is proposing establishing protocol for appropriate environmental and social safeguards conforming to international standards to be applied to the design and construction of all roads in Chin State. Once established, the State Government should promulgate the necessary regulations and inform the donor community that this milestone has been achieved.

7.1.9 Cost-saving measures

Cost saving measures is necessary with regard to Chin State's roads. The State Government will always be struggling to balance what it spends on new construction and what it allocates for maintenance. However, the Infrastructure Team strongly recommends State engineers be given freedom to put more into the design of new roads to gradually reduce the State's expenditure on road maintenance. The Team has also identified a number of areas in which substantial savings could be achieved by using different construction materials and approaches. These include:

- The use of gabion retaining walls instead of concrete masonry
- Spending more on improved drainage to offset the short life and high maintenance cost of road surfaces
- The use of cobbled surfaces to fill the gap between gravel and bitumen surfaces

Table 3 below summarizes the saving that could be achieved by applying different techniques.

Technique Suggested	Reduction in Construction Cost	Increase in life of road
Slope Stabilization and Bioengineering	A combination of civil engineering structure and bioengineering reduce the price by 60% when compared to civil engineering structures	Maintenance of bioengineering needs is up to 5 years whereas civil engineering structure needs maintenance over time
Selection of Low Cost Material and Technology for Wall Construction	Gabion wall is 75% cheaper than cement masonry wall	Life of gabion walls is 75% of masonry walls
Drainage and Water Management	Drainage and water management is a new component for most of the roads in Chin State.	Life of pavement is double if drainage and water management is done, therefore, maintenance as well as rehabilitation cost will be halved
Cobble Pavement for Village Roads	Cobble pavement is 65% cheaper than black topped pavement and 25% costlier than gravel pavement	Cobble pavement is about 50% less durable than black topped pavement and 50% more durable than gravel pavement

Table 3 - Summary of Savings from alternative approaches to design and construction of roads

7.2 STRATEGY FOR ROAD CONSTRUCTION AND MAINTENANCE

The strategy is as follows:

The strategy should include the development of a transport master plan for expansion of the road network. It should be delivered in the most strategic and economical manner and meet the needs of Chin State's expanding economy, particularly in growth centres.

The second element of the strategy is to create a better balance between new construction and road maintenance, so as to achieve more with the funds that is available. The construction and maintenance of roads consumes nearly half of the Chin State's budget. The MIID Infrastructure Team, in consultation with the Engineers of the Department of Public Works, has identified a number of areas in which considerable savings could be achieved both with initial construction and overall life of the road. Such measures should be thoroughly investigated by the Public Works Department by visiting a country where they are already being applied before implementing them in Chin State.

7.3. PROJECT PROPOSALS FOR ROADS

In developing project proposals for roads, the Infrastructure Team has tried to address planning needs of the sector and provide some technical and design solutions to construction and maintenance problems faced by the Government. Projects are listed below and presented in detail in Volume 2. Technical details are further expanded in the separate Working Paper on Road Infrastructure.

- A Project to prepare a Transport Master Plan for Chin State - **US\$ 490,000 over 12 months**
- A Project to improve Slope Stabilization and Landslide Control in Chin State's Road Network - **US\$ 3.63 million over 4 years**

- A Project to improve Rural Connectivity in Chin State; Village Roads for 3 townships – **US\$ 33 million over 5 years**

8. AIR TRANSPORT IN CHIN STATE: ISSUES AND OPPORTUNITIES

At present there are no airfields in Chin State and travellers wishing to connect by air with the rest of Myanmar, or internationally, must travel by road to Kalay airport or Nyaung-U (Bagan) airport. The journey from the administrative capital Hakha to Kalay is seven hours by road journey and seven to eight hours to drive from Mindat Township in Southern Chin State to Nyaung-U. This is a great impediment to tourism and to any outside person or company wanting to invest in a business enterprise in Chin State. To move from being a mainly subsistence agricultural economy to having a viable commercial economy – one which can generate employment for its young people – establishing air connection with the rest of the country, and internationally must be of the highest priority.

Mineral rich countries similar to Myanmar have air linkages established in remote areas similar to the topography of Chin State. International mining companies are often granted mining leases and need to service their mining ventures. Chin State does have a mineral deposit³⁰ in Tedim Township that could deliver such an air linkage.

Chin State was promised an airport and air service as part of the ceasefire agreement between the Chin National Front and the Union Government. In planning the State's air connections with the rest of Myanmar the Chin State Government should carefully investigate what is the most practical approach and what will deliver the maximum benefits to both the economy and the people in the State. The State needs a few runways that can support small aircraft feeder services linking a number of places in the state with the nearest regular domestic air service, such as Kalay and Nyaung-U (Bagan).



Potential site for new airfield

If taking this approach authorities would be dealing with: a) smaller and lighter aircraft; b) shorter runways to get take-off at the altitude of Chin's major urban centres; c) easier site selection; d) lower unit construction cost (reduced length and lower runway strength); and, far greater service coverage by having several, geographical points for take-off and landing. It is more likely that funds can be raised for a modest service than what would be required for a facility that would immediately become part of the domestic air service.

³⁰There is a nickel/chrome/iron/magnesium/ deposit in Tedim currently under investigation but it appears to have a number of technical issues which need to be resolved.

8.1 STRATEGY FOR AIR TRANSPORT

The approach must look at what Chin State needs at the present time by way of a service. The main rationale for the air service would be as follows:

- To stimulate business and commerce by bringing potential investors to Chin State without exposing them to great difficulty getting to centres of investment
- To stimulate the tourist industry and open it up to a wider set of tourists – particularly to the older and more affluent groups of international tourists
- To greatly improve survival rate in cases of medical emergency that cannot be handled within the state
- To make it easier for senior officials of the Union Government to get first-hand experience of the development issues faced by Chin State. It will help create an environment where there is a greater willingness in the Union Government to meet the States' funding needs

These operations can be effectively served by an aircraft capable of moving about 10 people. Once service has been established at minimal cost, larger commercial operators can evaluate the commercial viability of extending service directly to ports in Chin State. They can then contribute to the expansion of runways etc. to meet their own requirements.

8.2 PROJECT PROPOSALS FOR AIR LINKAGES IN CHIN STATE

- A Project to determine the feasibility and economic viability of establishing air services within Chin State and linking it to the domestic air services throughout Myanmar – **US\$ 350,000 over a 6-month period**

9. ELECTRICITY: ISSUES AND OPPORTUNITIES

Chin State is poorly serviced in terms of electrical power. In general, connection to any form of grid system is limited to the main towns and, in most of these, demand exceeds supply. Existing electricity in the towns is generated by mini-hydropower, which is effective in the rainy season, but a shortage of water in the dry season (the result of low discharge from natural springs and streams) translates into a drastic reduction in the amount of power available.

Most towns outside Hakha do not have adequate power on a 24-hour basis. Even within designated supply hours, outages are frequent. Poor access to electricity is a constraint to Chin State's development as most commercial and small-scale industrial enterprises require a reliable supply of electricity, and most on a 24-hour basis, to be successful.

The MIID Infrastructure Team examined the electricity supply systems in the main towns of Chin State and assessed a number of private village supply schemes. *Detailed findings are presented in the Report on Infrastructure.* The following section summarizes the team's assessment of the situation in Hakha City.

9.1 CASE STUDY: POWER SUPPLY TO HAKHA CITY

The main source of electricity in Hakha Township is from hydropower plants fed from the Laiva Dam about 20 miles north and from the Donva hydropower plant. The installed capacity of the Laiva Dam hydro plant is 600 kilowatts and from Donva is 400 kilowatts. These sources are supplying 5 wards and 5 villages in Hakha Township and 2 wards and 3 villages in Thantlang Township. The supply is not sufficient and is managed by rotational shedding supply to various wards and villages.

Since July 2014, Hakha City (the state's capital) is linked into the National Grid with installation towers, transmission lines and sub-stations constructed by the Union Government and now enjoys 24 hours electricity.

Prior to the decision to link Hakha City to the National Grid, there were plans to increase hydropower supplies by raising the crest of Laiva Dam by about 30 feet to increase storage capacity of the dam. The average annual inflow from the Laivachaung River is 7360 acre-feet and the storage capacity of the dam is only 1954 acre-feet, so excess water would be available to generate additional electricity during the dry season if the wall was raised. JICA is currently investigating the feasibility of this scheme. JICA is also studying a plan to construct a storage dam at Timit River about 7 miles away from Hakha. It is proposed that the water would be used for both irrigation and hydropower generation.

Even if Hakha City's electricity requirements have been met by being connected to the National Grid, the feasibility studies would demonstrate the financial and economic viability of expansion of the Laiva Dam and the Timit River hydroelectric schemes. It may still be worthwhile to invest in one or both of these schemes in order to allow for expansion of a renewable energy source and connection to the grid could supply electricity back into the grid during periods of peak demand. In addition, the water captured would be available for irrigation as well as electricity generation.

Improvement of electrical services was an incentive offered in the Ceasefire Agreement and the Union Government has taken steps to honour that commitment by expanding the National Grid to cover some parts of Chin State. Grid connection for most of the rural areas in the state, however, is unlikely to be physically or economically possible. The population is too scattered and the terrain too rugged. Most rural areas will need to find local solutions to meet their electricity needs. There is good potential for mini hydro plants in many parts of the State. A number of these schemes have already been developed by local communities with technical and financial support from donors and the Chin Diaspora.

Increasing overall electricity production and expanding the grid coverage is a high priority of the Union Government. Both the World Bank and the Asian Development Bank (ADB) have recently approved loans and technical assistance to increase both conventional power and renewable energy generation and distribution. The Union Government is in the process of developing a National Electrification Plan (NEP). This activity will include a comprehensive strategy and implementation plan to supply electricity to priority economic areas, investment needs and financing options, efficient institutional arrangements, capacity needs, and socioeconomic impact in different tiers of society, including aspects of gender protection and access to electricity for the poor. It will be important for the Chin State Government to cooperate fully with this activity and ensure that its requirements are well presented in the final report on the National Plan.

As the Union Government moves forward with a major expansion the Chin State Government must ensure that its state is included in the process and has access to funds provided by the World Bank, ADB and major donors such as JICA. It will be relevant to remain aware of initiatives being taken by these major funding sources. Chin State is well suited to renewable energy programs, particularly for hydropower projects.

9.2 RENEWABLE ENERGY

Standalone renewable energy is the logical electrical supply choice for Chin State's rural communities as high cost of connection to the grid is not justified due to the scattered population and small number of consumers in any one area.

Chin State has very good potential for mini-hydro power and has a number of successful private mini-hydro generating facilities. There is good potential for small wind turbines combined with small solar generating facilities. There is strong international interest in renewable energy and in financing projects that provide rural electrification through renewable energy sources. To attract support for such projects it is strategic for the State Government to develop a "pre-feasibility" stage concept paper and present this to donors who have

a special interest in renewable energy. Focusing on the social impact would be important, particularly as it relates to issues such as health and education. For example refrigeration for clinics, home lighting for children to study and the introduction of e-classrooms through internet connections.

10. WATER SUPPLY: ISSUES AND OPPORTUNITIES

With an average annual rainfall of 74 inches (1880 mm) Chin State should not be short of water, but due to the seasonality of rainfall and a lack of storage infrastructure, shortages do occur. Water sources are natural springs and surface runoff water into natural streams. Discharge from natural springs and streams are decreasing and local experts consider this is due to degradation of forests and the effects of global warming. As a result, mini-hydro plants, irrigation schemes and domestic water supplies do experience shortages during the dry season.

Throughout the State, towns and some villages have their own domestic water supply arrangements, in most cases the supply is not sufficient to meet the demand. Most systems involve a collector pond or tank fed through pipes from a spring or stream. Consumers collect water in containers from outlets scattered throughout the community.

The Infrastructure Team examined the water supply situation in several towns across the State and assessed the current supply and demand situation, as well as steps being taken to increase supply. The assessment of the situation in Hakha City is presented below. Details of the situation in the other towns visited are present in the Report on Infrastructure Development.

10.1 CASE STUDY HAKHA CITY

Hakha City has a population of 25,667 people and water is supplied from 17 natural springs around the city. The water is piped from springs to 14 ground water tanks (total capacity of 221,450 gallons) and it is then distributed to water points or directly to some households and businesses. The estimated demand for water is 20 gallons of water per person per day and Hakha City's total domestic requirement is therefore about 513,000 gallons per day. However, the discharge in the dry period is estimated to be only 218,000 gallons per day or a shortfall of 195,000 gallons.

To address this shortfall the Hakha Municipal Affairs Committee and Municipal Department are cooperating to implement the following water supplying projects:

Sarkyun Spring 5 miles from Hakha City

Water will be pumped with a 30 HP pump to a 15,000 gallons collector tank in Hakha City – the budget is MK 54.5 million (US\$ 56,000)

Raise the height of Laiva Dam to generate more hydropower

The water released would be used for domestic water supply downstream. The Hydropower program is under investigation and JICA is studying the feasibility of the domestic water supply system

The Ti River is about 7 miles from Hakha and it is planned to construct a storage dam across the river to irrigate about 150 acres of paddy land and generate the power for the lifting pumps required to deliver domestic water to Hakha City. The plan is still under investigation.

The State Government's Annual Development Plan 2014/2015 makes provisions for improving drinking water supplies in Puanpichaung in Teddim, Belcianzi in Ton Zang, Ngasihhava in Thantlang, Haramhaw in Hakha, Ngalawngchaung in Kanpetlet, Tlala in Matupi, and Mulaungchaung in Mindat. The Rural Development Department will support 35 villages to establish drinking water systems. This would involve construction of five earth tanks and 30 tanks to collect water from springs and it would be funded through the Poverty Fund.

In addition, Boarder and Tribal Peoples Department will invest MK225 million (US\$ 230,000) in village drinking water projects in its areas of operation.

10.2 RURAL WATER SUPPLY

Chin State has a high incidence of waterborne disease (mainly gastro-enteritis) in its population, particularly in rural areas. Apart from the danger this poses to the population, in particular children, there are economic consequences. Reduced labour productivity, as well as extra pressure and costs incurred by the health sector are a few examples. The fundamental cause of this problem is poor access to clean water, accompanied by lack of appropriate toilet facilities that can effectively manage human waste.

Over a number of years UNICEF, UNDP, JICA and other donors have been supporting the development of clean drinking water supplies in the rural areas of Chin State. These schemes have had impact in villages where implemented, but most villages have not yet been covered. Where schemes have been established there is a need for maintenance or major repairs.

The Government's support for the development of domestic water supplies for rural people is the responsibility of the Department of Rural Development under the Ministry of Agriculture, Livestock Breeding and Rural Development. It is part of the poverty alleviation plan funded by the Union Government's Poverty Fund. Chin State has been allocated MK5 billion (US\$ 5.1 million) from the Poverty Fund in 2014/2021 and use of this fund to improve village water supplies could have a significant impact on health outcomes for the rural population.

To use the Poverty Fund, committees are established at the Township and Village level. The Village Water Supply Committee cooperates with the Village Management Committee to submit a proposal for water supply to the Township Development Committee. The Township has an annual plan and budget for water supply and any village proposal must come within the plan and the overall budget. Generally, Township funding meets the cost of a collection tank/pond and a pipe to take the water to the village.

Most of the improved village water supply facilities source their water from natural springs. Water is usually carried by a pipeline or by earth channels/ditches to collection ponds or tanks. Sometimes, it is taken directly to a water stand with tap in the village. Village people can use it directly at the water point for washing and cleaning or they collect and carry it to their homes.



Photographs 12 and 13 - Typical village collection tanks, distribution system and multi-purpose water points

The Infrastructure Team examined a number of village domestic water supply systems during the field research and these are described in the Report on Infrastructure Development. The report contains cost estimates for schemes planned for implementation and/or rehabilitation. Depending on the size of the

scheme and the distance from the water source, schemes cost between MK 3 million and MK 10 million (US\$ 3,000 to US\$ 10,000).

10.3 STRATEGY FOR CHIN STATE'S WATER SUPPLY

10.3.1 Rural Strategy

The State Government through the Poverty Fund now has access to funding to supply clean water to additional rural communities impacting the social and economic wellbeing of a large number of people. This has particular relevance for women who now carry water over long distances.

The Government's strategy for rural water supply should be designed to do more than deliver water to the rural community. The critical element is *cleanliness* and protection of the community from waterborne disease. This involves the Health department, which should be identifying and targeting villages with the highest incidence of gastro-enteritis, to achieve the greatest impact from investment. The Education department should also be involved to ensure that schoolchildren are taught about hygiene and the importance of drinking only safe, clean water.

It is important to ensure that the water supplied is free from faecal contaminations. Communities receiving water should be educated about the use of toilets and supported to construct toilets that will not contaminate the water supply. If the local health clinic is reporting cases of gastro-enteritis after a "clean" water supply has been installed there should be follow-up investigation at the village level to identify where and how contamination is occurring and the Village Development Committee take steps to rectify the situation.

The Health department should take samples from town and village water supplies on an annual basis and test them for *faecal coliforms*. Any water supplies found to be contaminated should receive support for improving the system and the population given training on hygiene and sanitation.

The process of delivering clean water provides an ideal opportunity to bring various arms of government and the community together to add value to the process of water delivery. This involves the Department of Rural Development, the Department of Health and the Department of Education as well as donor agencies, NGOs and INGOs working in the field. Effective coordination and cooperation with all concerned stakeholders will maximize the effect of the investment and the positive impact on the local population.

Another aspect that should be considered when establishing village water supplies is the possibility of surplus water, thereby supporting household vegetable production plots that could be an additional food source during the dry season. Small household gardens (or household plots within a community garden area) can impact household nutrition and nutritional outcomes for children. If the quantity of water is not a limiting factor, the cost of larger infrastructure necessary to deliver water is small when compared to benefits accrued from improved nutrition.

10.3.2 Strategy for Urban Water Supply

Investment in urban water supply projects should follow the same principles as rural projects. With more people involved in urban projects, the impact is greater. The focus is to ensure water quality and not the volume of water to be supplied. The Health Department should be involved in planning and quality assurance to ensure the quality of the water at its source. The population should be educated on how to maintain hygiene standards to keep the water clean and the people, healthy.

The special needs of local small and medium industry should be taken into consideration with regard to water supply. Any investments in the *food manufacturing industry* will almost inevitably require a high quality, uncontaminated water supply. This will need to be achieved through a reliable sterile source such as a deep bore or a secure spring. The water will need to undergo treatment within the factory in order to

ensure its purity. The Health department should be provided with the capacity to sample and test water used by manufacturers and gives the necessary certification as to its quality.

10.4 IRRIGATION

The subject of irrigation has been discussed previously within the Agriculture sector project proposals, but is further mentioned here because of its importance to water management. There are definite complementarities between *village domestic water supplies* and *irrigated agriculture within villages*. In planning *village water related investments*, it is important for Village and Township Development Committees to look at the bigger picture. There is a need for people to have access to adequate quantities of clean drinking water. If the water source is sufficient to provide water for irrigation it is strategic to look at irrigation schemes as a source of water for domestic use. This approach will assist both the social and the economic issues within the community. Access to irrigation is the single most important factor affecting agricultural production and financial returns for farmers in Chin State.

As indicated in the discussion on the Agricultural Sector and described in the *“Project to rehabilitate existing irrigation systems throughout Chin State and to identify and design additional small-scale schemes”*, there is a need to invest and maximize the development of irrigation in agriculture where ever possible. Planning should involve a holistic approach to water management in rural areas. It is important to embed this approach within the Village and Township Development Committees. The Department of Agriculture and Irrigation should take the lead in this process. It is also important to include the Health and Education departments as well as various NGOs and INGOs involved.

11. TOURISM: ISSUES AND OPPORTUNITIES

There are a number of sites and attractions in Chin State that could be of interest to tourists, but very few actually make the journey. During field research, the MIID Tourism Team visited most tourist sites to assess their potential for attracting additional tourists and to analyse the main impediments to tourists visiting Chin State. The team also analysed how to increase current numbers and financial returns to communities in the vicinity of key tourism attractions around the state. A number of important heritage sites were identified as key assets and locations for tourism development.

There are currently 19 tour companies operating tours into Chin State, mainly for trekking around Mount Victoria and for bird watching. In the short-term, tourism will remain a small-scale niche market. Realistic estimates for the short to medium-term are up to 5,000 visitors per annum.

The research team identified the strengths of Chin State’s tourism as follows:

- It is an *undiscovered* destination
- Sites of natural beauty
- The remoteness will keep tourist numbers down and thus limit negative impacts on culture.

The identified weaknesses are:

- Challenging to access with no convenient air links to tourist sites
- A lack of tourism infrastructure
- Existing facilities are poor in quality
- Locals have no experience in tourism and poor planning skills
- Few site options
- Tourism is managed by outsiders and not by Chin people

12.1 STRATEGY FOR TOURISM DEVELOPMENT

Air access points - The greatest impediment to attracting tourist to Chin State is access to both the state and its tourist sites. Without an effective air link which can shuttle tourists to a point within a one to two hour drive to main sites, tourism in Chin State will be limited to younger low-paying adventurous tourists. In discussions as to the type of air service that Chin State wants, this factor should be taken into consideration. High paying tourists do not mind using small aircraft (10-seaters) but they will not happily travel six or seven hours in a four-wheel vehicle on a very winding road. More landing points, closer to points of interest, should be constructed to attract higher paying tourists.

Local tourism administrative structures are under-developed. Tourism to Chin State is mostly organized by companies based outside the state. Establishing a local organizational structure to promote and build the industry is necessary. This will require the formation of a Chin Tourist Association involving locally-based private sector groups. The State Government should initiate this by holding a forum to bring these groups together. The Tourist Association will then promote the industry via a website, which may be hosted through linkage to the Government website in initial phases of the project.

Studies should be carried out to prepare management plans for key tourist sites in Chin State. These plans should be structured to create the best tourist experience while preserving the integrity and features of the sites studied.

Promotional materials should be created. Develop high-grade visual materials for the website and commission development of a basic guidebook on how to access tourist sites. The book should explain and promote attractions. This material should highlight features that would appeal to a specific audience, i.e., trekkers, bird watchers, people interested in orchids or in the history of World War II etc.

Create a tourist friendly environment. At the administrative level, remove unnecessary barriers such as visitor permits/restrictions and promote a welcoming image. Sensitize local communities about the needs of tourists and how to deal with them on a personal and commercial level.

Train all levels of the industry from tour-guides to tour company managers, from hotel managers, to chefs, to cleaning staff.

Create connections and link-up with existing programs. Effective connections should be established to the major tour destinations and visits to Chin State be sold as a unique additional experience that can be added at minimal cost in terms of time and money. The small size of the current market and limited budget available to develop tourism in Chin State will make it important to utilize existing training and development programs to the extent possible. In this regard, Action Aid is working with communities in the Bagan area to promote handicraft and other tourist related activities that could benefit local village communities. This is just another example of how closer cooperation between the Government and the INGOs can be of mutual benefit in delivering people-centered development at a greatly reduced cost.

12.2 PROJECT PROPOSALS FOR ECOTOURISM

The MIID research team identified a number of Projects designed to carry out the basic groundwork required to setup the industry. These projects are summarized below and are presented in more detail in Volume 2. They need to be linked to each other and connected to an overall strategy for the industry. Once the Tourism Association has been established, and there is an operational framework for it to connect with the Government, that body will then need to consider whether it is more appropriate to combine a number of these studies and deliver results in the form of a tourism Master Plan for Chin state. Selected projects entail:

- A Project to identify the Strategic Direction for Chin State Tourism and develop the Chin Tourism Association – **US\$ 115,000 over 1 year**

- A Project to develop a Management Plan and trekking mapping for Nat Ma Taung (Mount Victoria) National Park – **US\$ 136,000 over 1 year**
- A Project to Train Guides and Provide Language Support for Selected Tourist Sites – **US\$ 44,000 over 4 months**
- A Project to Improve Guesthouse Infrastructure – **US\$ 91,000 over 1 year**
- A Project to create a Heritage & Textile Trail from Nyaung-U to Kanpetlet – **US\$ 150,000 over 1 year**

13. INSTITUTIONAL DEVELOPMENT: ISSUES AND OPPORTUNITIES

The Union Government's reform process has created a new development environment for State and Regional Governments. The approach to planning has been reversed from *central planning* to *bottom-up participatory planning*. Village Development Committees are now expected to identify what they want on their development agenda. The current period of transition is challenging to manage for everyone concerned, from the Village Tract Administrators through to the Township Leadership and State Government Departments. The development of Chin State in the years before the Ceasefire Agreement was disrupted and economic growth was slow, and there is a lot of learning to do if the Chin economy is to catch up with the other States and Regions.

The Union Government has rolled out a very impressive blueprint for Myanmar's future development. It outlines appropriate institutional frameworks within which states are required to prepare annual plans and budgets. The medium-term Comprehensive Strategic Development Plan for the five years commencing in 2016/2017 is expected to be grounded in the community, with Village Development Committees playing an important role, working with the village community to identify priority needs. These ideas/proposals are to be fed into plans developed at the Township level expected to take responsibility and have a central role.

While this planning framework proposed by the Union Government is excellent, many states lack capacity to implement new processes and are struggling to deliver results, especially at the Township level. Based on the field observations made by each of the MIID Research Teams it will be required to introduce a comprehensive program to build planning and implementation capacity within the State and Township administrations. This should focus on effective delivery of the Union Government's new planning and development approach to maximize budget flow from the Union Government to Chin State and ensure efficient and effective utilization of resources.

The international community recognizes the importance of the Union Government's reform process and is responding with increased resources to support poverty alleviation and economic development programs. Chin State should aim at fully capitalize on the increased flow of international assistance. The State Government has established a unit to manage international assistance and need support in dealing with donors. It is important for this unit to meet requirements of donors, both in the presentation of development of proposals and in implementation and reporting procedures.

Technical capacity should be built in most sectors, in addition to building the State's capacity to manage the Union Government's new planning processes. The Project Proposals presented in this report include components to introduce improved technology and strengthen the technical capacity of implementing staff. Most projects involve introduction of new approaches to development now being promoted by the Union Government. With the planned Agriculture College, the State is well placed to improve the technical capacity of its agricultural services. The Union Government's promised support to establishing an IT Training Centre is another important aspect of development and could have considerable impact on job creation in Chin State.

The TVET Research Team propose the establishment of a training centre to educate trades people for the construction, agro-processing and food processing sectors to add value to agricultural production. It is vitally

important that these training centres are properly coordinated and integrated into the economy as to retain their relevance. Frequent consultations with the private sector are necessary to meet the emerging needs of each sector. The State Government may have difficulty attracting high quality teaching staff to these institutions and should consider seeking donor support for curriculum development.

13.1 CAPACITY BUILDING

Capacity development within the NGOs and INGOs in Chin State is also an issue. For both the Government and the NGO community there is much to gain by working together rather than separately. The two sides have different skill sets: the government side is better on technical matters and the NGOs are better able to deal with community matters and communication at the grassroots level. By working together, both sides could benefit and the community will receive better service. Capacity development activities should include participants from both government and civil society.

13.2 PROJECT PROPOSALS FOR INSTITUTIONAL DEVELOPMENT AND CAPACITY BUILDING

Projects proposed for capacity development are designed to support the Union Government's new approach to planning and development. The objective is to ensure that all levels of the State Administration are fully competent using the new planning guidelines. This is essential if Chin State is to get its full entitlement of funding from the Union Government. It is also important that the grass-root processes are implemented and village communities obtain the resources needed to implement priority needs.

The international donor community has its own requirements for project preparation, implementation and monitoring. The Chin Government's unit dealing with donor coordination must be familiar with these requirements. A particular requirement in dealing with the donor community is to have a high level of English language skill within the unit. This is necessary for translating proposals into English and for presentations to donors. It is also necessary to conduct consultations with donors in English language and the Government side must have its own skilled interpreters supporting the process.

The Project Proposals for Institutional Capacity Building is designed to support and improve all aspects of Chin State's planning, budgeting, implementation and monitoring. It is designed to support the State Government's endeavours to increase funding from both the Union Government and from the donor community. It is estimated to cost **US\$ 270,000 and will be implemented over a period of 12 months.** Details of the Project are present in Volume 2.

PART C - OVERALL DEVELOPMENT STRATEGY AND IMPLEMENTATION RECOMMENDATIONS

1. A PEOPLE-CENTERED APPROACH FOR SOCIOECONOMIC DEVELOPMENT

The MIID Teams have developed strategies and identified investment proposals for each of the sectors researched; these have been presented above and in the Working Papers for each sector. In this section the aim is to bring together the various sector strategies and establish a coherent and balanced approach to the overall development of Chin State. This overall strategy must also be aligned with the national priorities established by the Union Government i.e. *people centred development*. The analysis to-date has focused on two overarching development themes: **Social Protection and the need for Economic Growth**.

In practice these two themes are inextricably linked and dependent on each other. When viewed in the context of the Union Government's desire to have **people-centred development**, the State plans need to address Chin State's serious shortage of food as a first priority. The food shortage is not just a social problem, it is a political problem. No State Government wants to report to the Union Government and to the international community each year that its economy is so **poor that it requires assistance to feed its people**.

Hunger and the stunting of children are the symptoms of this serious problem. The weakness of the agricultural production system, on which 70% of the Chin people depend, is the cause of the problem. It is at this nexus that the *social and economic themes of the Plan meet*. Agriculture is essentially the only productive element of the Chin economy at present and the vast majority of Chin people is dependent on it - directly or indirectly - for their livelihood. Agriculture is the Chin people's source of income and food. The fact that 73% of the Chin population is officially classified as "*poor*" and 58% of children are measured as being *seriously or moderately stunted*³¹ indicates that the agricultural system is failing and the social situation of the people is highly critical.

The field investigations show failure of the agricultural system is not transient³² but systemic³³. Agriculture is a very large part of the Chin economy - it is failing and the likelihood that it will decline still further, presents a very grim outlook for the future of the State and its people. *Poverty* pervades Chin society and failing to produce enough food undermines *the health of its people*. It also underlies the high dropout rates from school as children have to leave school because of insufficient household incomes to pay for schooling, because they need to work on their parents' farms and prop-up the inefficient agricultural production system.

To address social and economic problems in Chin State it is necessary to **address agricultural production as the first priority**. Because agriculture is such a big part of the economy, small gains across all of agriculture will deliver large gains in the overall economy. Because so many people depend on agriculture for their survival, gains in agriculture will benefit a large proportion of the population, thereby directly improving *social indicators* across the State.

SMEs and Ecotourism will have minimal immediate impact on overall economic growth or social conditions for the majority of the people. SMEs may have some impact if they can add value to agricultural production. Similarly, Ecotourism is unlikely to expand to a point where it has an impact on the economy as a whole and is considered unlikely to be a major source of employment in the medium term.

³¹ UNICEF/MICS "Myanmar Multiple Indicator Cluster Survey 2009 – 2010"

³²Due to periodic bad weather conditions etc.

³³Due to the way the system is operating

1.1 IMPROVING CHILDHOOD NUTRITION

Based on this analysis, it is proposed that “**improving childhood nutrition**” become the centrepiece of the Chin Government’s development strategy. The linkage between *the economy*³⁴ and *social indicators* has been demonstrated above. To make economic progress in any field it is necessary to be able to measure progress towards achieving a goal through the selection of an indicator that accurately reflects progress. In the case of Chin State “*poverty*” and its reduction is possibly the best goal to focus on. Poverty is difficult and expensive to measure and - in most cases - participants in the survey are unwilling to provide honest information about their income etc. It is often easier and more accurate to measure some *social outcomes* than the economic situation of households in terms of family income.

The nutritional status of children is relatively easy to measure and track. Initial measurements can be taken within the school system and later in health clinics. The nutritional status of children is the most fundamental of social indicators and also of the economic situation of the household and by extrapolation the state of the economy of the state as a whole. Nutritional markers are well established and internationally recognized and initial data can be easily collected as children enter school or pre-school. Schools also establish an effective geographical reference point for areas in greatest need and there is a high correlation between the nutritional status of children, poverty, and the efficiency of agricultural production (for both subsistence food production and cash crops for income generation).

With this approach in mind, it is proposed that a nutritional survey be conducted in all the schools in Chin State and that the data gathered would be used as a planning tool to identify the areas of greatest poverty and concern in terms of improving agricultural production and economic activity. This information should also be fed into the planning system for other sectors such as village road construction in order to target the communities where the most numbers of people are in need of improved economic outcomes.

Establishing a *people centred approach* to setting development priorities will allow the State Government to engage with the international donor community. The donor community would also appreciate a built-in monitoring mechanism that the nutritional survey approach would provide. Focus should be on the *nutrition and welfare of children* as a central theme for economic development. The State Government would reaffirm the Union Government’s *people centred approach* to development.

1.2 A RESOURCE BASED APPROACH TO DEVELOPMENT PLANNING IN CHIN STATE

The political environment in Myanmar is focused on improving the lives of people. Therefore, any development plan needs to identify resources available that can boost the economy and improve people’s lives.

Figure 3 in the “Background” section of this report shows the pattern of land use in Chin State. It should be noted that only 3% of the land is actually cultivated. An estimated 16% is designated “Reserved Forests” and 13% is designated “Other Forests”. In addition to these three categories, 34% of the land is designated to be “Cultivable Waste” and 34% is designated “Other Land”. Thus there is an enormous amount of land set aside for forestry, an estimated 2,594,205 acres (1.5 million ha.), or 29% of the total land area, however, the projected net returns from forestry in 2014-2015 (as stated in the 2014-2015 Annual Development Plan and Objectives for Chin State) is only MK 1,563 million (US\$ 1.6 million). This is a very small return from such a vast amount of forest land³⁵. The forest industry in Chin State is poorly developed and there is little or no processing of trees into timber. There is also no known plan for the systematic harvesting and replanting of forests or plans for community forests, which only operate at the “micro level”.

³⁴The economy is essentially the agricultural economy in Chin State

³⁵While the figures are official they probably understate the value of forestry and do not take into account the large amount of wood that is harvested by farming households to meet their fuel requirements and for sale to meet their needs to purchase grain to meet family food requirements.

Given land use and the terrain in Chin State, the forestry sector should be at the forefront of any planning exercise conducted in the State. Unfortunately this has not been the case in previous plans. Chin's forests are a major asset with potential for wealth creation that far exceeds anything now generated by agriculture or other sectors considered in this study.

The current situation presents a mismatch in resource utilization. The vast majority of the Chin people are trying to make a living from agriculture on land that would be classified as unsuitable for cultivation. They are locked into a declining system of shifting cultivation and are under pressure to move to permanent agriculture, even if most of the land available to them is not really suitable for permanent agriculture. Returns that could be obtained from changing to permanent agriculture do not justify the enormous investment required to construct terraces and provide the irrigation, essential for even a modest level of production. To support development a *re-think* is required of the way smallholder producers in Chin State make their living and how they make the transition to more sustainable systems of income generation that is better in-tune with the geographic realities of the state.

Chin State Government is recommended to realign its use of natural resources to address serious social and economic issues facing its people. Agriculture alone will not be able to get the Chin people out of poverty and it is unlikely that light industry and tourism will be able to create the employment necessary to absorb the population growth.

Most of Chin State's poverty problems could probably be resolved by a structured program putting communities in charge of forest resources in areas used for shifting cultivation. Forests could be developed in association with a move out of shifting cultivation and towards permanent agriculture. A major asset base can be created by using surplus land from shifting cultivation to plant commercial forest species owned by individual households. Structured annual payments, offset against returns from a final harvest of trees at maturity would guarantee minimum household income levels during the life of the tree. By phasing the planting and harvesting regimes, households would have a sustainable income source in perpetuity. Such a system would allow for the State Government to collect revenue at the point of sale and reduce the State's dependence on budgetary support for the Union Government. Locally based processing of timber would further add value to forest products and create a substantial amount of rural employment. The investment requirements for planting forests are less than for terracing land for agricultural production and - depending on the slope of the land - returns from forestry are greater than from terraced crop production.

1.3 COMBINING A PEOPLE CENTERED APPROACH AND A RESOURCE BASED APPROACH TO DEVELOPMENT PLANNING

It should be possible to combine both a people centred and resource based approach in relation to Chin State to give an optimum outcome for the rural population. Such an approach would address basic social needs by addressing food shortages and promoting income generation. The solution provides immediate relief from hunger and long-term income security through forestry. For such an approach to succeed, it is critical the Union and State Government agree to put responsibility for management of the forests in the hands of the people. Ideally to individual households overseen by village leaders with inputs from, and supervision by, State Government officials.

It is a bold step but this is a time of reform in Myanmar and many things are possible. Those who show they are willing to take the risk and lead the reform process will reap the benefits.

Some believe forests are a resource best exploited by big business and that may be the case in places less geographically challenging than Chin State. Given the extremely rugged terrain, it is almost impossible to mechanize the planting and harvesting processes in the forestry sector. The land now being used for shifting cultivation is so fragmented it is not suitable for exploitation by a large commercial operator. It is better suited to residential, small-scale household producers who have a vested interest in protecting it from damage by fire or animals – a *task that would be virtually impossible for an external commercial operator*.

Clearly forest development is a long-term process requiring farmers to have faith in the Government's goodwill to honour such long-term agreements. A system of guaranteed, annual performance-based payments should overcome any doubts. Progressive annual payments offset against the final harvest provide the Government with control over the program. It also provides a basis on which the Government can collect revenue from forest resources.

The introduction of such a people-based program to commercial forest development provides a community-led approach to moving from shifting cultivation to permanent agriculture. It provides incentives to shifting cultivators *to change to a more permanent system* and to protect the land by planting trees. It then becomes imperative for them to control fires to protect *their own trees* and reduce the damage done to forest resources in the *Reserved Forests*.

1.4 INCREASING AGRICULTURAL PRODUCTION TO ADDRESS FOOD SECURITY, CHILD STUNTING, POVERTY, HEALTH AND ECONOMIC GROWTH

There is a range of interventions to increase agricultural output and local food production elaborated on in the Project Proposals. The following list of initiatives attempts to explain priorities and time frames for resulting impacts:

- Increased chemical fertilizer use will increase production of irrigated rice, rain-fed terraced (bundled) rice and terraced areas of maize and upland rice. This will show results from Year 1 and should be recognized as the highest priority.
- The second priority should be obtaining improved seeds. If improved strains of rice and maize are introduced, the change will give a major response at a minimum cost. Improved seeds will be more efficient when utilizing chemical fertilizers and will greatly increase the production from the same level of investment.
- Quick gains can be made by distributing improved seed for shifting cultivation but the uptake will not be as quick as for farmers who have terraced land and irrigation. Given the fact that 80% of production is based on shifting cultivation measures to increase output should be promoted. Improved seeds should be provided to INGOs/CBO as part of the program as they already cover a substantial number of farming communities and have good community outreach. Much of the shifting cultivation is on poor soil that may not give a sufficient enough increase in production to warrant additional expenditures on chemical fertilizer.
- Promoting SALT techniques will significantly increase crop yields but previous experiences with this approach in Chin State and elsewhere have shown farmers are slow to adopt the technology. SALT technology should still be promoted where ever possible.
- Repairing existing irrigation systems is the third highest priority and will give an immediate response to rice production due to improved water control. It may also allow expansion of the planted area on existing schemes as less water is wasted. If accompanied by improved seed and chemical fertilizers the response is even greater. A return on investment will be higher from this than from investing in new schemes. The lead-time for repair work to have an impact is two years.
- Expanding the area under irrigation will take longer because of a need to design schemes and source large amounts of money required for construction. An irrigation scheme is the surest way to increase agricultural production for the very long term. The lead-time for each new scheme is possibly three years.
- Establishment of household fishponds has been proposed to supplement protein requirements for household nutrition and to be a minor source of income. Pond water can also be used to maintain household food gardens.

- Household food gardens in areas where there is sufficient water supply to allow production during the dry season can add significantly to a family's nutrition. Strategic selection of vegetable species can also fill nutritional gaps especially for young children and pregnant mothers.
- A number of root and tubers such as cassava³⁶ and sweet potato can also serve as food reserves when grain crops fail, or during periods of *hunger* before the new crops are harvested for the season.

Cash crops are important. The measures summarized above relate to increasing production of food crops, most of which are consumed directly by households to meet nutritional needs of the family. A family only sells its crop when it has a surplus and then, only locally to households in the same village. There are considerable economic benefits to producing for local consumption because there are no marketing costs for the surplus and no freight charges incurred for bringing in food to fill local food shortages. For cash crops, the situation is reversed. Freight costs have to be met by the producer and those costs reduce profit. Cash crops are also much more subject to the effects of supply and demand outside the area of production. Prices can fluctuate widely and most Chin farmers are isolated and at the mercy of traders. Farmers do not control the market - they are *price takers* – the traders are the *price setters*.

Some cash crops such as Elephant Food Yam are in high demand and can make a significant contribution to the Chin economy. It is a major contribution to food security for households producing them. There is also potential for expanding the production of EFY, wine grapes and wine production, improved oil seed crops and dried fruit crops such as raisins, pears, apples, peaches etc. Minor processing (i.e. drying) can extend shelf life of fruit crops and facilitate the marketing of out of season products.

1.5 THE ROLE OF LIVESTOCK – ESSENTIALLY A CASH “CROP” AND A SAFETY NET

Chin State with its vast areas of waste and fallow land is well suited for ruminant livestock production (cattle Mithun and goats) and there is considerable potential for increasing production by converting fallow land to permanent pastures and fodder trees. This could include legumes in pastures to increase soil fertility to support future cropping. This approach could be used as an alternative to replanting forests on land formally used for shifting cultivation. While local people consider Mithun to be the favoured species, they are expensive to buy and difficult to manage due to damage they cause to crops. Goats are less expensive, easier to manage and more suitable for meeting the needs of the poor. There is potential for a substantial increase in goat production in Chin State and surplus animals would find a ready market in neighbouring India.

Pigs are very important to the household economy but given the shortage of grain and the lack of a local source of the protein needed for their diet, the prospects for commercial production are not good. However, there is potential for expanding pig ownership as a coping strategy for poorer households.

Livestock play a vital role as a safety net in times of economic stress. They are sold to buy food in times of shortage and pay school fees, medical expenses, as well as supplying enough money for weddings and funerals. They are the poor family's banking system and a high level of livestock ownership usually reflects a thriving rural economy³⁷. The livestock project proposals presented in the Plan is designed to increase livestock ownerships and minimize risk within the smallholder sector. In the planning sense, livestock perform the dual role of providing economic growth while at the same time providing direct social benefits, e.g. access to medical and educational services.

³⁶ Cassava is an important food security crop in Thailand and a number of other countries but possibly would only be successful at lower altitudes in Chin State.

³⁷This means a large proportion of households owning livestock – not just large numbers of livestock owned by a few people – in that case livestock ownership is often the question that separates the rich from the poor.

1.6 LINKING GENDER AND THE EMPOWERMENT OF WOMEN TO THE DEVELOPMENT PROCESS

The research report on Gender and the role of women has highlighted the need to give women a greater say in the development process. By putting *nutrition* in the forefront of the proposed development strategy, the Plan creates space for the inclusion of women in the planning process. Women are the custodians of family nutrition. They, with their children, are the ones who experience the most severe hunger. It is logical they should take the lead in monitoring the nutritional status of the household, the village, the Township and the State. It is therefore proposed that this monitoring responsibility should lie within the Department of Social Affairs and that it should be coordinated by Social Workers posted to each Township. These Social Workers would work through women's groups to monitor food security on a household basis in each village. Representatives from the Women's Groups would report to Village and Township Development Committees. This may be considered to be only a small step, but it would be a significant one as it gives women responsibility within an important part of the administrative structure.

1.7 THE ROLE OF SMEs WITHIN THIS PLANNING FRAMEWORK

As in most economies, the Plan for SMEs in Chin State emphasizes adding value to local agricultural products so as to command better prices in local markets or markets outside the State. SMEs also service other parts of the economy, such as construction, IT services and communications, retail outlets and the supply system to agriculture and forestry. SMEs play an important role in employment generation absorbing surplus labour from the rural sector and school dropouts. The SME sector is poorly developed in Chin State and the Plan focuses on removing administrative barriers to establishing SMEs as well as identifying and developing locations well connected to roads, electricity and water, which can facilitate SME establishment and reduce production costs. In the medium term, SME development will be confined to processing agricultural products in order to lower transport costs in marketing outside Chin State, or to SMEs servicing local needs. One opportunity that requires further investigation is small-scale saw milling of timber and low cost furniture manufacturing for local supply purposes.

1.8 THE ROLE FOR ECO-TOURISM WITHIN THE PLANNING FRAMEWORK

It will be challenging to link into the higher end of the tourist market until Chin State has effective and convenient air linkages with the rest of Myanmar. The plan focuses on undertaking the groundwork necessary to create a small, locally-based industry catering to more intrepid tourists interested in trekking, and traveling on to other tourist destinations in Myanmar. In the medium term, tourism will play a quite localized role in the State's economy improving the lives and incomes of only a relative small number of people.

1.9 THE ROLE OF INFRASTRUCTURE WITHIN THE PLANNING FRAMEWORK

The high cost of constructing roads is a major impediment to economic growth in Chin State. Road budgets consume a high proportion of the State's financial resources. The Plan focuses on developing a Road Master Plan to prioritize where investment can have the most impact, introducing improvements in road design that can reduce construction and maintenance costs and improve the durability of roads. So much of the State's budget is spent on roads and so little on productive activities such as agriculture or forestry. Stronger consideration should be given to the economic aspects of road construction and the road budget needs to be focused on the networks that have the greatest economic impact.

Improving the domestic water supply is a development priority with social consequences. Lack of clean drinking water is the cause of gastro-enteric disease and Chin State experiences the highest incidence of water borne disease in the Union. In rural areas where reticulated systems have not yet been developed,

Chin women spend more time collecting water from rivers and springs than any State in the Union³⁸. The Government is addressing these issues by improving both rural and urban water supply systems. Consideration should be given to creating supply systems capable of supporting household nutrition gardens as well as standard domestic water supplies.

There is considerable scope for developing renewable resources in Chin State in the Energy sector. Mini-hydro schemes and wind power have potential for rural electrification in areas where connection to the National Grid is not economically feasible. It would be strategic for the State Government to adopt a “green agenda” approach to many aspects of its development. This would be consistent with a move away from shifting cultivation, the development of sustainable forest management practices and adaptation to climate change. This approach could then tap into international funding for climate change adaptation and the reduction of CO2 emissions.

2. MOBILIZING OF RESOURCES: EXISTING OPPORTUNITIES

The MIID Team prepared a large number of project proposals designed to be included in Chin State’s regular planning and budget process. These project proposals have been presented as stand-alone development modules so the State Government may use them to solicit donor support for particular development initiatives.

There are five categories of donors/development agencies supporting Myanmar’s development:

- Individual donor governments supporting government and CBO initiatives
- International multi-lateral organizations – UNICEF, WFP, UNDP, ILO, EC.
- Support from INGO and CBO
- International Finance Institutions – World Bank, ADB and IFAD
- Global funds such as the Global Environmental Facility (GEF), the Adaptation Fund, which are generally managed through the UN agencies or the IFIs

A number of agencies are operating projects and programs in Chin State in association with the State Government, CBO and INGOs. The State Government has established a unit to deal with these donors. This unit has a vital role to play in mobilizing extra budgetary funds from the international donor community to support development. It requires an understanding of how each category of donor operates. For example, the type of projects and the development sectors donors are prepared to finance. Other factors include the size of projects financed and conditions attached to a supply of funds (grants or loans). Modalities for the delivery of funds also need to be considered if they are channelled through the Union Government. The role of the unit should be to present project proposals to donors and funding agencies and seeking assistance. It should facilitate the donor’s efforts to carry out detailed project designs and establish a cooperative working environment across concerned government departments, with the private sector and CBOs.

A number INGOs and CSOs are very involved in Chin State’s development. They provide a substantial amount of the social and economic support to the community, particularly in rural areas. This support is invaluable to the State, but lack of effective dialogue between the INGO community and the State Government is reducing the impact of programs provided by both parties. Barriers for NGOs to operate are being eased through the newly approved Association Registration Law, paving the way to establishing better mechanisms for coordination and an exchange of ideas to maximize impact. Establishing a more supportive environment for NGO operations could result in additional aid flow from donors that prefer to use civil society organizations as vehicles of support for grassroots programs.

³⁸ UNICEF/MICS “Myanmar Multiple Indicator Cluster Survey 2009 – 2010”

It is the IFI's (ADB, The World Bank and IFAD) that provide the largest amounts of development finance options. They could be interested in financing an operation in Chin State as part of initiatives they are financing in one or more of the larger states or regions. They could be interested in including Chin State if the State Government had already identified and partially prepared the project component so it could be included in a larger project with minimal additional work. It will be important for the Chin State Government to monitor what projects the World Bank, ADB and IFAD are planning to prepare and when something of interest to Chin State comes-up, it should express its interest to both the IFI and to the concerned Union Government Department.

Bilateral donors should be targeted and a number of projects that have been prepared by the MIID Team would be attractive to particular donors. Chin State has comparative advantage over other States in Myanmar in relation to India because it shares a common border and there are cross-border ethnic connections. India could be a source of technical assistance with respect to agriculture³⁹ and there could be opportunities for Indian manufacturers to setup production facilities in the cross-border areas. If this happens, such industry could provide services such as power, water facilities and roads and contribute to upgrading these sectors to acceptable standards. This type of opportunity needs to be factored in by the State Government when planning the State's service networks.

The Adaptation Fund supports efforts around the world for countries to adapt to climate change. Chin State would be a prime candidate for support from the Adaptation Fund. The State is almost entirely dependent on rain-fed agriculture for its subsistence and is already experiencing severe climate stress, more than other States or Regions in the Union. No state is likely to be more adversely affected by climate change than Chin State. Myanmar has already received support from the Adaptation Fund through the UNDP for drought-proofing irrigation systems in the Dry Zone. It should be a relatively simple matter to obtain Adaptation Fund financing to mitigate the effects of climate change on agricultural production in Chin State. Such a program could include financing alternatives to shifting cultivation with an emphasis on increased irrigation and a reduction in the associated burning.

3. CONCLUSION

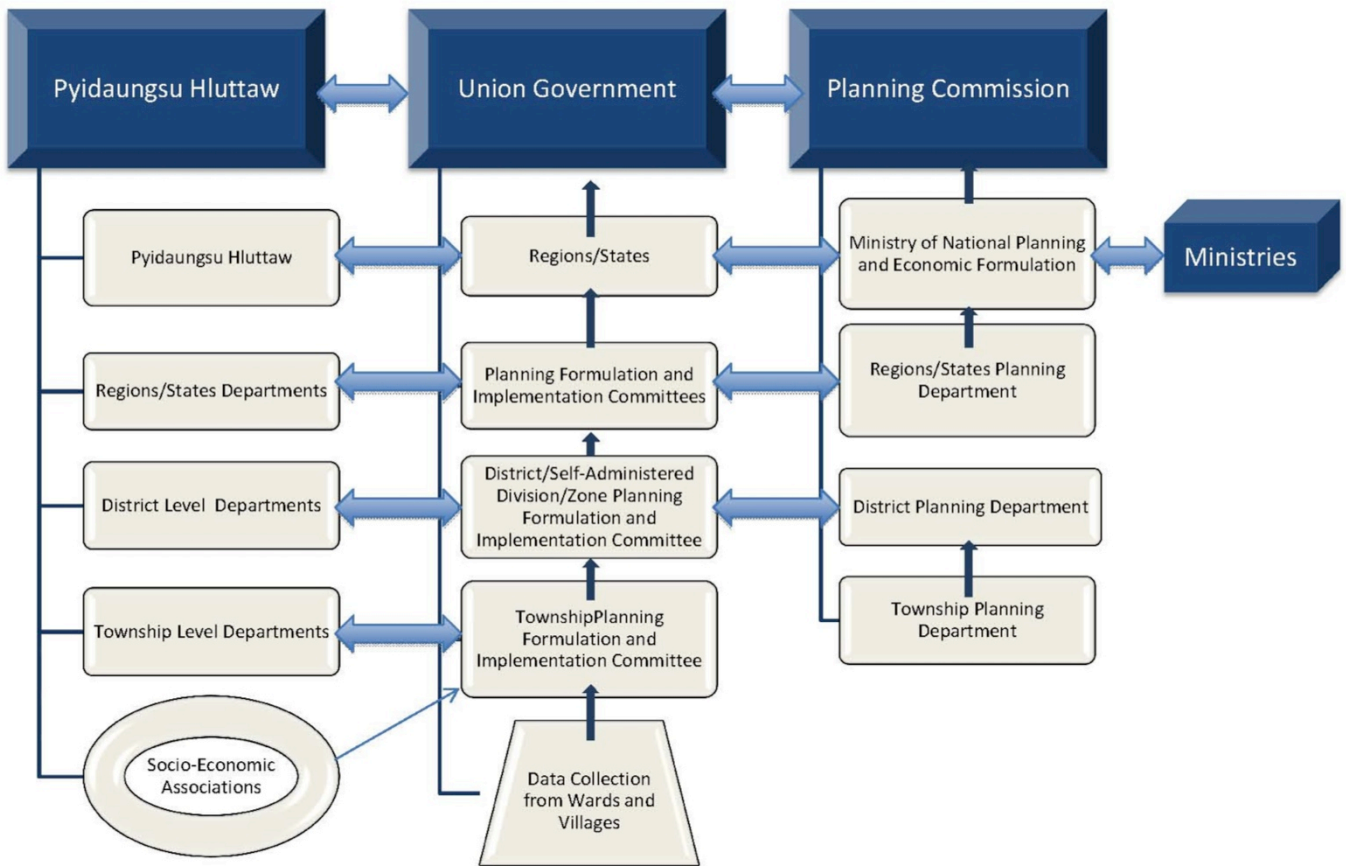
This report is the result of a participatory planning process involving key stakeholders associated with the economic and social development of Chin State. It has examined all sectors of the Chin economy and has provided a forum in which the Chin people and Government could articulate problems and aspirations. It has endeavoured to construct a development program addressing the main issues facing the economy and the people. The planning process has included the development of a Local Social Plan and the LSP has directly affected the way the overall plan has evolved. The analysis carried out in preparing the LSP highlighted the great difficulties the Chin people face in their daily lives – the shortage of food, the lack of money for children's education, and the poor access to health services. In recognition of the seriousness of these issues – particularly the lack of food security – the Plan has focused its development approach on resolving the problem of hunger and food shortages, using the nutrition of children as a marker for development progress. The Plan has attempted to bring together the economic activities and opportunities and focus them on achieving people-centred development that can deliver improved social indicators. The result is a large number of initiatives presented in the form of project proposals at a combined value of US\$ 65 million. They have been designed for incorporation in the State Government's plans and budgets and also for presentation to the donor community for possible funding.

³⁹ Technical support for the proposed new Agricultural College would be a possibility.

ANNEXES

**ANNEX 1 -
New Planning Processes**

Figure 1 - Participatory Plan Formulating Process in Myanmar



ANNEX 2 -

Review of Chin State Plans and Budget 2014- 2015

The State Government is committed to “*Regional Balanced Development*” and “*Sustainable Development*”. Priority developments proposed under the budget for the 2014-2015 fiscal year include: a) improved access to water accessibility; b) supply of electricity to an additional 30 villages; and, c) the construction of 79 miles of road (including 11 mile of rock surfaced road and 50 miles of village motorbike roads), 8 water drainage systems, 11 bridges and 3 suspension bridges, and maintenance on 70 miles of existing roads. Of particular importance to the MIID Study is that MK 2168.48 million (US\$ 2.1 million) was allocated to establishing *the new municipal planning activities in Chin State*. This investment is seen as essential for the improvement of planning capacity at the Township level.

Under the current plan the State Government is cooperating with NGO and INGO. GRET is supplying MK 1500 million (US\$ 1.5 million) to fund small loan to agricultural producers and MK 320 million (US\$ 350,000) for terracing; water supply; community forestry; cow breeding; and, goat breeding activities. World Vision is providing nearly MK 200 million (US\$ 200,000) for health care in Tedim Township and the NGO GREEN is supporting terrace development. WFP is also supporting child protection and village connection roads.

The Budget for 2014-2015 – totals MK 122,797 million (US\$110.5 million) of which the major expenditure items are: Construction 48%; Townships Municipalities 10%; water supply 8%; State Government Office 7%; Rural Development 7%; and, electricity supply 4%. Education consumes only 3%, Health 2%, and Agriculture only 2% of the total budget. The 48% allocated to Construction reflects the very high cost of building and maintaining roads in Chin State.

Table 1 Chin State Government Budget Allocations, 2014-2015			
Area/Department	Approximate Budget (MK million)	Approximate Budget (US\$ million)	%
Construction	54.268	54.2	48
Drinking Water	8.412	8.6	8
Electricity	4.151	4.2	4
Agriculture	2.587	2.5	2
Rural Development	7.510	7.4	7
State Government Office	7.733	7.6	7
General Administration Department	1.622	1.6	1
Judiciary	412	0.4	(<1)
Parliament	1.355	1.3	1
State Audit	218	0.2	(<1)
Fire Department	2.555	2.5	2
Municipal	11.375	11.1	10
Border Affairs	2.489	2.4	2
Basic Education	3.251	3.2	3
Health	2.058	2.0	2
Other	2.802	2.7	3
Total	<u>112.797</u>	<u>110.5</u>	<u>100%</u>

Targets Set for the Main Development Sectors in 2014-2015

The State Plan for 2014-15 establishes development priorities for - Agriculture: Livestock: Forestry; Education; Health; SME; Communications; and, Tourism as follows.

The proposals for Agriculture include - mechanizing agriculture and expanding plantation crops. It is expected that a total of 600 additional acres of terraced land will be developed – 150 acres by the Government, 350 acres by the farmers themselves and 100 acres by NGOs. It also expects to provide farmers with MK 1200 million (US\$1.2 million) in credit for cultivation and planting costs. The plan predicts 8.5% increase in the value of agricultural production in 2014-2015.

The plans for Livestock and Fisheries include - substantial increases in the livestock numbers and meat production and the area of fish ponds is expected to reach about 300 acres.

It is proposed in the budget that the forestry sector should move from simply selling logs to timber based small and medium enterprises development to produce sawn timber and end products such as furniture. It aims to expand the area of reserve forest by about 103 sq. miles and invest MK 47.5 million (US\$475,000) in developing plantation forests.

In the Small and Medium Industrial sector – the policy is to expand existing SMEs and try to replace imported goods and materials with locally produced goods. It expects the expansion of basic agricultural processing such as village and township level rice mills and oil extraction units and predicts a 26.3% increase in the value of industrial production during the plan period.

The Plan for the Construction sector – is for the value of construction to reach MK 33908.5 million (US\$33.23 million), an increase of 34.3% over the previous year.

The Government sees the communications sector as important for – linking regions and supporting the economy, education, health and the social sector. It expects that an additional 80 automatic exchanges and micro-wave stations to be established. It is also expecting nearly 50,000 additional mobile phones will enter into use during the plan period. The investment provided amounts to MK 4791.3 million (US\$ 4.7 million).

The Social Sector

The State's Plan recognizes the importance of the social sector in responding to the President's call for a *people centred* approach to planning and development. It sets the following priorities for Health and Education.

The Government's plans for the Education Sector highlight - a) the right to education for all young children; b) the importance of improving the quality of education in Chin State; c) the need to establish a compulsory education system from primary education to university and implement it successfully; d) to use the education system as a vehicle for national unity; and, e) the basic education system is the core of local development.

It sets as objectives a) improvement to school infrastructure; b) to provide free books at basic primary level; c) basic education for all; d) to upgrade all levels of education from pre-primary to high-school; e) to appoint external teaching and administrative staff to make-up for the lack of teaching staff; f) to ensure there is a match-up between the teaching staff capabilities and the teaching requirements.

The Plan points out that in 2014-2015 the Ministry of Science and Technology at Union level will support the Government Technical College at Hakha and organize foreign assistance for a) teaching materials; b) assistance with school buses; c) supply of engineering text books; d) computers and research materials; e) classrooms; f) student boarding and staff accommodation; g) a scholarship program; f) a library building; and, g) sporting facilities. In 2014 – 2015 there is also an allocation of MK 324 million (US\$ 317,520) to develop basic primary schooling and MK 2146 million (US\$ 2.1 million) to build 43 new primary schools.

The Government's plans for the Health sector include the following policy objectives - a) to reduce the basic problems of disease and death; b) to improve public health awareness; c) to expand health services for children under 5 years; and, d) to improve staff productivity. It acknowledges the need to a) appoint more doctors; b) introduce cost effective health measures; c) reduce maternal mortality rates; and, d) address the growing gap between urban and rural health outcomes.

The 2014-2015 Plan includes - a) building additional Rural Health Centres; b) building a nursery in Falam Township; c) the purchase of drugs and equipment; d) solar power for vaccine storage; and, e) nutrition research. Foreign Assistance has been secured for – drug users, reproductive health, maternal and child welfare, and health monitoring.

The plan for drinking water supplies includes improved water supply to a number of urban areas and 35 additional villages; and, in addition the Border and Tribal Peoples Department will spend MK 225 million (US\$ 296,000) on water supply during the year.

In respect of Social Security and Social Protection the Plan highlights a) the right of good citizens to a national identity card; b) expansion of employment and vocational training; c) livelihood assistance after retirement; and, d) protection and assistance after natural disasters.

In respect of the Communications sector the Plan proposes a) extension of mobile phone coverage; b) the establishment of a technology centre with the assistance of the Union Government; c) a wireless back-up system in case of natural disaster; and, d) a staff training school will be established in Hakha.

The Tourism sector the government will encourage the private sector to build additional accommodation. It will financially support the development of a Chin Culture Museum in the near future.

Rural Development - Poverty Reduction – Poverty Fund

The Government has set a target of reducing poverty rate from 73.3 % to 26.7 % by 2015-2016. Eight committees have been formed to achieve this target. They are focusing on a) expanding water supply for agriculture; b) distribution of quality seed; c) farm demonstrations; d) development of farmer associations; e) adding value to agricultural products; f) credit for agricultural production and the purchase of agricultural machinery; g) market information systems; and f) SMEs for agricultural processing. In addition in the livestock and fisheries sector the focus will be on group formation, cooperative production, technical support for animal husbandry and disease control and the distribution of improved male and female cattle. The Poverty Reduction Fund has also been used to purchase 41 farm tractors and additional tractors and equipment has been provided by the Indian and Chinese Governments.

ANNEX 3 – Township Committees Structure

Chin State - Township Committees: Overview of structure



Township Planning and implementation Committee (TPIC)

- Data collection
- Chair: Administrator
- Upward reporting

TMC:

- Executive
- Planning
- Budgeting
- Implementation
- Public Services
- Revenue collection (local and central govt)
- Procurement

Sub-Committee (SC) 1: Peace and Security	1	2	3	4	5	6	7	8	9
SC 2: Planning, Finance+ Urban / rural	1	2	3	4	5	6	7	8	9
SC 3: Commerce and production	1	2	3	4	5	6	7	8	9
SC 4: Education, Health & HR Development	1	2	3	4	5	6	7	8	9
SC 5: Rural Dev & Poverty Reduction	1	2	3	4	5	6	7	8	9
SC 6 Intl Aid, Investment Coordination &Mgmt	1	2	3	4	5	6	7	8	9
SC 7: Land Management (Mon State only)	1	2	3	4	5	6	7	8	9

Sub-Committees:

- Advisory functions to the Township Administration on the respective subject matters
- Inputs in Township planning process

Township Municipal Affairs Committee (TMAC)

- Between 7 and 9 members
- Chairman is elected
- Ex Secretary = Officer of Township Municipal Dpt

1	2	3	4	5	6	7	8	9
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TMAC:

- Assists management of urban and rural affairs
- Exec Secretary: Head of Township Municipal Affairs Dpt
- Collection, admin spending of own source revenue
- Public Services: Roads, water, markets
- Limited degree of autonomy

Township Development Support Committee (TDSC)

- Between 7 and 9 members
- Chair and Ex Secretary elected by members
- Heads of GovtDpts as Ex Secretary of SCs

1	2	3	4	5	6	7	8	9
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TDSC + SCs:

- Community consultation
- Establish 2-way communication (govt –community)
- Contribute to planning (bottom up)
- Promote SMEs
- Participate in rural development and poverty reduction activities
- Channel grievances



Sources: Presidential Decree no. 27/2013, 26 February 2013; Municipal by-laws of Mon and Chin State; Field work in Chin and Mon State.