Country Report

Vietnam Soil Resources

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Introduction

Vietnam facts:

- Total area (main land): ~ 33 mil ha
- Population (2014): ~ 90.5 mil
- GDP:

![GDP Graph](source: www.tradingeconomics.com | World Bank)
Vietnam agriculture-facts:

- Agriculture-based economy, though agriculture share in GDP is only 22%
- More than 70% of population engaged in agriculture
- Dominant area under food crops
- Agriculture is a very open sector/the big share of key products are for export
Status of Soil Resources

- The soil map of Vietnam at scale 1/1,000,000 issued in 1976 by Ministry of Agriculture
- The soil map included 13 Major Soil Groups with 31 Soil Units

33 M hectares

- Ferralitic soils (17.5 M ha)
- Alluvial soils (3.3 M ha)
- Grey degraded soils (2 M ha)
- Acid sulphate soils (2 M ha)
- Humus soils (10%)
- Sandy soils (2%)
- Saline soils (3%)
- Others (10%)
75% area is slopping land; 50% which slope more than 20°
Status of Soil Resources

70% soil is poor in Phosphorus (< 0.06 P$_2$O$_5$ in Hydromorphous soils; and < 0.10% P$_2$O$_5$ in Ferralitic soils)
60% soil is poor in Potassium (< 0.5% $K_2O$)
Status of Soil Resources

Soil Reference and Information Centre of Vietnam

63 soil profiles
Main Issues and Soil Threats


2. Limited in agricultural land area (World average 1.20 ha; Vietnam 0.104 ha/capita).

3. Draught; water quality.

4. Agricultural soil quality:
   - 75% slopping/infertile soil; 50% low in N, 87% in P, 80% in K, 72% in Ca, 48% in Mg;
   - Soil desertification/ degradation/ pollution and salt water intrusion.
Ongoing Activities

1. Agricultural Restructuring Program: i) production growth increase by 20%, ensuring food security at national and household levels; ii) poverty reduced by 20% and iii) GHG emission reduced by 20%.
   - Changing 200,000 ha from rice cultivation to cash crops and grazing;
   - Keeping 3.8 M ha for rice cultivation.

2. Soil degradation inventory in whole country;

3. Limited nutrients in soil for rice production in RRD and MRD;

4. Land evaluation for provincial, regional and national levels;

5. Saline and acid sulphate soil in RRD and MRD;

6. Upgrading the National Soil Information Center;

7. Soil analyze capacity building;

8. National Soil Science Conference.
1. Conservation farming:
   - On slopping land: control soil erosion, soil degradation... by intercropping, crop rotation...
   - On flat areas: soil degradation; soil pollution, salt affected... by using crop residues (biochar, composting), balanced fertilizer application...

2. Soil quality management/land and soil resources inventory:
   - Soil fertility database for rice cultivation.
   - Soil degradation database.
Thanks for your attention!