Rice Environment Suitability Maps for the Ayeyarwady Region
(Ayeyarwady Delta)

Supported by
the Africa to Asia - Testing Adaptation in Flood-based Resources Management Project
and
the CGIAR Research Program on Water, Land and Ecosystems

June 2020
# Contents

Acknowledgements ................................................................................................................................. 1  
About these maps ................................................................................................................................... 3  
Objectives............................................................................................................................................ 3  
Why are these maps needed? ............................................................................................................ 3  
Contributing to national policy implementation ............................................................................ 3  
Interpreting the maps for decision-making ..................................................................................... 4  
Enabling application of the maps........................................................................................................ 4  
Where can I access the model to generate maps? ............................................................................. 4  
Methodology ........................................................................................................................................... 8  
1. Ayeyarwady Region ........................................................................................................................... 10  
  1.1 Favourable Land Rice Suitability of Ayeyarwady Region ............................................................ 10  
  1.2 Flooded Land Rice Suitability Map of Ayeyarwady Region ......................................................... 11  
  1.3 Deepwater Land Rice Suitability Map of Ayeyarwady Region .................................................... 12  
2. Hinthada District ............................................................................................................................... 13  
  2.1 Hinthada Township ..................................................................................................................... 13  
  2.1.1 Favourable Land Rice Suitability Map of Hinthada Township ............................................. 13  
  2.1.2 Flooded Land Rice Suitability Map of Hinthada Township .................................................. 14  
  2.1.3 Deepwater Land Rice Suitability Map of Hinthada Township ............................................. 15  
  2.2 Ingapu Township ......................................................................................................................... 16  
  2.2.1 Favourable Land Rice Suitability Map of Ingapu Township ................................................. 16  
  2.2.2 Flooded Land Rice Suitability Map of Ingapu Township ...................................................... 17  
  2.2.3 Deepwater Land Rice Suitability Map of Ingapu Township ................................................. 18  
  2.3 Kyangin Township ....................................................................................................................... 19  
  2.3.1 Favourable Land Rice Suitability Map of Kyangin Township ............................................... 19  
  2.3.2 Flooded Land Rice Suitability Map of Kyangin Township .................................................... 20  
  2.3.3 Deepwater Land Rice Suitability Map of Kyangin Township ............................................... 21  
  2.4 Lemyethna Township .................................................................................................................. 22  
  2.4.1 Favourable Land Rice Suitability Map of Lemyethna Township ........................................... 22  
  2.4.2 Flooded Land Rice Suitability Map of Lemyethna Township ............................................. 23  
  2.4.3 Deepwater Land Rice Suitability Map of Lemyethna Township ........................................... 24  
  2.5 Myanaung Township ................................................................................................................... 25  
  2.5.1 Favourable Land Rice Suitability Map of Myanaung Township .......................................... 25  
  2.5.2 Flooded Land Rice Suitability Map of Myanaung Township ................................................ 26  
  2.5.3 Deepwater Land Rice Suitability Map of Myanaung Township ........................................... 27  
  2.6 Zalun Township ........................................................................................................................... 28  
  2.6.1 Favourable Land Rice Suitability Map of Zalun Township ................................................... 28
2.6.2 Flooded Land Rice Suitability Map of Zalun Township ........................................................ 29
2.6.3 Deepwater Land Rice Suitability Map of Zalun Township .................................................. 30

3. Labutta District .......................................................................................................................... 31
  3.1 Labutta Township ................................................................................................................... 31
    3.1.1 Favourable Land Rice Suitability Map of Labutta Township ............................................. 31
    3.1.2 Flooded Land Rice Suitability Map of Labutta Township ................................................ 32
    3.1.3 Deepwater Land Rice Suitability Map of Labutta Township ........................................... 33
  3.2 Mawlamyinegyun Township ................................................................................................. 34
    3.2.1 Favourable Land Rice Suitability Map of Mawlamyinegyun Township ......................... 34
    3.2.2 Flooded Land Rice Suitability Map of Mawlamyinegyun Township ............................... 35
    3.2.3 Deepwater Land Rice Suitability Map of Mawlamyinegyun Township ......................... 36

4. Maubin District ......................................................................................................................... 37
  4.1 Maubin Township .................................................................................................................. 37
    4.1.1 Favourable Land Rice Suitability Map of Maubin Township ............................................. 37
    4.1.2 Flooded Land Rice Suitability Map of Maubin Township ................................................ 38
    4.1.3 Deepwater Land Rice Suitability Map of Maubin Township ........................................... 39
  4.2 Danubyu Township ............................................................................................................... 40
    4.2.1 Favourable Land Rice Suitability Map of Danubyu Township ............................................ 40
    4.2.2 Flooded Land Rice Suitability Map of Danubyu Township ............................................. 41
    4.2.3 Deepwater Land Rice Suitability Map of Danubyu Township ........................................... 42
  4.3 Nyaungdon Township .......................................................................................................... 43
    4.3.1 Favourable Land Rice Suitability Map of Nyaungdon Township ....................................... 43
    4.3.2 Flooded Land Rice Suitability Map of Nyaungdon Township ........................................... 44
    4.3.3 Deepwater Land Rice Suitability Map of Nyaungdon Township ....................................... 45
  4.4 Pantanaw Township ............................................................................................................. 46
    4.4.1 Favourable Land Rice Suitability Map of Pantanaw Township .......................................... 46
    4.4.2 Flooded Land Rice Suitability Map of Pantanaw Township ............................................. 47
    4.4.3 Deepwater Land Rice Suitability Map of Pantanaw Township .......................................... 48

5. Myaungmya District .................................................................................................................. 49
  5.1 Myaungmya Township ......................................................................................................... 49
    5.1.1 Favourable Land Rice Suitability Map of Myaungmya Township ..................................... 49
    5.1.2 Flooded Land Rice Suitability Map of Myaungmya Township .......................................... 50
    5.1.3 Deepwater Land Rice Suitability Map of Myaungmya Township ..................................... 51
  5.2 Einme Township ................................................................................................................... 52
    5.2.1 Favourable Land Rice Suitability Map of Einme Township ............................................... 52
    5.2.2 Flooded Land Rice Suitability Map of Einme Township ................................................... 53
    5.2.3 Deepwater Land Rice Suitability Map of Einme Township ............................................... 54
5.3 Wakema Township ...................................................................................................................... 55
  5.3.1 Favourable Land Rice Suitability Map of Wakema Township ................................................ 55
  5.3.2 Flooded Land Rice Suitability Map of Wakema Township ..................................................... 56
  5.3.3 Deepwater Land Rice Suitability Map of Wakema Township .................................................. 57

6. Pathein District .................................................................................................................................. 58
  6.1 Pathein Township ........................................................................................................................ 58
    6.1.1 Favourable Land Rice Suitability Map of Pathein Township ................................................... 58
    6.1.2 Flooded Land Rice Suitability Map of Pathein Township ....................................................... 59
    6.1.3 Deepwater Land Rice Suitability Map of Pathein Township ................................................... 60
  6.2 Kangyidaunt Township ................................................................................................................. 61
    6.2.1 Favourable Land Rice Suitability Map of Kangyidaunt Township ....................................... 61
    6.2.2 Flooded Land Rice Suitability Map of Kangyidaunt Township ............................................. 62
    6.2.3 Deepwater Land Rice Suitability Map of Kangyidaunt Township ....................................... 63
  6.3 Kyaunggon Township .................................................................................................................. 64
    6.3.1 Favourable Land Rice Suitability Map of Kyaunggon Township ....................................... 64
    6.3.2 Flooded Land Rice Suitability Map of Kyaunggon Township ............................................. 65
    6.3.3 Deepwater Land Rice Suitability Map of Kyaunggon Township ....................................... 66
  6.4 Kyonpyaw Township ................................................................................................................... 67
    6.4.1 Favourable Land Rice Suitability Map of Kyonpyaw Township ....................................... 67
    6.4.2 Flooded Land Rice Suitability Map of Kyonpyaw Township ............................................. 68
    6.4.3 Deepwater Land Rice Suitability Map of Kyonpyaw Township ....................................... 69
  6.5 Ngapudaw Township ................................................................................................................... 70
    6.5.1 Favourable Land Rice Suitability Map of Ngapudaw Township ....................................... 70
    6.5.2 Flooded Land Rice Suitability Map of Ngapudaw Township ............................................. 71
    6.5.3 Deepwater Land Rice Suitability Map of Ngapudaw Township ....................................... 72
  6.6 Thabaung Township .................................................................................................................... 73
    6.6.1 Favourable Land Rice Suitability Map of Thabaung Township ....................................... 73
    6.6.2 Flooded Land Rice Suitability Map of Thabaung Township ............................................. 74
    6.6.3 Deepwater Land Rice Suitability Map of Thabaung Township ....................................... 75
  6.7 Yegyi Township ........................................................................................................................... 76
    6.7.1 Favourable Land Rice Suitability Map of Yegyi Township ................................................. 76
    6.7.2 Flooded Land Rice Suitability Map of Yegyi Township ....................................................... 77
    6.7.3 Deepwater Land Rice Suitability Map of Yegyi Township ................................................. 78

7. Pyapon District .................................................................................................................................. 79
  7.1 Pyapon Township ........................................................................................................................ 79
    7.1.1 Favourable Land Rice Suitability Map of Pyapon Township .............................................. 79
    7.1.2 Flooded Land Rice Suitability Map of Pyapon Township ................................................... 80
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1.3 Deepwater Land Rice Suitability Map of Pyapon Township</td>
<td>81</td>
</tr>
<tr>
<td>7.2 Bogale Township</td>
<td>82</td>
</tr>
<tr>
<td>7.2.1 Favourable Land Rice Suitability Map of Bogale Township</td>
<td>82</td>
</tr>
<tr>
<td>7.2.2 Flooded Land Rice Suitability Map of Bogale Township</td>
<td>83</td>
</tr>
<tr>
<td>7.2.3 Deepwater Land Rice Suitability Map of Bogale Township</td>
<td>84</td>
</tr>
<tr>
<td>7.3 Dedaye Township</td>
<td>85</td>
</tr>
<tr>
<td>7.3.1 Favourable Land Rice Suitability Map of Dedaye Township</td>
<td>85</td>
</tr>
<tr>
<td>7.3.2 Flooded Land Rice Suitability Map of Dedaye Township</td>
<td>86</td>
</tr>
<tr>
<td>7.3.3 Deepwater Land Rice Suitability Map of Dedaye Township</td>
<td>87</td>
</tr>
<tr>
<td>7.4 Kyaiklat Township</td>
<td>88</td>
</tr>
<tr>
<td>7.4.1 Favourable Land Rice Suitability Map of Kyaiklat Township</td>
<td>88</td>
</tr>
<tr>
<td>7.4.2 Flooded Land Rice Suitability Map of Kyaiklat Township</td>
<td>89</td>
</tr>
<tr>
<td>7.4.3 Deepwater Land Rice Suitability Map of Kyaiklat Township</td>
<td>90</td>
</tr>
</tbody>
</table>
Acknowledgements

These maps were developed by the International Water Management Institute (IWMI) for the Department of Agriculture (DoA). This process was financed by the European Union through International Fund for Agricultural Development (IFAD): Africa to Asia - Testing Adaptation in Flood-based Resources Management under the Programme Putting research into Use for Nutrition, Sustainable Agriculture and Resilience (PRUNSAR) managed by IWMI, and by the CGIAR Research Program on Water, Land and Ecosystems.

IWMI is grateful to the staff of the DoA’s Township, District and Nay Pyi Taw offices for their guidance, interest and excellent support through this process. We are especially thankful to Ms. Thuzar Myint, Director, Land Use Division for her guidance and constant support; Mrs. May Phyoe Way, Staff officer, Land Use Division for her involvement in almost all training activities and for acting as the primary liaison between IWMI and DoA staff; Ayeyarwady Division, Director, Mr. U Myo Zaw, Deputy Director, U Htay Lwin, U Sein Maung Myint and Mr. U Zaw Wan (Pathein District Chief officer), all of the Ayeyarwady Division for their support and cooperation in organising training and consultation events at the Ayeyarwady Division office.

At IWMI, Dr. Mansoor Leh, Researcher – Spatial Hydrology guided map development and designed and conducted most related trainings; Ms. Yin Mon Aung, Intern, generated the maps under Dr. Leh’s guidance; Ms. Nikola Schulte Kellinghaus, Intern, collected field data and generated the maps; Ms. Palal Moet Moet, Research Officer, coordinated the entire process, collected field data and supported consultations and training, and Sanjiv de Silva, Researcher – Natural Resource Governance, supported through project leadership and engagement with DoA.
ငှက်ပျော်

ဤစာအုပ်သည် IWMI နှင့်အတူအပေါ်ပါသော FBFS မှစားချီးမှုမှာ အကြောင်းပြပါသည်။ IWMI သည် ဤလုပ်ငန်းစဉ်ကို FBFSမှစားချီးမှုအောက်ပါသောအခြေအနေများကို မှတ်သားျပီး ပြောင်းလဲရှိသည်။ IFAD နှင့် European Union နှင့် CGIAR အားကျင်ားခြင်းကို ဖော်ပြပါသည်။

IWMI အတွက် ဤလုပ်ငန်းစဉ်မှာ DoA နှင့်အတူမှာ နောက်ဆို့ပြုပေးသည်။ အကြမ်းဖျင်သော ရဲလစ်နှင့် သေချာပါသောစာကြည်ပြင်ပါသည်။ သုံးစွဲပါသော စာလူးအရာရှိများကို မှန်ကန်ထားသည်။ ကြက်စိုက်ပျိုးရာသုံးစွဲပါသည်။

IWMI နှင့်Spatial Hydrologyအားဖြင့် Dr. Mansoor Lehထံမှစားချီးမှုကို မှတ်သားျပီး ပြောင်းလဲရှိသည်။ Dr. Lehထံမှစားချီးမှုအားကျင်ားပါသည်။ Nikolai Schulte Kellinghaus အားဖြင့် မိဘန်းသားတိုးတက်သည် မိသားစုများကို မှတ်သားျပီး ပြောင်းလဲရှိသည်။ Sanjiv de Silva အားဖြင့် စာရင်းအဖွဲ့စည်းသုံးစွဲပါသည်။
About these maps

Objectives
These maps are primarily intended to support the Department of Agriculture (DoA) reduce rice crop losses as a result of flooding in the Ayeyarwady Delta. The maps seek to do this by identifying areas in the delta as a whole and in each township that are suitable (and less suitable) for three categories of rice environments used by the DoA: flooded, deep water and favourable. Each of these categories are defined by several parameters including different degrees of water depth and duration of inundation. For each of the three rice environments categories, suitability maps have been developed at the delta and township levels, covering all 26 townships in the delta. Therefore, at the delta scale, a separate map has been produced for each rice environment category. This approach was repeated for each township. In each of these maps, the level of suitability is divided into five 20 percent segments (0-20; 21-40; 41-60; 61-80 and 81-100), with 0-20% indicating the least suitability and 81-100 indicating areas very suited to a particular category of rice.

Suitability in these maps refers primarily to the risk (or lack) of undesirable environmental conditions for a rice environment category and as such the higher the suitability percentage, the higher the degree of safety. However, given the fact of annual variation in rainfall, it must be appreciated that even a high level of suitability will involve some degree of unpredictability.

A total of 81 maps were developed. Three maps were developed for each township: one each for each of the three rice environments categories. Similarly, three maps were developed for the whole delta.

Why are these maps needed?
Discussions with DoA in 2018 indicated that flooding is the main cause of crop damage especially in the case of rice. Approximately 248,000 tons of rice was lost in 2015-2016 and 351,000 tons in 2016-2017, translating to economic losses for farmers of USD 16 million and USD 22 million respectively, impacting about 62,000 farmers annually. Altered rainfall patterns and poldering, irrigation and other infrastructure are likely to have altered water flow both into and out of (drainage) farmland. Outdated data (e.g. maps preceding the use of geospatial tools) limits the options available to the DoA for taking timely strategic adaptive action.

These maps thus provide an updated analysis of the suitability of environmental conditions, and suggest where different rice categories could be grown. It is however up to the DoA to determine what suitability threshold (i.e. percentage) it will apply in matching rice varieties to the landscape. In this manner, it is hoped that these maps will enable the DoA to reduce rice losses in future years.

Contributing to national policy implementation
Enhancing institutional capacity to adapt to threats to the agriculture sector posed by climate change is central to the Myanmar Climate Change Adaptation Strategy (MCCAS) 2018-2030. The MCCAS recognizes the agriculture sector as a pillar of growth; its critical role in household food and nutrition security especially for smallholder farmers, and its utmost importance for Myanmar reaching Sustainable Development Goals 1 (ending poverty) and 2 (ending hunger). The MCCAS further considers the Ayeyarwady Delta as one of Myanmar’s agricultural production centres, yet one of the most at risk regions to climate change.

If farmers’ exposure to crop loss during flooding can be reduced through the application of these maps, then this would constitute a significant contribution towards meeting the MCCAS’s call for building resilient production and development approaches in the face of major environmental stress, at least with respect to increasing production of Myanmar’s staple crop and securing farmer income in the Ayeyarwady delta. Such an outcome would also support the Agriculture Development Strategy (ADS) 2018-2023 in reducing rural poverty especially of smallholders. While recognizing the need for more diverse cropping practices, the ADS nevertheless seeks to also maintain rice production as the backbone of Myanmar’s food security.
Interpreting the maps for decision-making

What is critical to recognize is that there will be an inverse relationship between the area of land suitable for a rice environment category and the risk of crop damage or loss due to flooding or other agro-ecological conditions. The lower the percentage suitability for a particular rice environment category, the less chance there is for a successful crop at a certain location, either due to a high risk of flood damage or other agro-ecological conditions. Lower percentages are therefore not recommended for any of the three rice environment categories. However, where the suitability percentage is low for one category of rice environment, the same area may be more suitable for another rice environment category, since there will be areas of overlap between two or all three rice environment categories. In such cases, a shift from one category to a more suitable one may help reduce risk. To identify these areas in each township, the three township maps (one for each of the three rice land categories) will need to be combined, so that overlaps (between the rice environment categories) become clear.

The model that has generated the maps in this publication provides the flexibility to show the areas at township level at any suitability percentage, and to generate maps that overlay the suitable areas of all three rice environment categories for a given suitability percentage. Different scenarios can therefore be visualized by using the model to generate maps for different suitability percentages, depending on what level of risk is deemed acceptable.

The overlapping of maps for a township will also indicate areas where a high level of suitability does not exist for any of the rice environment categories, depending on what percentage is applied. In such areas the agro-ecological conditions may be more suitable for non-rice crops or other production systems such as household or community-based fish culture, or forms of integrated food systems. This would support the objectives of the ADS and MCCAS that call for diversification and adaptation to agro-climatic conditions, as well as the Multi-sectoral National Plan of Action on Nutrition (MS-NPAN) that recognizes the important role diverse and nutrient rich diets play in reducing a number of health issues in women and young children.

Nevertheless, since rice is the staple crop, this rice-risk trade-offs raises the important policy question about what the appropriate balance should be between a) production of Myanmar’s staple crop, and b) reducing the risk of rice crop losses and resulting economic hardships to farmers. Policy makers and land use planners may need to consider options for how to balance rice production on the one hand and reducing flood risk and resulting economic losses. Since it will be the farmers who ultimately will have to bear this risk, users of the model are encouraged to involve representative farmers from the target landscapes when deciding what level of risk is acceptable.

Enabling application of the maps

In addition to the several consultations with all levels of DoA and especially the Land Use Division (LUD) on map development, training workshops were held to develop capacity within the DoA to apply and update the maps. These included practical training on geospatial data collection and management using tablets and QGIS with Kobotoolbox for staff from all township offices in the delta; the provision of a GPS-enabled tablet to each township office to enable continuous data collection, and training on the model used to generate the maps for DoA’s remote sensing staff.

Where can I access the maps?

The maps are available for use on IWMI’s Water Data Portal (https://waterdata.iwmi.org/) and the websites of the Myanmar Information Management Unit (MIMU) and the Myanmar Water Partnership.
ရာခိုင္ႏႈန္း သည္။ စိုက္ပ်ိဳးဦးစီးဌာနအေနျဖင့္ ရွိေစရန္လုပ္ေဆာင္ျခင္းအတြက္ တြက္ေရစီးဆင္းကို အဦးမ်ား တြက္ကန္ေဒၚလာ အမ်ိဳးမ်ိဳးေသာ စပါးတန္ခ်ိန္ ၿမိဳ႕နယ္တစ္ခုခ်င္းစီအတြက္ ေျမပံု၈၁ပံုကိုေရးဆြဲခဲ့သည္။ အားအပိုင္း အတြက္ ျမစ္ဝကၽြန္းေပၚရွိ ေရေတာ္မိုးေတာ္ကြင္း ေနာင္ႏွစ္မ်ား ရွိ၊မရွိကို ဤေျမပံုမ်ားတြင္သင့္ေလ်ာ္မႈသည္ အတြက္ ၂၀၁၈ခုနစ္တြင္ ဤေျမပံုမ်ားသည္ ေျမပံုမ်ားအေၾကာင္း စိုက္ပ်ိဳးဌာန ႀကိဳတင္မခန္႔မွန္းနိုင္ေသာ သင့္ေတာ္မႈအလြန္နည္းေသာ စသည့္သတ္မွတ္ခ်က္မ်ားစြာျဖင့္ မိုးရြာသြန္းမႈပံုစံမ်ားႏွင့္ သင့္ေလွ်ာ္ေသာေျမပံုမ်ားကို ကိုသတ္မွတ္မည္ကို ေရႏုတ္ေျမာင္း သို႔ေသာ္ ၂၄၈၀၀ တြင္စိုက္ပ်ိဳးေရးဦးစီးဌာနအေနျဖင့္ စပါးအမ်ိဳးအစားမ်ားကို ေရကာတာမ်ားေဆာက္လုပ္ျခင္း၊ ၂၂သန္းအသီးသီးက်ဆင္းခဲ့ၿပီး ၄၀၊ သတ္မွတ္သည္။ အဓိကအားျဖင့္ ျမစ္ဝကၽြန္းေပၚေဒသအဆင့္ႏွင့္ၿမိဳ႕နယ္အဆင့္စသည္ျဖင့္ ၄၁ စပါးစိုက္ကြင္းမည္သည့္ေနရာတြင္စိုက္ပ်ိဳးႏိုင္သည္ကို ၆၀၊ ထုတ္လုပ္ခဲ့သည္။ တန္ခ်ိန္ ၆၁ စပါးဆံုးရႈံးမႈကို (လယ္ယာေျမအတြင္း ဤေျမပံုတစ္ခုစီတြင္သင့္ေလ်ာ္မႈအဆင့္ကို ၈၀၊ ကန္႔သတ္မႈျဖစ္ေစသည္။ အတြက္ အမ်ိဳးအစားသံုးမ်ိဳး ၃၅၁၀၀ မူတည္၍ အထူးသျဖင့္ - ၁၀၀ အခ်ိန္မီမဟာဗ်ဴဟာအရလိုက္ေလ်ာညီေထြ ေလွ်ာ့ခ်ႏိုင္လိမ့္မည္ဟု နားလည္ထားရန္ မည္သည့္ သင့္ေလ်ာ္မႈပမာဏတစ္ခုစီအတြက္ ဆံုးရႈံးခဲ့ရျခင္းေၾကာင့္ ခြဲျခားထားသည္။ ၂၀၁၅ေရသြင္းျခင္းႏွင့္ေရထုတ္ျခင္းမ်ားအ ေရေၾကာင့္ စပါးသီးႏွံဆံုးမႈကို ေရၾကီးကြင္း၊ ၂၀၁၆တြင္ ဤေျမပံုမ်ားကို ေရးဆြဲထားသည္။ ေနရာမ်ားအားေဖာ္ထုတ္ျခင္း ျမစ္ဝကၽြန္းေပၚေဒသအဆင့္ ေဖာ္ျပသည္။ ဥပမာ ဆံုးရွံးမႈနည္းေလေလ ၂၀ရာခိုင္ႏႈန္းသည္ ေမွ်ာ္လင့္ရသည္။ ၂၀ရာခို္င္ႏႈန္းသည္ - geospatial tools ျဖရက်ခဲ့ချင်းပါ၀င်သည် တရားသုံးထားသည်။ နားလည္မှတ်ကာ ထုတ္ျပန္းပါ၀င်သည်။ အိန္ႏိုင္ငံးအခြဲ ေရိက္အထုးျပဳချင်သည်။ အိန္ႏိုင္ငံးအခြဲေမွ်ာ္ ေရရသည်။
၎င်္ဘာသာစကားအသုံးပြုထားခြင်းကို သိသိသာသာစောင်းချင်သည်။

လေးဦးတွင်းမှာ အောက်ပါအရေးကို အကယ်၍ အမ်းအစားသုံးရာတွင် အရွိဆံုအမ်းအစားအတွက် အရွိဆံုအမ်းအစားအတွက် အလြန်အေရးတိုင်း၀ကျော်ကျော် ကြားနေသည်။

ထပ်တူက်နေသည့်အားမ်ားလည်း ကြားနေသည်။

ျမန္မာႏိုင်ငံချင်း ၂၀၁၈ စုိက္ကြင္းအမ်ိးအစားအတွက် အမ်ိးမ်ိးေသာသင့္ေလ်ာ္မႈရာခုိင္ႏႈန္းႏွင့္ အမ်ိးမ်ိးေသာသင့္ေလ်ာ္မႈရာခုိင္ႏႈန္းႏွင့္ အျပန္အလွန္ဆက္ႏြယ္မႈရွိလိမ့္မည္။

ရာခုိင္ႏႈန္းျဖင့္ျပသရန္ စိုက္ပ်ိဳးေရးက႑ကို ေဒသထဲမွ တစ္ခုျဖစ္သည္။

အျခားစုိက္ပ်ဳိးေရးေဂဧစနစ္ ဝင္ေငြရရွိေရးအတြက် သီးႏွံမ်ား ျမန္မာႏိုင်ငံ၏ေရရွည္တည္တံ့ခိုင္ၿမဲေသာ ႏွင့္ ျဖစ္သည္ဟုယူဆေသာ္လည္း ၂ အျခားအခ်က္ျဖစ္သည္။

စပါးစုိက္ကြင္းအမ်ိးအစား ၎သည္ ပုံကုိ ေကာက္ခ်က္ခ်ျခင္းမကုိက္ညီေသာဧရိယာမ်ားကို ၂၀၁၈ စပါးစုိက္ကြင္းအမ်ိဳးအစားလက္ခံႏုိင္ေသာအႏၱရာယ္အဆင့္မ်ားေပၚ ျမင္ေတြ႕ႏုိင္သည္။

ေဆာင္ရြက္ေပးႏိုင္လိမ့္မည္။ ေပါင္းစပ္ရန္လုိအပ္သည္။

ထုိ႔အျပင္-၂၀၂၃ model ျမင့္တင္ျခင္းသည္ စိုက္ပ်ိဳးေရးက႑ကိုၿခိမ္းေျခာက္မႈမ်ားႏွင့္ အေသးစားလယ္သမားမ်ားအတြက် နိမ့္ေသာ အခြင့္အလမ္းနည္းေလေလ။

သင့္ေတာ္မႈ (သုိ႔မဟုတ္) အတုိင္းအတာ နည္းေလေလ၊ ျပားလဲျခင္းလိုက္ေလ်ာရာတြင္ ေရႀကီးျခင္းေၾကာင့္ ျဖည့္ဆည္းရာတြင္ ေရႀကီးျခင္းေၾကာင့္မ်ားႏွစ္ခုမ်ား ၂၀၃၀ အေထာက္အကူျပဳလိမ့္မည္။

အေ၀းချင်းစိုက္ပ်ဳိးခြဲျခားသတ္မွတ္ႏုိင္မည္။

အျပ်တြာအမ်းအစားျမိဳ႕နယ္တစ္ခု၏ ရာသီဥတုေျပာင္းလဲျခင္းအတြက် သင့္ေလ်ာ္မႈ MCCAS (၂၀၀၄-၂၀၀၇) အေထာက္အကူျပဳလိမ့္မည္။

မူတည္၍ကြဲျပားေသာ အေ၀းချင်း အတုိင္းအတာ စပါးစုိက္ ဆင္းရဲ စိုက္ပ်ိဳးဆင္းရဲ ၆ ၎င်္ဘာသာစကားအသုံးပြုထားခြင်းကို ပြင်သက်ရမည္။

မူတည္၍ကြဲျပားေသာ အေ၀းချင်း အတုိင္းအတာ စပါးစုိက္ ဆင္းရဲ စိုက္ပ်ိဳးဆင္းရဲ စိုက္ပ်ိဳးဆင္းရဲ စိုက္ပ်ိဳးဆင္းရဲ စိုက္ပ်ိဳးဆင္းရဲ စိုက္ပ်ိဳး.handleError: Error: Unable to load the module
သျဖင့္ဆုံးဖတ္သည့္အခါ တုိက္တြန္ပါသည္။ကိုစဥ္းစားရန္လိုအပ္ေပလိမ့္မည္။ညီေအာင္ထိန္းညိွျခင္းႏွင့္မူဝါဒခ်မွတ္သူမ်ားႏွင့္အဘယ္သုိ႔တက္ဘလက္မ်ားေထာက္ပံ့ေပးျခင္းသင္တန္းမ်ား၊စပါးသီးႏွံဆုံးရႈံးမႈက႑ေပါင္းစုံအမ်ဳိးသမီးမ်ားႏွင့္ျဖစ္ရန္ႏွင့္ရာေဒသမ်ားျမစ္ဝကၽြန္ေပၚေဒသရွိအလက္စီမံခန္႔ခြဲေရးေျမပံုမ်ား ေျမပံုေရးဆြဲေရးအတြက္မ်ားႏွင့္လူထုအေျချပဳတိန႔ႏွင့္တိုင္ပင္ေဆြးေႏြးမႈမ်ားအျပင္စြမ္းရည္ျမင့္တင္ရန္ကို ဤအခ်က္အလက္ကုိပိုမိုသင္ေလ်ာ္ႏိုင္သည္။

အသံုးခ်၍ ညီတူမွ်တူျဖစ္သင့္သည္ဆိုသည့္အတြက္ IWMI (အာဟာရႏွင့္ဆုိင္ေသာငါးေမြးျမဴျခင္းကဲ့သုိ႔ေသာ္စပါးသည္အဓိကသီးႏွံျဖစ္ျခင္းေၾကာင့္စဥ္ဆက္မျပတ္ေဒတာစုေဆာင္းႏိုင္ရန္အႏၱရာယ္ေလွ်ာ့ခ်ျခင္းႏွင့္ကေလးငယ္မ်ား၏geospatial data သတ္မွတ္ထားေသာေနရာမ်ားမွေလ့က်င့္ေရးသင္တန္းမ်ား၊မဟုတ္ေသာ၏ၿမိဳ႕နယ္ရံုးမ်ားအတြက္Water Data P ortal ေရႀကီးမႈအႏၱရာယ္ႏွင့္စီးပြားေရးဆံုးရွံးမႈေျမယာအသံုးခ်ေရးဦးစီးဌာန ေလ့က်င့္ေရးသင္တန္းမ်ား ႏွင့္Myanmar Water Partnership ေျမပံုမ်ားကို ႏွင့္က်န္းမာေရးအမ်ဳိးသားစီမံကိန္းရည္ရြယ္သည့္ DoA သီးႏွံမ်ားအတြက္အခ်က္အလက္စုေဆာင္းျခင္းႏွင့္စီမံခန္႔ခြဲျခင္းဆိုင္ရာအျခားထုတ္လုပ္မႈစနစ္မ်ားလယ္သမားမ်ား၏အေရးႀကီးေသာ သည္၊ LUD အလုပ္ရံုေဆြးေႏြးပြဲမ်ားကို (LUD)မွာရင္ဆုိင္ရမည္မွာ ADS မည္သည့္အႏၱရာယ္ (LUD)စသည္ျဖင့္ကုိယ္စားလွယ္က်င္းပခဲ့သည္။

အဓိကပါ၀င္သည့္စနစ္ပါဝင္ေသာအေထာက္အပံ့နည္းလမ္းမ်ားၾကားပါ၀င္ေစရန္ ၎တိန႔တြင္လက္ေတြ႕အသီးသီး(၇)ခြင်း၏ လက္ခံံသင့္သည္ကုိ လုိက္ေလ်ာညီေထြအဓိကပါ၀င္သည့္စနစ္ယုိလိုးမ်ားပါဝင္ေသာ IWMI ကို Water Data Portal (https://waterdata.iwmi.org/) နှင့္ Myanmar Water Partnership တို႔ေက်ာင္းေဆာင္ေသာ
Methodology

The maps are intended to support the DoA reduce rice crop losses as a result of flooding in the Ayeyarwaddy Delta. The maps focus on three types of rice environments based on the categories of rice used by the DoA: flooded rice, deep water and favourable rice environments. Each of these rice environments have unique characteristics with different degrees of water depth and duration of inundation. Based on this, suitability locations were modelled by identifying biophysical drivers that may be conducive for each of these environments. Suitable drivers for each rice environment were selected through a series of stakeholder and review workshops conducted with the DoA. Field data was collected across 26 townships in the Delta over the summer and raining seasons of 2017-2019 and used to identify geospatial layers of the drivers, a statistical learning model was developed using the random forest algorithm. Suitable areas were located by an analysis of the surface water characteristics in the Delta combined with cropping calendar, topography, salinity, soil quality, vegetation cover and land use. After initial consultations with DoA staff, the maps and map generation process was detailed in a 2 day workshop with DoA township staff. The feedback from this workshop based on local field knowledge was used to refine the model and derive final maps. Following this the GIS staff of DaA was trained in developing the model during a 2-day workshop. This was followed by an intense 3 day hands on in house workshop on working with the model and generating the suitability maps.

These maps identify areas most suitable for each rice growing environment. The maps are depicted on a 0-100% scale where higher values indicate potentially more favourable locations for each rice environment. It must be noted that these maps indicate areas that are potentially suitable for each rice environment. These potentially suitable areas may include areas that are currently planted with the respective rice category, but also areas that may be planted with a different rice category, or not planted at all. Also, depending on the environmental characteristics, a suitable area could potentially be suitable for 2 or more of the rice environments, although the level of suitability for each (i.e. the percentage) may be different.

Definition used to map favourable rice land, flooded rice land and deepwater rice land environments.

<table>
<thead>
<tr>
<th>Favourable rice land</th>
<th>- Large, flat areas (ဒေါ်လာရေးကြင်း)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Typical water depth: 15-30 cm (အရေအန်း သိုးနှံချ်)</td>
</tr>
<tr>
<td></td>
<td>- Short flood duration: hours (ကြူကြားချစ်)</td>
</tr>
<tr>
<td></td>
<td>- High yielding variety (ကြားစွာကြား)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flooded rice land</th>
<th>- Smaller field sizes with some trees (ကြားစွာကြား)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Water depth: 30-60 cm (အရေအန်း ကြား)</td>
</tr>
<tr>
<td></td>
<td>- Flood duration: 1-2 weeks (ကြူကြား)</td>
</tr>
<tr>
<td></td>
<td>- Traditional rice varieties (ကြားစွာကြား)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Deepwater rice land</th>
<th>- “Bowl-shaped” topography (အရေအန်းကြား)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Water depth is greater than 90 cm (အရေအန်း ကြား)</td>
</tr>
<tr>
<td></td>
<td>- Flood duration: more than 3 months (ကြူကြား)</td>
</tr>
<tr>
<td></td>
<td>- Deepwater rice varieties (ကြားစွာကြား)</td>
</tr>
</tbody>
</table>
မိသားစုများကို Algorithm လာသော့မစ္ဝကၽြန္းေပၚရွိၿမိဳ႕နယ္အလုပ္ရံုေဆြးေႏြးပဲြမ်ားမွတဆင့္ သင့္ေလ်ာ္ေသာအခ်က္အလက္မ်ားကို သို႔ေသာ္ စိုက္ပ်ိဳးရန္သင့္ေလ်ာ္မႈရွိသည့္ စပါးစိုက္ကြင္းတစ္ခုစီႏွင့္သက္ဆိုင္ေသာ က်င္အေျခအေနတစ္ခုစီသည္ - စပါးစိုက္ကြင္းအမ်ိဳးအစားမ်ားသည္ ပ်ိဳးေရးဦးစီးဌာနကို ဤေစုမ်ားသည္ ေနရာမ်ားလည္းပါႏႈင္သည္။ ဤသင့္ေတာ္မႈအလားအလာရွိေသာေနရာမ်ားတြင္ နည္းစနစ္ ျခင္းကိုလည္း ေဖာ္ထုတ္ခဲ့သည္။ ဤေစုမ်ားသည္ စိုက္ကြင္းတစ္မ်ိဳးစီအတြက္ ပိုမိုသင့္ေတာ္ေကာင္းမြန္ေသာေနရာမ်ားကို ၁၀၀ရာခုိင္ႏႈန္းေသာစေကးျဖင့္ DoA တည္ေဆာက္ျခင္းပိုမိုေကာင္းမြန္ေစရန္ႏွင့္ တစ္ခုခ်င္းစီအတြက္ ေျမဆီလႊာအရည္အေသြး၊ အခ်က္အလက္မ်ားကိုမူတည္ကာ ကိုအေျခခံၿပီး (မွပတ္ဝန္းက်င္အေျခအေနစိုက္ပ်ိဳးဦးစီးဌာနမွဝန္ထမ္းမ်ားႏွင့္ ၂၆ၿမိဳ႕နယ္တြင္ တည္ေဆာက္ထားေသာ ထို႔အျပင္ ၿမိဳ႕နယ္ဝန္ထမ္းမ်ားႏွင့္ အျခားအမ်ိဳးအစားကိုစိုက္ပ်ိဳးထားေသာေနရာမ်ား၊ ကြဲျပားျခားနားေသာ ၎ေနာက္ ေရႀကီးကြင္း၊ ေဖာ္ျပသည္။ ကြင္းဆင္းအေတြ႕ အပင္ျဖစ္တည္ျခင္း ပတ္ဝန္းက်င္ဆိုင္ရာဝိေသသလကၡဏာမ်ားေပၚ ၂ရက္ၾကာ ကြင္းဆင္း၍ ညႊန္ျပျခင္းျဖစ္သည္။ GIS သက္ဆိုင္ရာ ေရနက္ကြင္းႏွင့္ ေရႀကီးမႈေၾကာင့္ စပါးအထြက္ဆံုးရံႈးမႈကိုေလွ်ာ့ခ်ရန္ အလုပ္ရံု အဓိကထားလိုက္သည္။ အထူးျပဳ (ဗျားငံးြမ်ား၌ ဗျားငံးြမ်ားကိုစိုက္ပ်ိဳးထား အၾကံြဖေပၚအေျခခံ၍ရရွိေသာ သို႔မဟုတ္ ကနဦးတိုင္ပင္ေဆြးေႏြးမႈမ်ားအၿပီး ေျမအသံုးခ်ျခင္းတို႔ႏွင့္ ေျမပံုထုတ္လုပ္ႏိိုင္ရန္အတြက္ ေဆြးေႏြးပြဲတြင္ ၂၀၁၇ ဌာနတြင္ ဝန္ထမ္းမ်ားကို သီးႏွံစိုက္ခ်ိန္၊ အေသးစိတ္အလုပ္ရံုေဆြးေႏြးပြဲကို ေရေတာ္မိုးေတာ္ကြင္းတို႔အား ႏွစ္ခုထက္ပို၍ သင့္ေလ်ာ္မႈႏွင့္ဆက္စပ္ေသာ စပါးစိုက္ကြင္းတစ္ခုခ်င္းစီအတြက္ စပါးစိုက္ပ်ိဳးသည့္ပတ္ဝန္း ကြဲျုပားသည္။ လံုးဝမစိုက္ပ်ိဳးထားေသာ အသံုးျပဳခဲ့သည္။ သင့္ေလ်ာ္ေသာဧရိယာတည္ေဆာက္ၿပီး ျပန္လည္သံုးသပ္ျခင္း တည္ေဆာက္ျခင္းကို မူတည္၍ တုန္ျပန္ခ်က္မ်ားကို ေျမပံုႏွင့္ ေျမပံုလုပ္ေဆာင္ သင့္ေလ်ာ္ စိတ္ျဖာ၍ ရွိသည္။
1. Ayeyarwady Region

1.1 Favourable Land Rice Suitability of Ayeyarwady Region
1.2 Flooded Land Rice Suitability Map of Ayeyarwady Region
1.3 Deepwater Land Rice Suitability Map of Ayeyarwady Region
2. Hinthada District
2.1 Hinthada Township
2.1.1 Favourable Land Rice Suitability Map of Hinthada Township
2.1.2 Flooded Land Rice Suitability Map of Hinthada Township
2.1.3 Deepwater Land Rice Suitability Map of Hinthada Township
2.2 Ingapu Township

2.2.1 Favourable Land Rice Suitability Map of Ingapu Township
2.2.2 Flooded Land Rice Suitability Map of Ingapu Township

[Map showing Flooded Land Rice Suitability in Ingapu Township with different colors representing suitability levels and village names listed on the map.]

Inagpu Township Boundary
Village Tracts

Flooded Land Rice Suitability

- 0% - 20% Least Suitable (201589 acres)
- 21% - 40% (78110 acres)
- 41% - 60% (89465 acres)
- 61% - 80% (78757 acres)
- 81% - 100% Most Suitable (41419 acres)
2.2.3 Deepwater Land Rice Suitability Map of Ingapu Township

![Deepwater Land Rice Suitability Map of Ingapu Township](image_url)
2.3 Kyangin Township

2.3.1 Favourable Land Rice Suitability Map of Kyangin Township
2.3.2 Flooded Land Rice Suitability Map of Kyangin Township

Flooded Land Rice Suitability

- 0% - 20% Least Suitable (199582 acres)
- 21% - 40% (89212 acres)
- 41% - 60% (24781 acres)
- 61% - 80% (1251 acres)
- 81% - 100% Most Suitable (0 acres)
2.3.3 Deepwater Land Rice Suitability Map of Kyangin Township
2.4 Lemyethna Township

2.4.1 Favourable Land Rice Suitability Map of Lemyethna Township
2.4.2 Flooded Land Rice Suitability Map of Lemyethna Township
2.4.3 Deepwater Land Rice Suitability Map of Lemyethna Township
2.5 Myanaung Township

2.5.1 Favourable Land Rice Suitability Map of Myanaung Township
2.5.2 Flooded Land Rice Suitability Map of Myanaung Township
2.5.3 Deepwater Land Rice Suitability Map of Myanaung Township
2.6 Zalun Township

2.6.1 Favourable Land Rice Suitability Map of Zalun Township

![Favourable Land Rice Suitability Map of Zalun Township](image)

- **Zalan Township_Boundary**
- **Village Tracts**

**Favourable Land Rice Suitability**

- 0% - 20% Least Suitable (749 acres)
- 21% - 40% (1413 acres)
- 41% - 60% (64965 acres)
- 61% - 80% (64822 acres)
- 81% - 100% Most Suitable (20674 acres)
2.6.2 Flooded Land Rice Suitability Map of Zalun Township
2.6.3 Deepwater Land Rice Suitability Map of Zalun Township
3. Labutta District
3.1 Labutta Township
3.1.1 Favourable Land Rice Suitability Map of Labutta Township
3.1.2 Flooded Land Rice Suitability Map of Labutta Township
3.1.3 Deepwater Land Rice Suitability Map of Labutta Township
3.2 Mawlamyinegyun Township

3.2.1 Favourable Land Rice Suitability Map of Mawlamyinegyun Township
3.2.2 Flooded Land Rice Suitability Map of Mawlamyinegyun Township
3.2.3 Deepwater Land Rice Suitability Map of Mawlamyinegyun Township
4. Maubin District
4.1 Maubin Township
4.1.1 Favourable Land Rice Suitability Map of Maubin Township
4.1.2 Flooded Land Rice Suitability Map of Maubin Township
4.1.3 Deepwater Land Rice Suitability Map of Maubin Township
4.2 Danubyu Township

4.2.1 Favourable Land Rice Suitability Map of Danubyu Township
4.2.2 Flooded Land Rice Suitability Map of Danubyu Township
4.2.3 Deepwater Land Rice Suitability Map of Danubyu Township
4.3 Nyaungdon Township

4.3.1 Favourable Land Rice Suitability Map of Nyaungdon Township
4.3.2 Flooded Land Rice Suitability Map of Nyaungdon Township
4.3.3 Deepwater Land Rice Suitability Map of Nyaungdon Township
4.4 Pantanaw Township

4.4.1 Favourable Land Rice Suitability Map of Pantanaw Township

![Map of Pantanaw Township with Favourable Land Rice Suitability](image)

**Pantanaw Township Boundary**

**Village Tracts**

**Favourable Land Rice Suitability**

- 0% - 20% Least Suitable (20652 acres)
- 21% - 40% (79872 acres)
- 41% - 60% (139632 acres)
- 61% - 80% (111252 acres)
- 81% - 100% Most Suitable (26526 acres)
4.4.2 Flooded Land Rice Suitability Map of Pantanaw Township
4.4.3 Deepwater Land Rice Suitability Map of Pantanaw Township
5. Myaungmya District
5.1 Myaungmya Township
5.1.1 Favourable Land Rice Suitability Map of Myaungmya Township
5.1.3 Deepwater Land Rice Suitability Map of Myaungmya Township
5.2 Einme Township

5.2.1 Favourable Land Rice Suitability Map of Einme Township
5.2.2 Flooded Land Rice Suitability Map of Einme Township
5.2.3 Deepwater Land Rice Suitability Map of Einme Township
5.3 Wakema Township

5.3.1 Favourable Land Rice Suitability Map of Wakema Township
5.3.2 Flooded Land Rice Suitability Map of Wakema Township
5.3.3 Deepwater Land Rice Suitability Map of Wakema Township

Deepwater Land Rice Suitability

- 0% - 20% Least Suitable (40546 acres)
- 21% - 40% (99282 acres)
- 41% - 60% (59496 acres)
- 61% - 80% (74854 acres)
- 81% - 100% Most Suitable (51104 acres)
6. Pathein District
6.1 Pathein Township
6.1.1 Favourable Land Rice Suitability Map of Pathein Township
6.1.2 Flooded Land Rice Suitability Map of Pathein Township
6.1.3 Deepwater Land Rice Suitability Map of Pathein Township

Deepwater Land Rice Suitability

- 0% - 20% Least Suitable: 261235 acres
- 21% - 40%: 62508 acres
- 41% - 60%: 60431 acres
- 61% - 80%: 64494 acres
- 81% - 100% Most Suitable: 7786 acres
6.2 Kangyidaunt Township

6.2.1 Favourable Land Rice Suitability Map of Kangyidaunt Township
6.2.2 Flooded Land Rice Suitability Map of Kangyidaunt Township
6.2.3 Deepwater Land Rice Suitability Map of Kangyidaunt Township
6.3 Kyaunggon Township

6.3.1 Favourable Land Rice Suitability Map of Kyaunggon Township
6.3.2 Flooded Land Rice Suitability Map of Kyaunggon Township
6.3.3 Deepwater Land Rice Suitability Map of Kyaunggon Township
6.4 Kyonpyaw Township

6.4.1 Favourable Land Rice Suitability Map of Kyonpyaw Township
6.4.2 Flooded Land Rice Suitability Map of Kyonpyaw Township
6.4.3 Deepwater Land Rice Suitability Map of Kyonpyaw Township
6.5 Ngapudaw Township

6.5.1 Favourable Land Rice Suitability Map of Ngapudaw Township
6.5.2 Flooded Land Rice Suitability Map of Ngapudaw Township
6.5.3 Deepwater Land Rice Suitability Map of Ngapudaw Township
6.6 Thabaung Township

6.6.1 Favourable Land Rice Suitability Map of Thabaung Township
6.6.2 Flooded Land Rice Suitability Map of Thabaung Township
6.6.3 Deepwater Land Rice Suitability Map of Thabaung Township

Deepwater Land Rice Suitability

- 0% - 20% Least Suitable (378944 acres)
- 21% - 40% (43300 acres)
- 41% - 60% (45453 acres)
- 61% - 80% (133567 acres)
- 81% - 100% Most Suitable (14793 acres)
6.7 Yegyi Township

6.7.1 Favourable Land Rice Suitability Map of Yegyi Township

![Favourable Land Rice Suitability Map of Yegyi Township](image.png)

**Favourable Land Rice Suitability**

- **0% - 20% Least Suitable**: 98478 acres
- **21% - 40%**
- **41% - 60%**: 66053 acres
- **61% - 80%**: 63635 acres
- **81% - 100% Most Suitable**: 26489 acres
6.7.2 Flooded Land Rice Suitability Map of Yegyi Township

Flooded Land Rice Suitability

- 0% - 20% Least Suitable (125138 acres)
- 21% - 40% (40716 acres)
- 41% - 60% (106192 acres)
- 61% - 80% (81801 acres)
- 81% - 100% Most Suitable (23746 acres)
6.7.3 Deepwater Land Rice Suitability Map of Yegyi Township
7. Pyapon District
7.1 Pyapon Township
7.1.1 Favourable Land Rice Suitability Map of Pyapon Township
7.1.2 Flooded Land Rice Suitability Map of Pyapon Township
7.1.3 Deepwater Land Rice Suitability Map of Pyapon Township
7.2 Bogale Township

7.2.1 Favourable Land Rice Suitability Map of Bogale Township
7.2.2 Flooded Land Rice Suitability Map of Bogale Township

![Map of Flooded Land Rice Suitability in Bogale Township]
7.2.3 Deepwater Land Rice Suitability Map of Bogale Township
7.3 Dedaye Township

7.3.1 Favourable Land Rice Suitability Map of Dedaye Township
7.3.2 Flooded Land Rice Suitability Map of Dedaye Township
7.3.3 Deepwater Land Rice Suitability Map of Dedaye Township
7.4 Kyaiklat Township

7.4.1 Favourable Land Rice Suitability Map of Kyaiklat Township
7.4.2 Flooded Land Rice Suitability Map of Kyaiklat Township
7.4.3 Deepwater Land Rice Suitability Map of Kyaiklat Township