AREA APPROACH MANAGEMENT FOR SALINE SOIL IN NORTHEAST THAILAND

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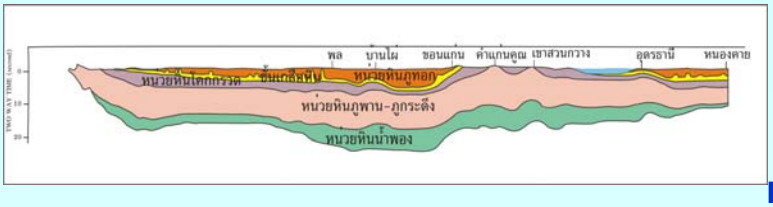
Introduction

There is about about 6 million ha of salt affected soil or 34% of arable land in northeast Thailand.

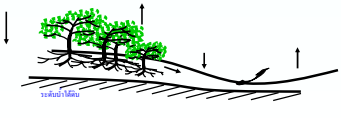


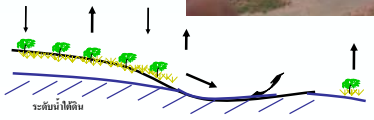
The source of salt is primarily the dissolution of rock salt in the Mahasarakham Formation, which underlies most of Khorat Plateua.

Severe salt affected soil: More than 50% of salt patches on soil surface. The area is 0.2 m ha, as deteriorated land.

Moderate salt affected soil: 10-50% of salt patches on soil surface. The area is about 0.6 m ha, land use is paddy but rice yield is very low.

Slight salt affected soil: Less than 10% of salt patches on soil surface. The area is about 2 m ha, Most of the area is rice field with low yield.

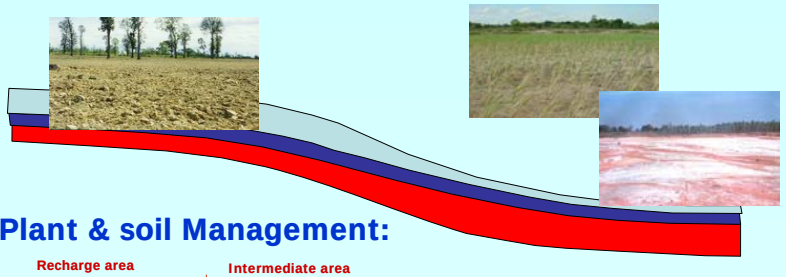




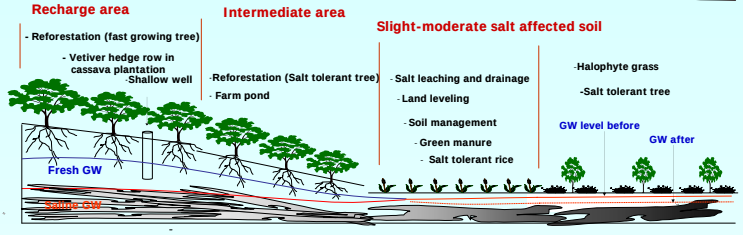
Potential salt affect land: About 3.1 m ha of recharge area or/and shallow saline groundwater area without salt on soil surface, but mismanagement might cause distribution of salt affected soil.

Area approach Management

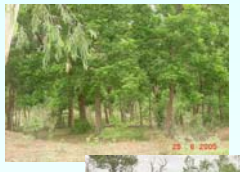
Deforestation in recharge area increases groundwater recharge and uplift saline groundwater in discharge area.



Plant & soil Management:



Recharge area



Saline paddy

Severe salt affected

Water management

Most of salt affected soil is in rainfed area. The problem of the farmers is not only soil and water salinity but also short of water for agricultural purpose. Water harvesting is an other important factor to be considered.

Farm pond

Shallow well