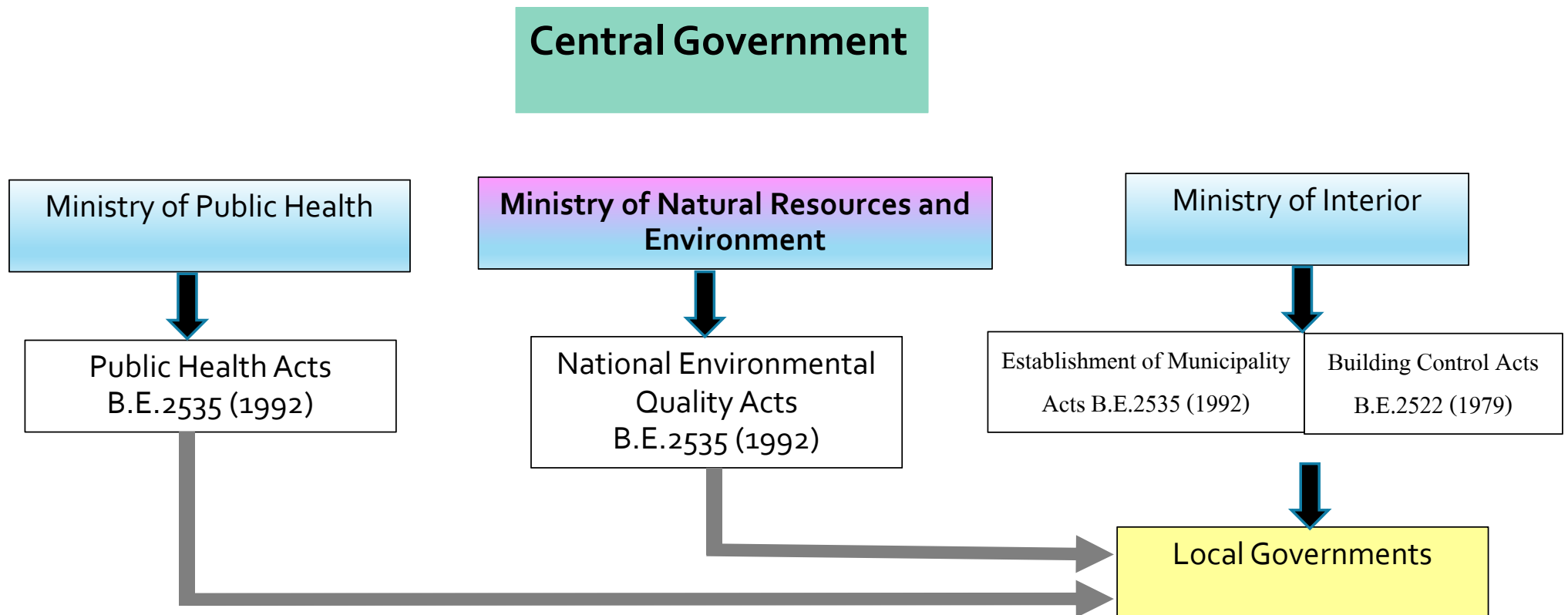


# Good Practices of Septage Management in Thailand

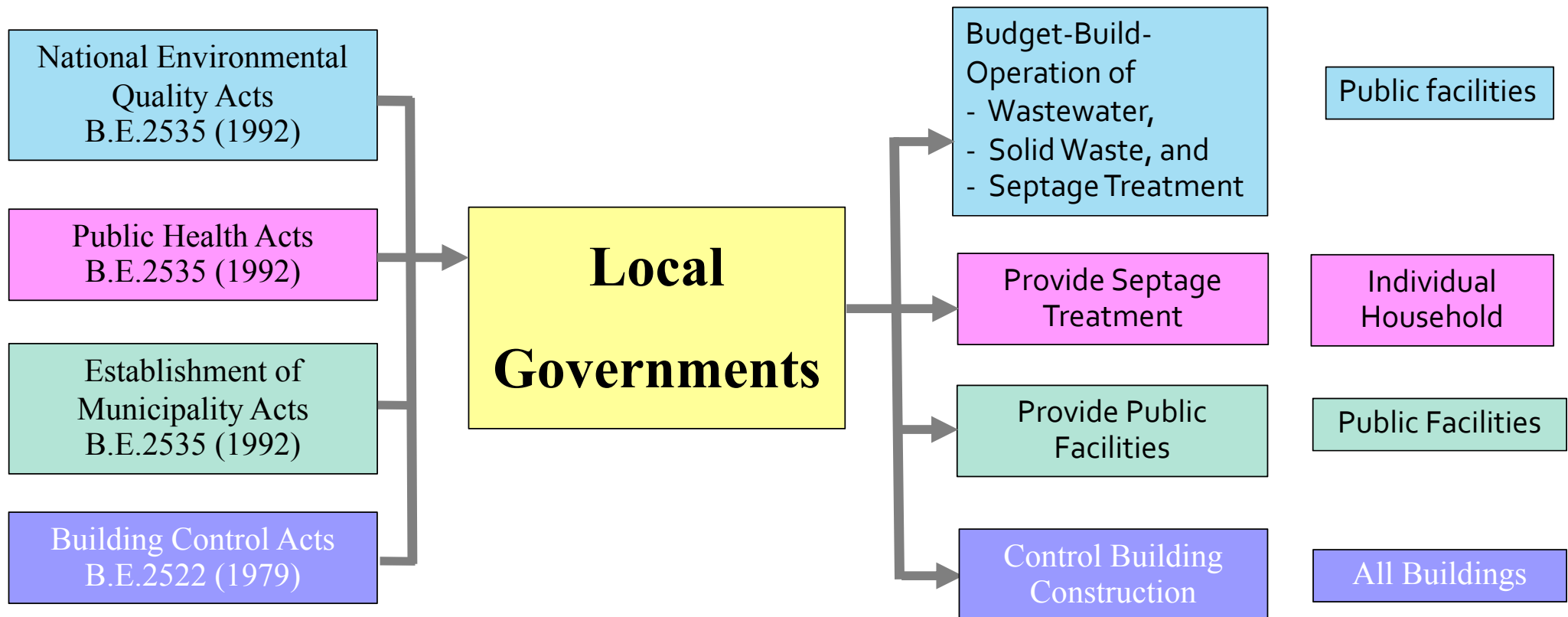
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**Jiranun Hempoonsert**  
**Pollution Control Department**  
**Ministry of Natural Resources and Environment**

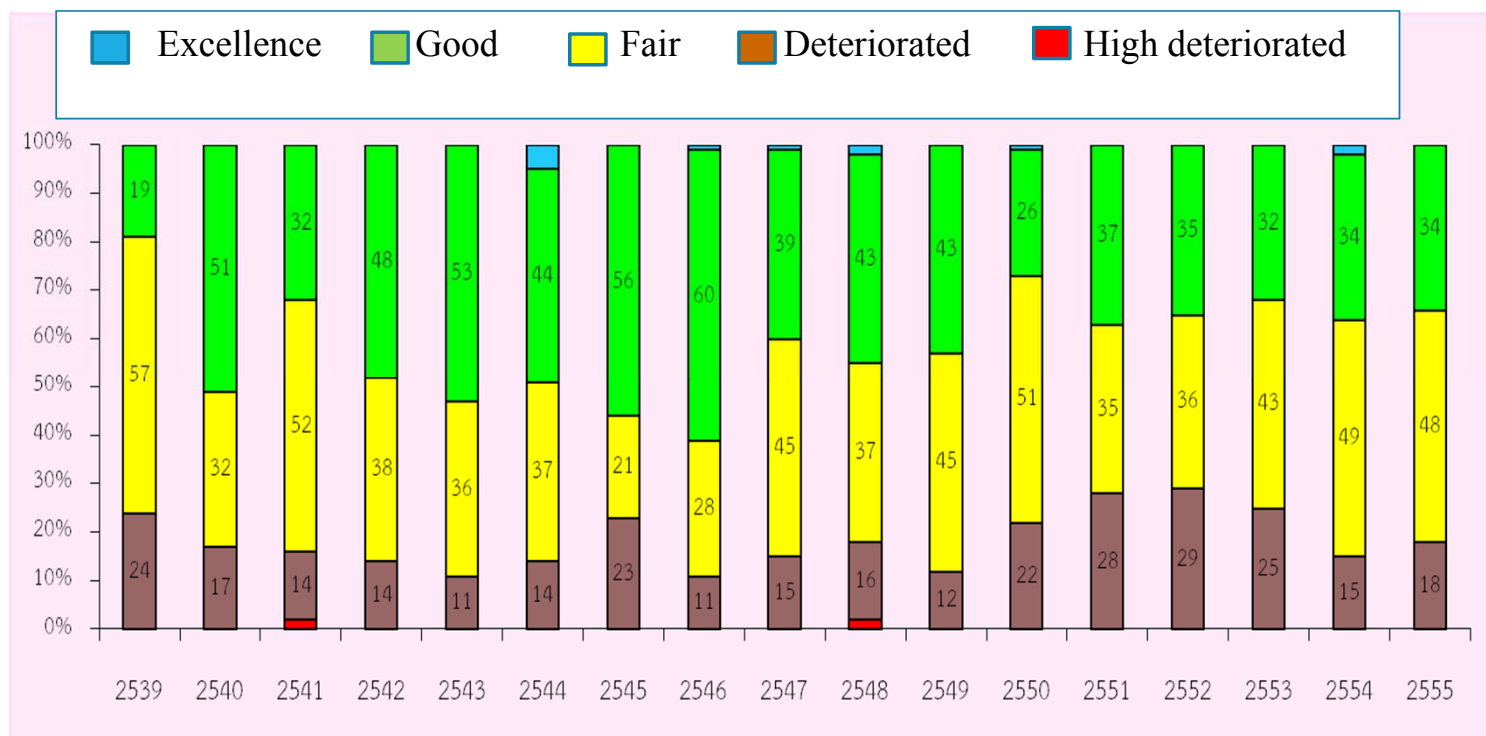
# Background of Administration in Thailand



# Local Administration Responsibility



# Background of Surface Water Quality Situation 1996 - 2012

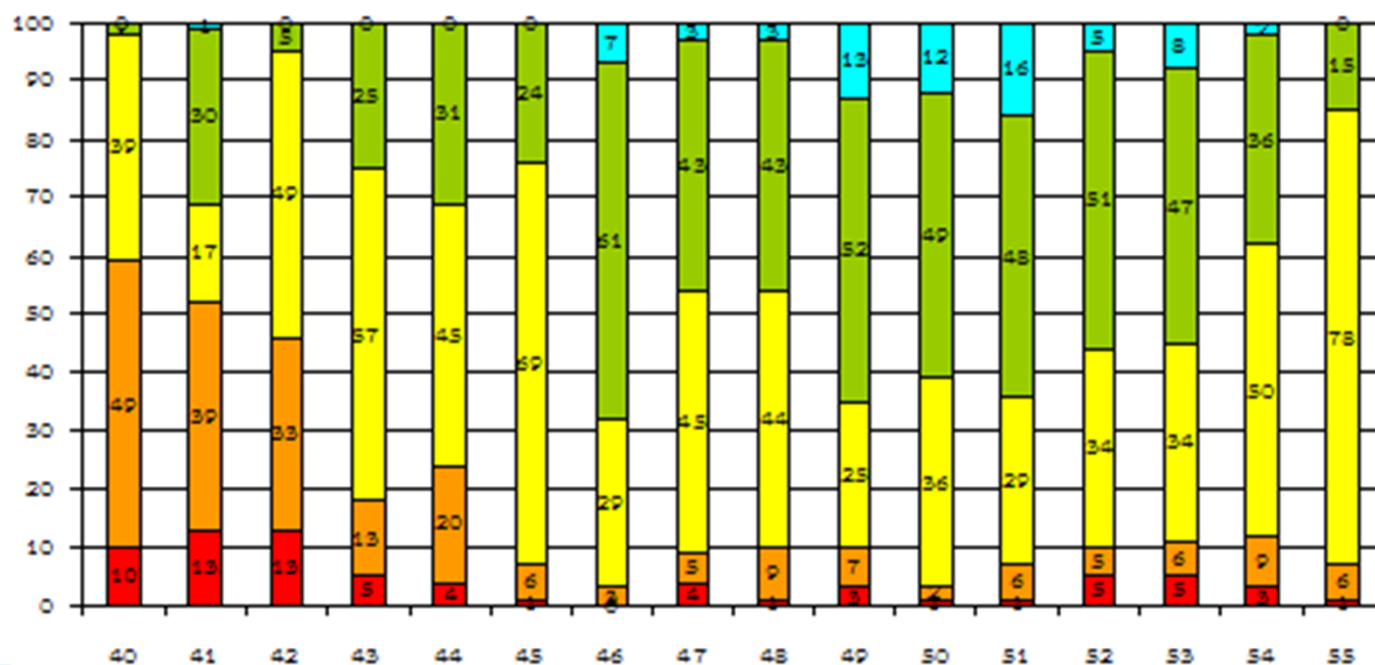


Source: State of Thailand Pollution, 2013

# Background of Coastal Marine Water Quality Situation 1997 - 2012

Excellence      Good      Fair      Deteriorated      High deteriorated

ร้อยละของจุดเก็บตัวอย่างทั้งหมดของแต่ละปี



# Wastewater Management Model in Thailand

- **Central Treatment Plant**
- **Cluster (Community) Treatment Plant**
- **On-site Treatment**



# Central Wastewater Treatment plants in Thailand

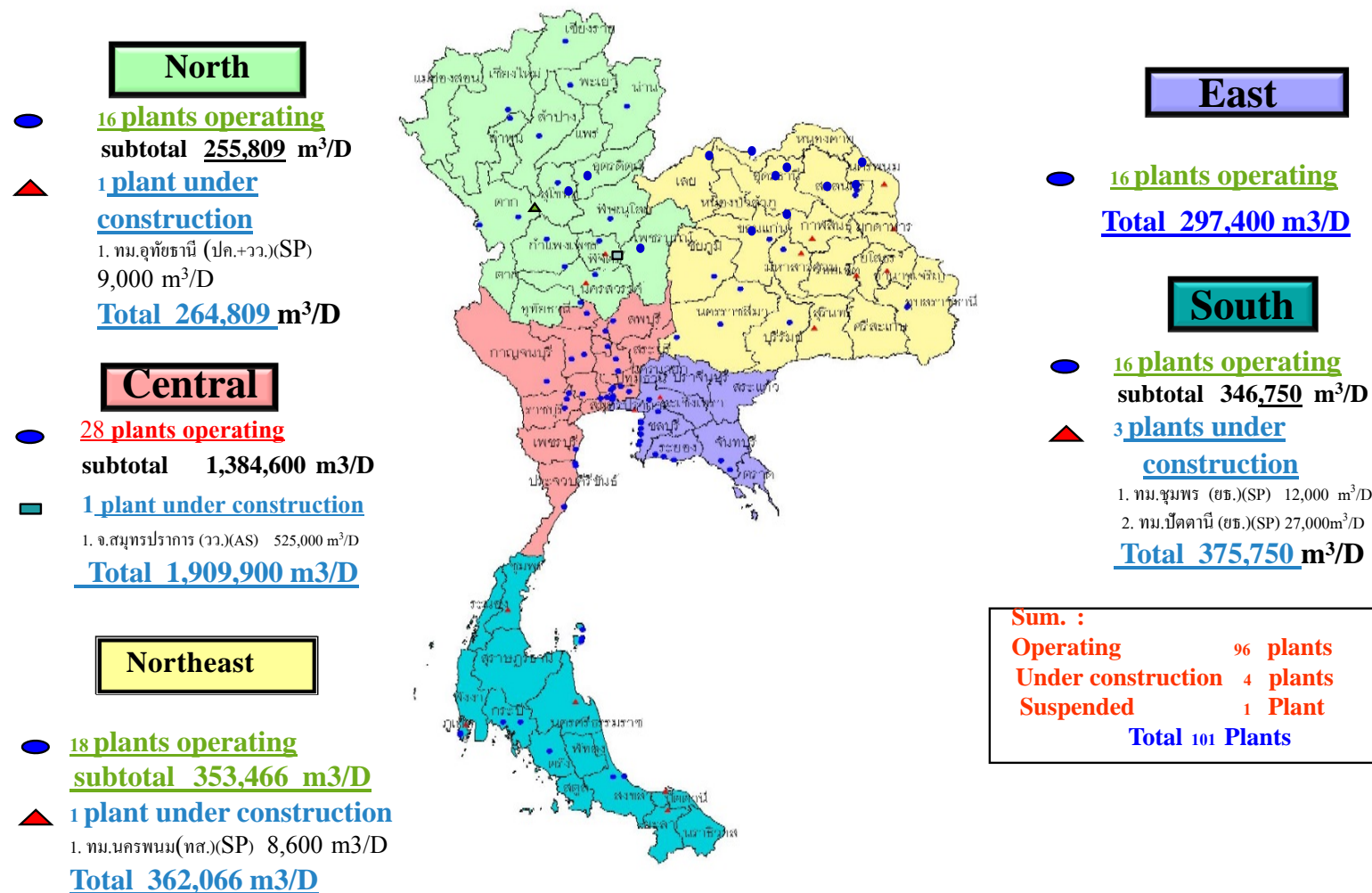


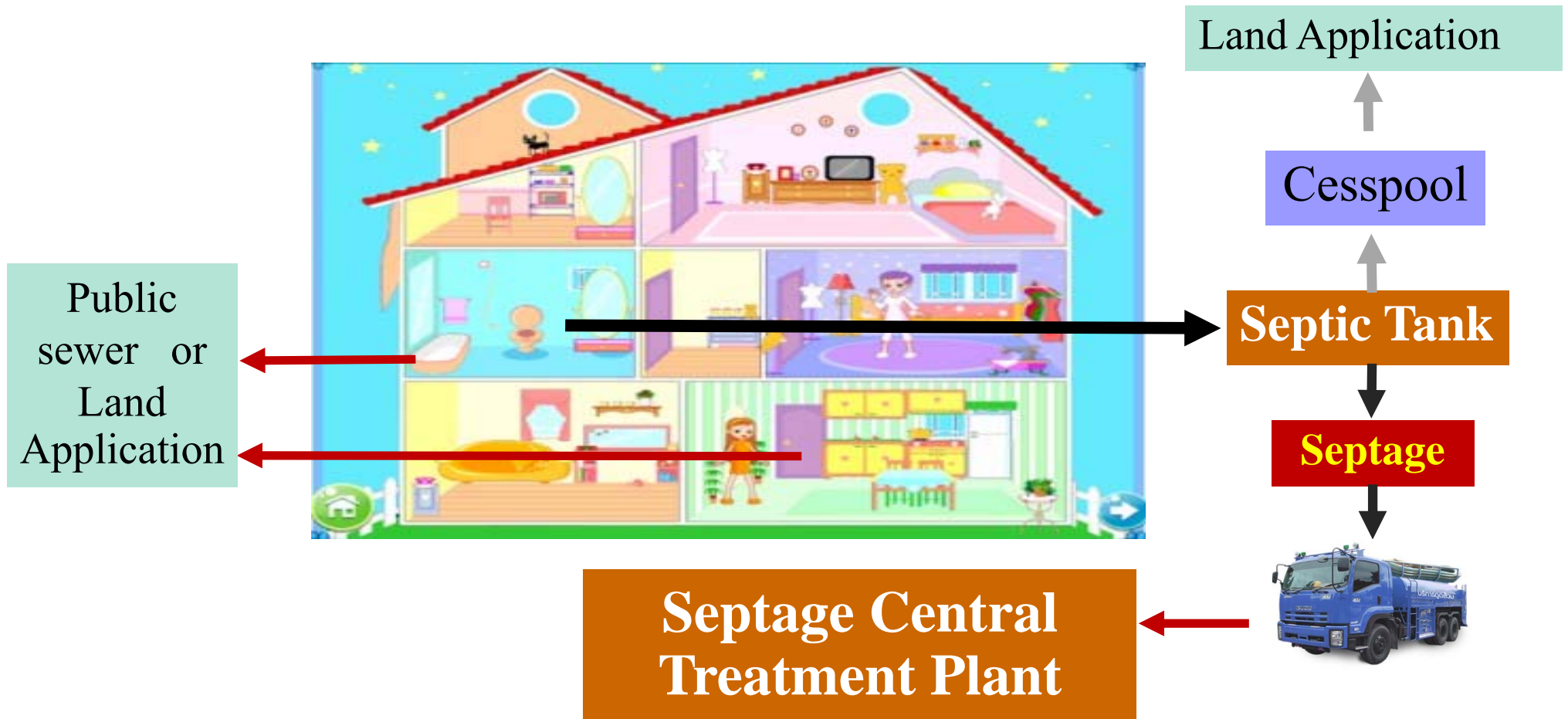
Figure of Wastewater Treatment Plants in Thailand (as of 2016)

## Central or Cluster Treatment Service Area





# Rural Area



# Central Septage Treatment : Nonthaburi Plant



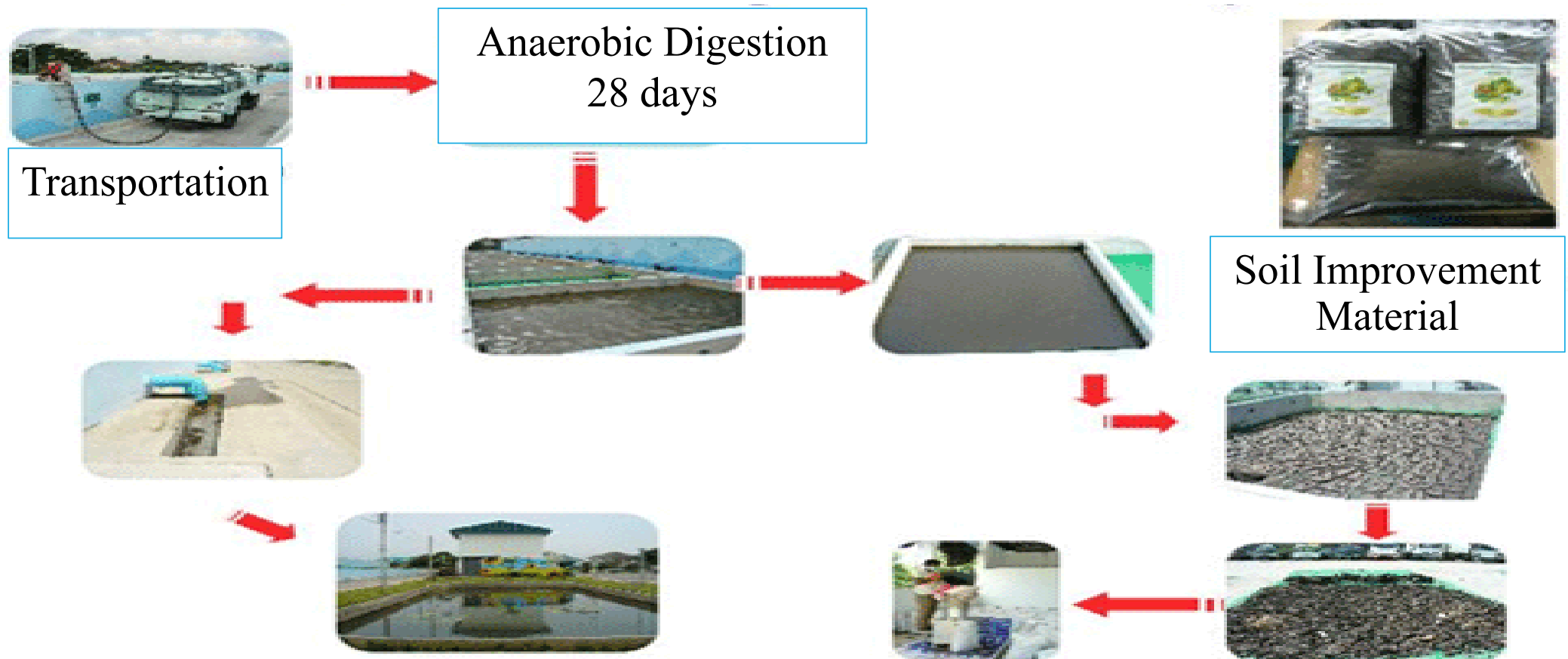
# Facilities in Treatment Plant



1. Office
2. Pond
3. Digestion Tank
4. Sand Drying Beds
5. Heavy Mechanical  
Equipment Store
6. Soil Improvement  
Material Store
7. Equipment Store
8. Parking Lots

[http://www.behn.go.th/upload/detail\\_dirt.pdf](http://www.behn.go.th/upload/detail_dirt.pdf)

# Septage Treatment Process (Nonthaburi Plant)





# Transportation & Pumping



# Anaerobic Digestion



# Sludge Drying & Soil Improvement Material



- Concrete tank 13 cu.m
- Slope 3%
- PVC Ø 6" piping distribution



Soil Improvement  
Material

# Liquid Fertilizer



Drainage from Sand Drying Bed



Storage Pond for  
Liquid Fertilizer  
Process



Thank you  
for  
your attention