Viking Settlements in Greenland

Viking-Age Scandinavian populations expanded into the North Atlantic between about A.D. 800 and 1000. First occupied Shetland, Orkney and Scottish mainland, then Iceland, Greenland and Vinland.

Like Easter Islanders, Norse settlers transported:

1. A political organization based on a chief
2. Their economy. In this case, one based primarily on domestic cattle, sheep, goats, pigs, dogs, and horses as well as cereal cultivation of barley and oats

Unlike Easter Island, the plants did not do well on Iceland and Greenland. Had to import. Tried to grow feed – many suitable species for pasture.

A.D. 1000 to 1260 was the “golden” age
A.D. 1260 to 1300 was the “little ice age”

Entire region marginal for cereal agriculture and the other components of the transported agricultural system. As with growing corn in the arid Southwest, even a small negative change in climate would create a serious problem.

At peaks, Iceland probably had population of 50,000 and Greenland 5000.

Created problems for themselves:

1. Overstocking of domestic animals
2. Fuel collection, iron working, and construction activity rapidly depleted the dwarf trees
3. Soil probably seriously eroded by Norse land-use practices.
By late middle ages, Greenland communities completely abandoned and Iceland experienced a major loss of population.

Pollen analysis:

  Significant decline in willow and birch when early colonies established.
  Wood especially valuable for smelting and smithing iron; use in hearths and construction.

But: We know from statutes and records from mainland that Norse sensitive to conservation issues and tried to space farms, manure fields, and pay attention to number of animals being grazed.

Bottom line: whatever conservation measures they practiced, the situation deteriorated.

Questions:

1. Were Norse land-use practices causing adverse ecological impacts, outweighing effects of their conservation efforts?
2. Were impacts on land use sufficiently widespread to cause significant, sometimes irreversible degradation of components of the ecosystem important to Norse economy?
3. If practices were destructive to vital economic resources, why did Norse farmers fail to perceive and correct the problem?
Conclusions:

Six factors:

1. Model used in decision making might have been based on another ecosystem that had surface similarities, but critical differences.

2. Insufficiently detailed information might have been presented, problem may have been over-generalized

3. There may have been only a short observational series, because it was a truly new situation where there was little realistic experience.

4. Managers might have felt detached, being socially and geographically distant from producers.

5. Reaction of managers might have been out of phase with problem – too little too late.

6. Managers might have perceived the potential problem, but did not feel obligated to take action – it was someone else’s problem.

Would expect first 3 factors to have been most serious in early years of colonies and to fade as knowledge gained.

Last 3 more of the problem as administrative structure shifted from chiefly local involvement to more formal, geographically-separated patron-client relation.

We know that at first most colonists owned their land and used slaves from their conquests. As presence of slaves diminished, more farmers lost land and became tenants or wage earners on someone else’s farm.
Tenant farmer no longer free to make own decisions. In order to hold onto lease, would have to attempt always to maximize. This shifted land-use decisions up a rank in the new social hierarchy, giving real authority to absentee landlords who were locked in their own power struggle in the homeland.

Landlords also distant from ecological feedback that might have warned of impending doom. Even if information flow had been better, would they have had sympathy for proposed solutions that would permanently lower production in favor of long-term environmental conservation?

What was happening may have been recognized only by the politically powerless.

Were there alternatives? Yes, the Inuit, who were recent immigrants to Greenland were fishing and hunting sea mammals. They succeeded.

Did logic rule? No. (Does it ever?)

Inuit way not culturally acceptable.

Church disapproved of contact because of Inuit religious beliefs and practices.

Result: conditions worsened, many died, Greenland abandoned and never resettled. Iceland’s population and pasturage dramatically cut.

Failure to adapt → extinction, in one form or another.