Myanmar Agro-ecological Atlas

Prepared by
Mandalay Technology
Agribusiness and Rural Development Consultants
and
ForestInform

Facilitated by the
National Economic and Social Advisory Council
and the
Settlements and Land Records Department
Ministry of Agriculture & Irrigation
Table of Contents

States and Regions 3
Districts and Townships 3
Township Census 2010 Mean Small Holding Size (ac) 4
Township Census 2010 Small Holdings % of Total Area 4
Reserved Forests and Nature Reserves 5
Reserved Forests, Nature Reserves and Forest Cover 5
Agro-ecological Zones (FAO 2001) 6
Agro-ecological Zones (ARDC 2012) 6
AEZ Component: Slope 7
AEZ Component: Moisture Stress 7
AEZ Component: Nutrient Availability 8
AEZ Integrating Three Components 8
Rainfed Wetland Rice Yield Model (1960-1990) 9
Rainfed Wetland Rice Yield Model (change 1960-1990 to 2080) 9
Rainfed Dryland Rice Yield Model (1960-1990) 10
Rainfed Dryland Rice Yield Model (change 1960-1990 to 2080) 10
District Census 2010 Major Crops % of Total Area 11
Recommendations for Additions to the Atlas 11
Sources of Data 12

The authors wish to acknowledge support, assistance and the use of data generously provided by:

Food and Agriculture Organization (FAO)
Myanmar Information Management Unit (MIMU)
Settlements and Land Records Department (SLRD)
WorldClim

Please notify errors and omissions to:
zawnaing@mandalay-technology.com
earl.saxon@forestinform.com
National data are often aggregated at State/Region level. Crop suitability assessments should be made at Township level, because agro-ecological conditions are highly variable.
Smallholdings are largest (left) and most abundant (right) in some of Myanmar’s most productive areas.
Reserved Forests and Protected Areas (left) include large areas of farmland, but exclude large areas of unclassified forest (right).
Agro-ecological zones prepared by FAO in 2002 (left) and ARDC in 2012 (right)
More detailed Agro-ecological zones combine three factors: slope (left); aridity (right); and soils (next page)
The new agro-ecological map (right) shows fine detail within regions to guide crop suitability assessments.
Wetland rice yield 1960-1990 (left) will decline significantly by 2080 (right) without improved varieties and practices.
Dryland rice yield 1960-1990 (left) will decline significantly by 2080 (right) without improved varieties and practices.
Recommendations for additional maps in the Agro-ecological Atlas:

1. Identify farmed land outside surveyed and titled “Kwin Map” land
2. Include Township data on planted area and crop yield.
3. Identify current crops in commercial cropping areas.
4. Identify new areas suitable for current crops.
5. Assess impacts of climate change on rice yield with improved varieties and practices.

In Districts that practice double cropping, combined cropping area can be greater than the total area of land in the District.
<table>
<thead>
<tr>
<th>Map Theme</th>
<th>Reference</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Map Theme</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protected Area boundaries</td>
<td>Myanmar Protected Areas digital data assembled by the Wildlife Conservation Society, 2013</td>
</tr>
<tr>
<td>Reserved Forest boundaries</td>
<td>Myanmar National 1:250,000 Scale Topographic Map images assembled by Landmine Mapper accessed at <a href="http://www.mekongmaps.com">http://www.mekongmaps.com</a></td>
</tr>
<tr>
<td>State, Region, District and Township boundaries</td>
<td>Myanmar Information Management Unit (MIMU) accessed August 2013 at <a href="http://www.themimu.info">http://www.themimu.info</a></td>
</tr>
</tbody>
</table>