

Aesthetic preferences – what about the afforested areas?



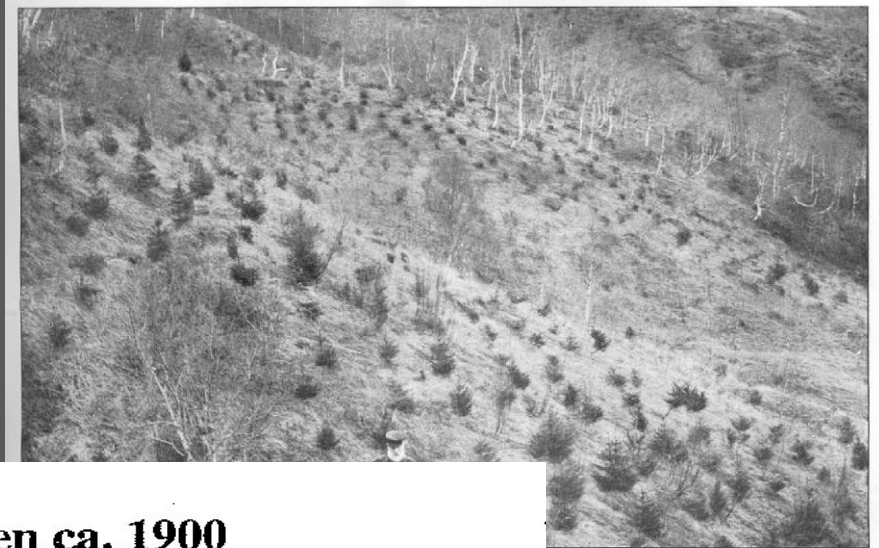
Vegard Gundersen, Norwegian Institute for Nature Research, Lillehammer





**God Jul
Godt Nytt År**

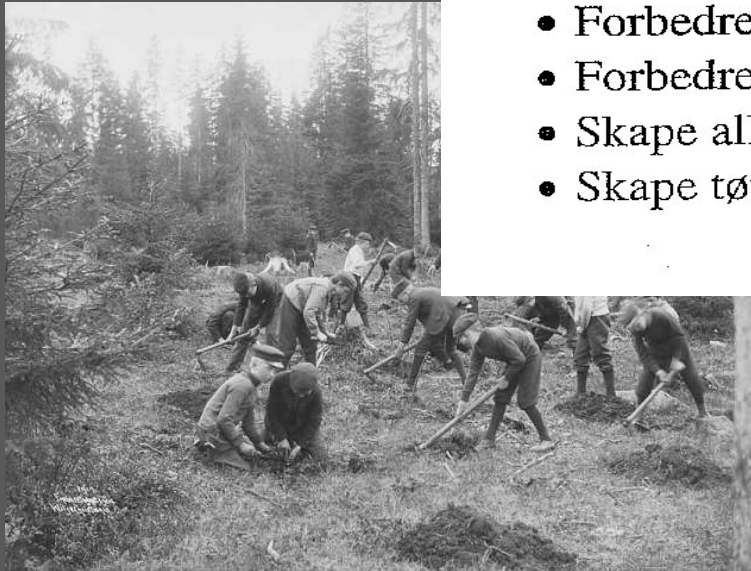
Det most sold Christmas Card in Sogndal, 1988



Plantet 1908, fot. 1913. 449-1914

Mål for skogreisingen ca. 1900 (Etter div. opprop og artikler i Tidsskrift for Skogbruk)

- Kle fjellet
- Forskjønne landskapet - **Scenic landscape values**
- Forbedre klimaet
- Forbedre jordsmonnet
- Skape allsidig husbehovsvirke
- Skape tømmer for salg



Modern times





Photo: Kari Bental

Landscape quality assessment

Objective

Quality as inherent in the physical landscape

- surveys of landscapes which classify and evaluate their quality
- Bureau of Land Management (1980) – visual resource management system
- Linton (1968) ± assessment of Scottish scenery
- Martin (1993) ± British landscape assessment
- US Forest Service National Forest Landscape Management

Subjective

Quality as a product of the mind (the eye of the beholder)

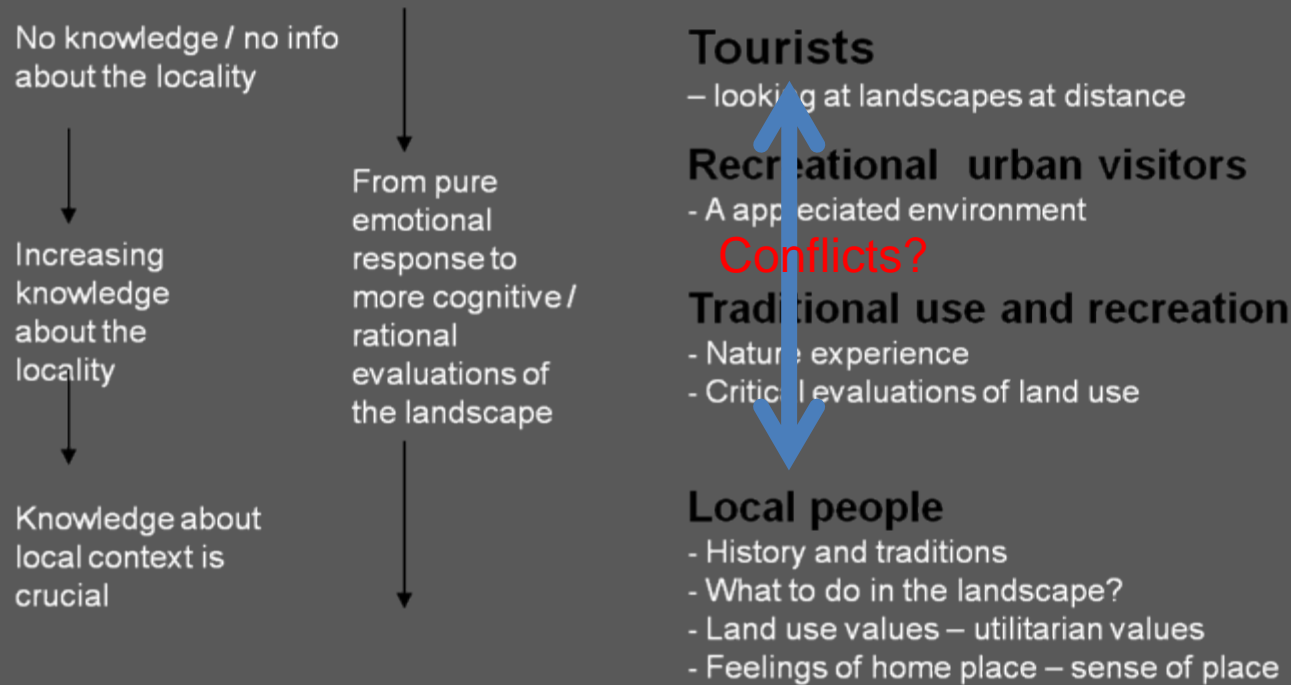
- surveys of respondent preferences of landscapes through the use of statistical methods (i.e. multiple regression and factor analysis)
- Leading researcher: Herzog, Hull and Buhyoff, Kaplan and Kaplan, Ulrich, Schroeder and Daniel, Shafer, Zube
- More than 60 research surveys from the Nordic e.g. Haakenstad, Strumse, Kardell, Hultman, Jensen, Kellomäki, Tyrväinen, Karjalainen



Long distance view – Main source: Visual design

Near-view effects – Main source: Preference research

Local knowledge – crucial for the evaluation



Preference research in Fennoscandia (64 surveys)

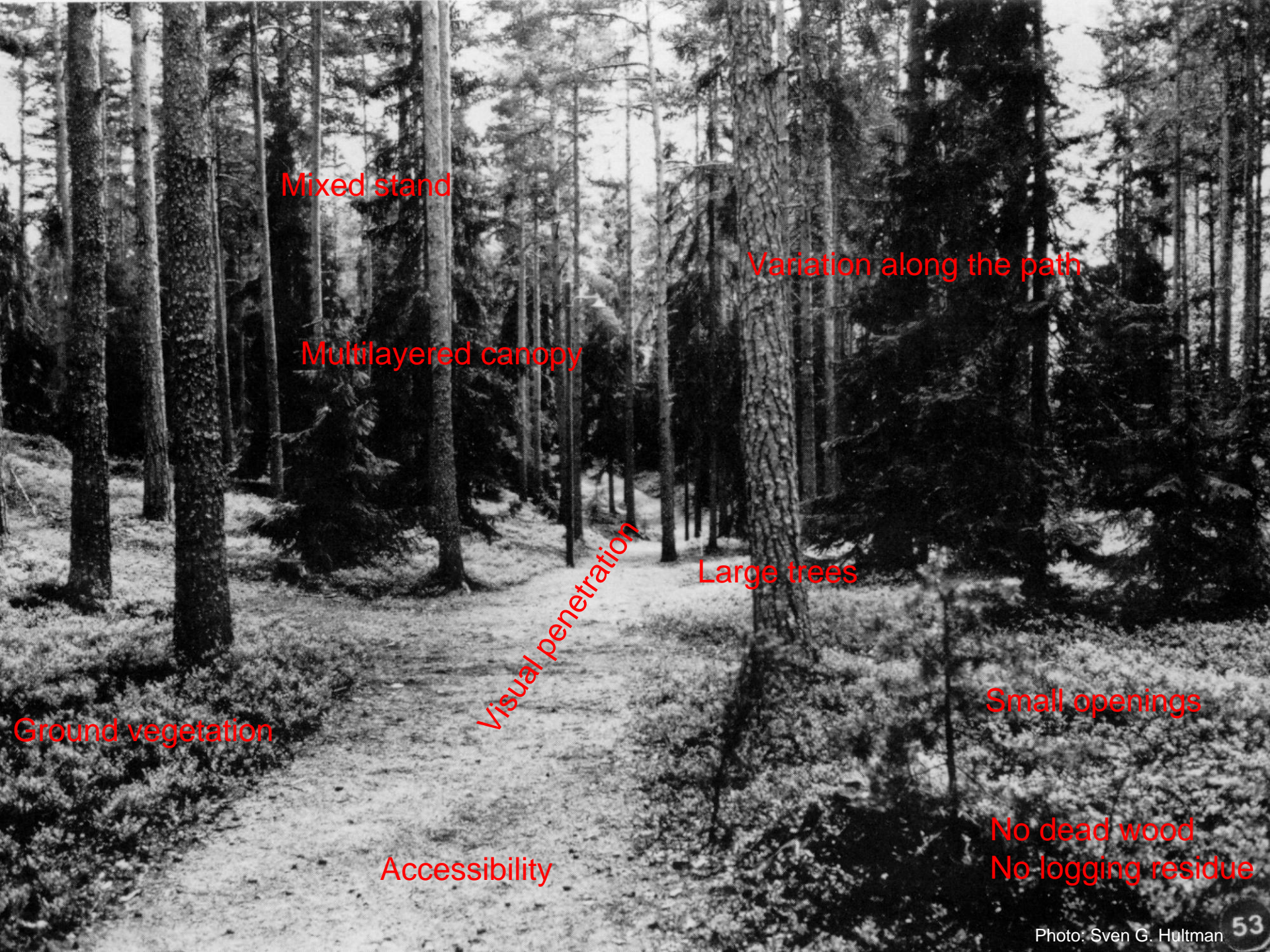
Verbal

Photo

On site

| Med ord (verbalt) | Med fotos (visuelt) | I felt |
|---------------------------------|-------------------------------------|-----------------------------------|
| Aasetre 1993, 1994 | Aasetre 1994 | Haakenstad 1972 |
| Eskelinen 1979 | Gundersen & Christensen 2008 | Jaatinen 1976 |
| Haakenstad, 1972, 1975 | Hallikainen 1998 | Kardell 1990, 2001 |
| Hallikainen 1998 | Holgén et al. 2000 | Kardell & Lindhagen 1998, 2006 |
| Hoen & Winther 1993 | Hultman 1979, 1981, 1983 | Kardell & Mård 1989 |
| Hoen & Veisten 1994 | Kaltenborn & Bjerke 2002 | Kardell & Wallsten 1989 |
| Jaatinen 1976 | Kangas m.fl. 1993 | Kardell m.fl. 1977 |
| Järveläinen 1977 | Kardell 1978 | Kellomäki 1975, 1981, 1984 |
| Kaltenborn & Bjerke 2002 | Kardell & Mård 1989 | Kellomäki & Savolainen 1984 |
| Kangas & Niemiläinen 1995, 1996 | Kardell m.fl. 1977 | Lindgren & Sorte 1990 |
| Karhu & Kellomäki, 1980 | Karjalainen & Komulainen 1998, 1999 | Savolainen & Kellomäki 1981, 1984 |
| Kellomäki 1975 | Karjalainen 1996, 2000 | Mestvedt 1984 |
| Komulainen 1998 | Kellomäki & Savolainen 1984 | |
| Korhonen 1983 | Lindhagen 1996 | |
| Lind m.fl. 1974 | Lindhagen & Hörnsten 2000 | |
| Lovén 1973 | Mattsson & Li 1994a, b, 1995 | |
| Saastamoinen 1982 | Pukkala m.fl. 1984 | |
| Sieväinen 1993 | Rydberg 1998 | |
| Silvennoinen m.fl. 2002 | Saastamoinen 1982 | |
| Tyrväinen m.fl. 2001 | Silvennoinen m.fl. 2001, 2002 | |
| Andreassen 1982 | Strumse 1996, 2002a, b | |
| Hagen 1997 | Tahvainen m.fl. 1996, 2001 | |
| Haugan 1976 | Tønnes m.fl. 2004 | |
| Grindalen 1993 | Tyrväinen m.fl. 2003 | |
| Mestvedt 1984 | Simensen & Wind 1990 | |
| Pagander & Østerås 2006 | | |
| Pedersen 1985 | | |
| Skagestad 1996 | | |
| Simensen & Wind 1990 | | |





Mixed stand

Variation along the path

Multilayered canopy

Large trees

Visual penetration

Small openings

Ground vegetation

No dead wood
No logging residue

Accessibility

1. Natural openings in a forest, like lakes, bogs and other treeless areas, are considered more attractive than openings from cuttings.



2. Openings in a forest that are related to traditional agricultural land use are regarded as positive elements. Time-honored cultural landscapes, and traces of historical uses of open land, all in all provide a richer experience to many forest visitors.



3. Forests with viewpoints are appreciated.



4. Many forest visitors prefer some extent of visibility in forest stands.



5. Forest visitors would rather walk in sparse than in dense stands of young trees.



Photo: Lars Helge Frivold

6. The general public likes the forest better the larger the trees are.



7. People tend to like multi-storied forest stands, however, irregularity may be in conflict with visibility.



8. Elements of broadleaves in coniferous stands are appreciated. In other respects, opinions about tree species differ. People`s preferences for tree species and species composition of a forest stand are influenced by factors like openness, stand structure and light conditions, and by what tree species the respondents are accustomed to.



9. Stands containing dead trees and coarse woody debris are not appreciated by the general public, at least as long as respondents are uninformed about the ecological importance of such elements.



10. Most forest visitors experience large, recent clearcuttings as negative elements. Seed trees or other retained trees usually make the impression somewhat better. The impression also improves if the cut provides a scenic view.



11. Selection cuttings usually do not cause significant negative reactions among the general public.



12. Tending of young stands as well as thinning improve visibility and accessibility, and are accepted by the general forest visitor, provided that there is little visible debris in the stand.



13. Most people claim that they prefer walking on simple paths when visiting forests; behavior studies reveal that forest visitors for a large part walk on forest roads.



14. Strongly visible tracks from field logging give a negative impression.



15. Professional foresters become significantly more enthusiastic than other people when exposed to photos of forest stands that have been treated in accordance with the syllabus from their forestry education.



Special case 1: Introduction of non-native tree species

- Far from all forest visitors are able to recognize differences between native and exotic tree species at all (Kardell & Wallsten 1989, Haakenstad 1972)
- Almost 60% of the respondents in the verbal mail survey of Haakenstad (1972) did not want areas with exotic tree species in the forests around Oslo (Haakenstad 1972)
- Provided with the information that 20–30 foreign tree species were already more or less present in the municipal forests of Bymarka ,Trondheim, 38% wanted areas with foreign tree species, 30% did not want them and 32% were indifferent (Andreassen 1982): approximately the same scores as if respondents had answered at random.
- Strumse (1996) found that photos from dense Norway spruce plantations in West Norway got low scores compared with pastoral agrarian landscapes.

Introduction of non-native trees in afforestation areas may not be perceived as negative for landscape appreciation as long as the exotic trees do not stand out as very deviant landscape elements or have properties unsuitable for recreational use of the forest stands (e.g. dense spruce plantations). However, the concept of ‘alien’ species will stand in strong contrast to the perception of ‘naturalness’ that is a highly valued landscape characteristic.

Special case 2: Increased afforestation

- Non-managed, overgrown fields and afforestation of such abandoned fields were considered the most disturbing factors in the local cultural landscape for land-owners, landscape planners, and people participating in the planning process in several rural landscapes and villages in Finland (Komulainen 1998).
- Nousiainen et al. (1998) discovered that local inhabitants did not accept afforestation, but potential tourists preferred the alternatives that contained wide areas of afforestation.
- Karjalainen and Komulainen (1998) found that afforestation of abandoned farmland and all options were perceived as disturbing despite the afforested area in each option being small.
- Tahvanainen et al. (1996) found that moderate afforestation (1/3 of the original farmland area) could have positive effects on scenic beauty, but that afforestation was little appreciated if it was applied to originally attractive cultural landscapes (cf. Strumse 1996).
- A survey in Sweden (Kardell 1990) showed very heterogeneous negative opinions among respondents when asked about their impression of a field afforested with Norway spruce.



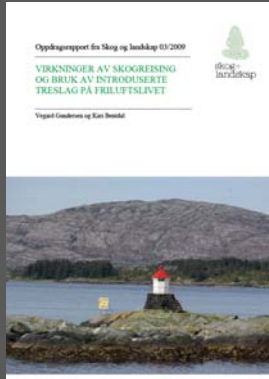
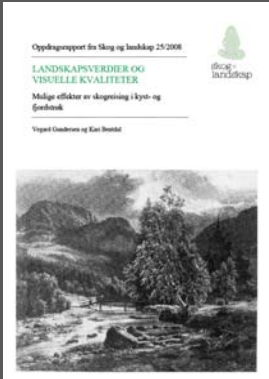
Some important factors for afforested areas:

- Development stage – stand openness
- Treatment – e.g. Thinning activities
- Location – e.g. Present landscape values
- Establishment near the edge – irregular edge
- How it fit in the landscape?

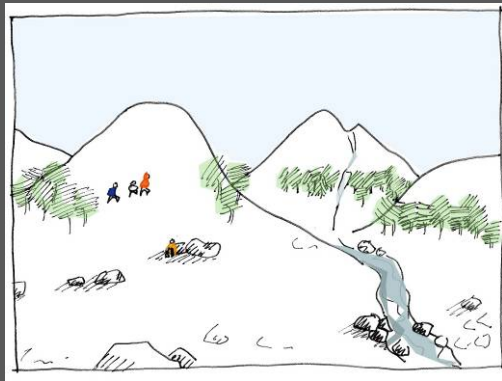


View from distance

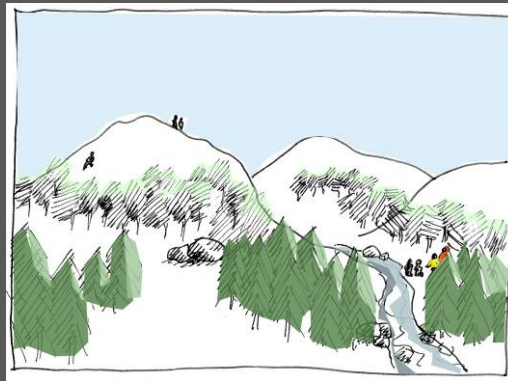




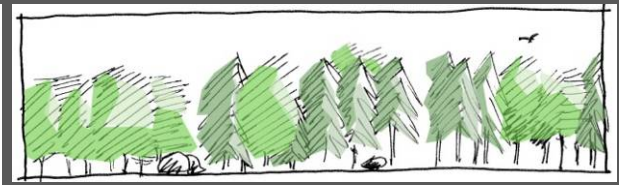
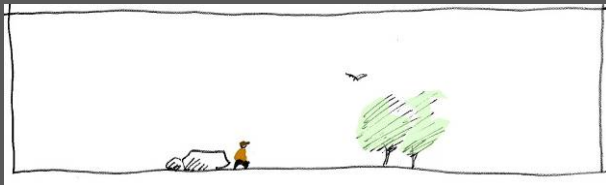
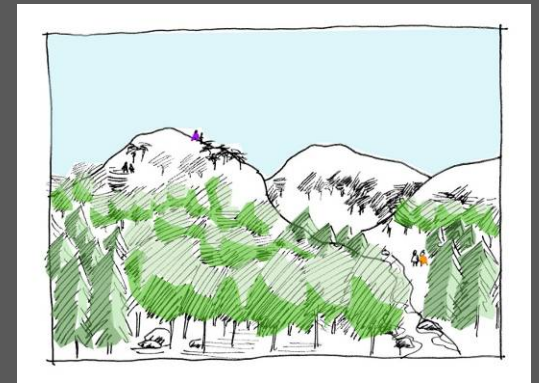
1950

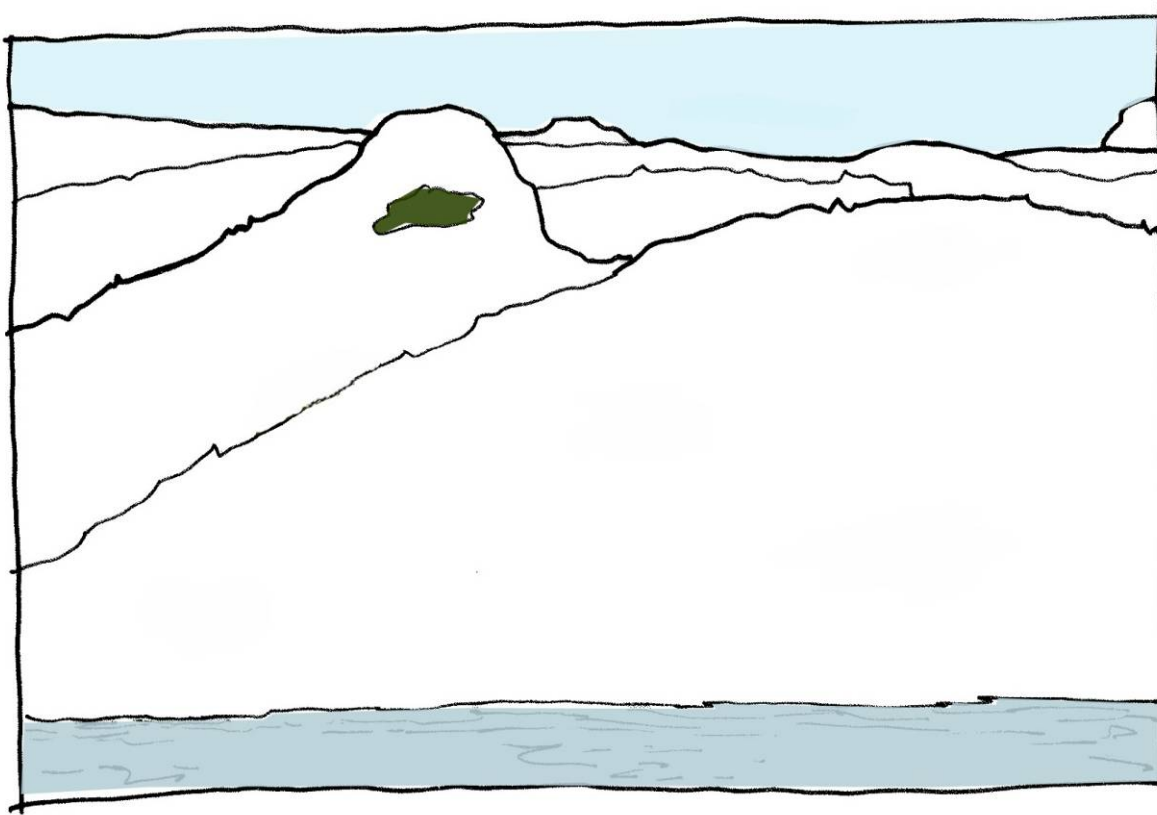


1980



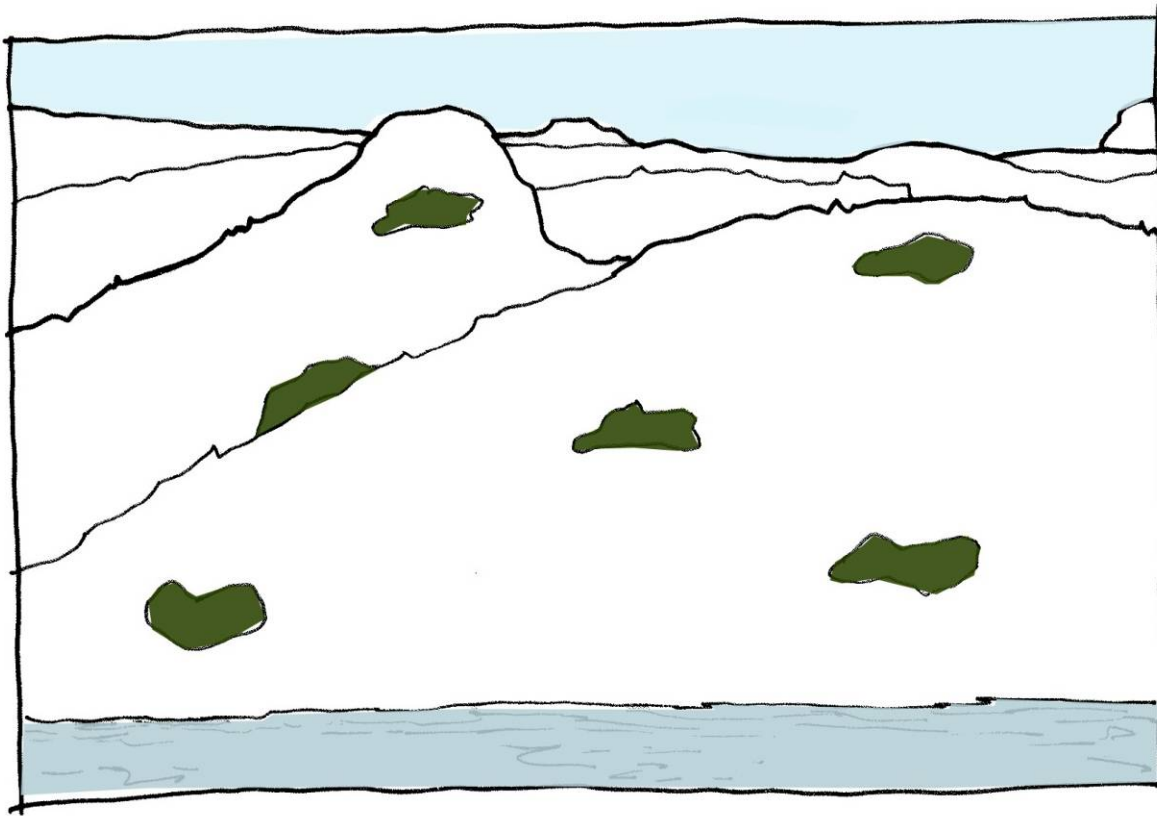
Today





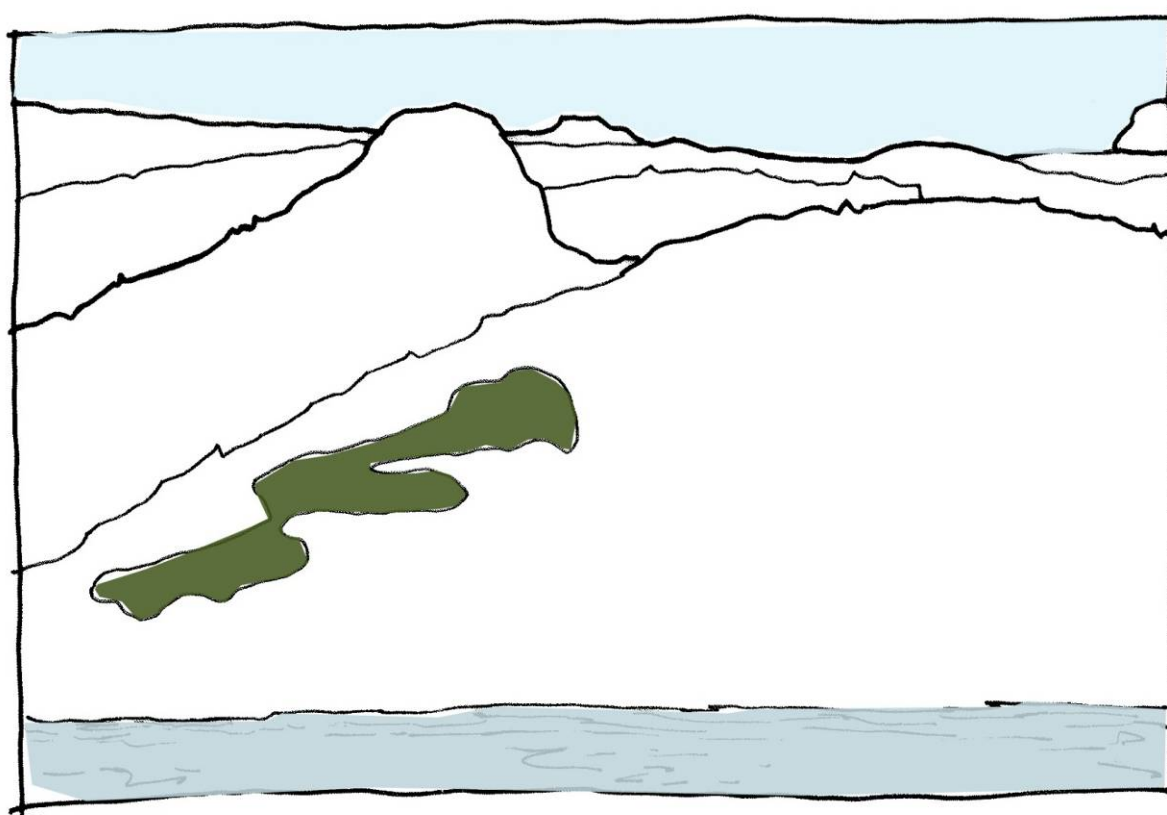
A forest as a point that make an contrast to the surrounding landscape.

I marginale områder kan granplantingene opptre som punkt i landskapet med store kontrastvirkninger til landskapet rundt.



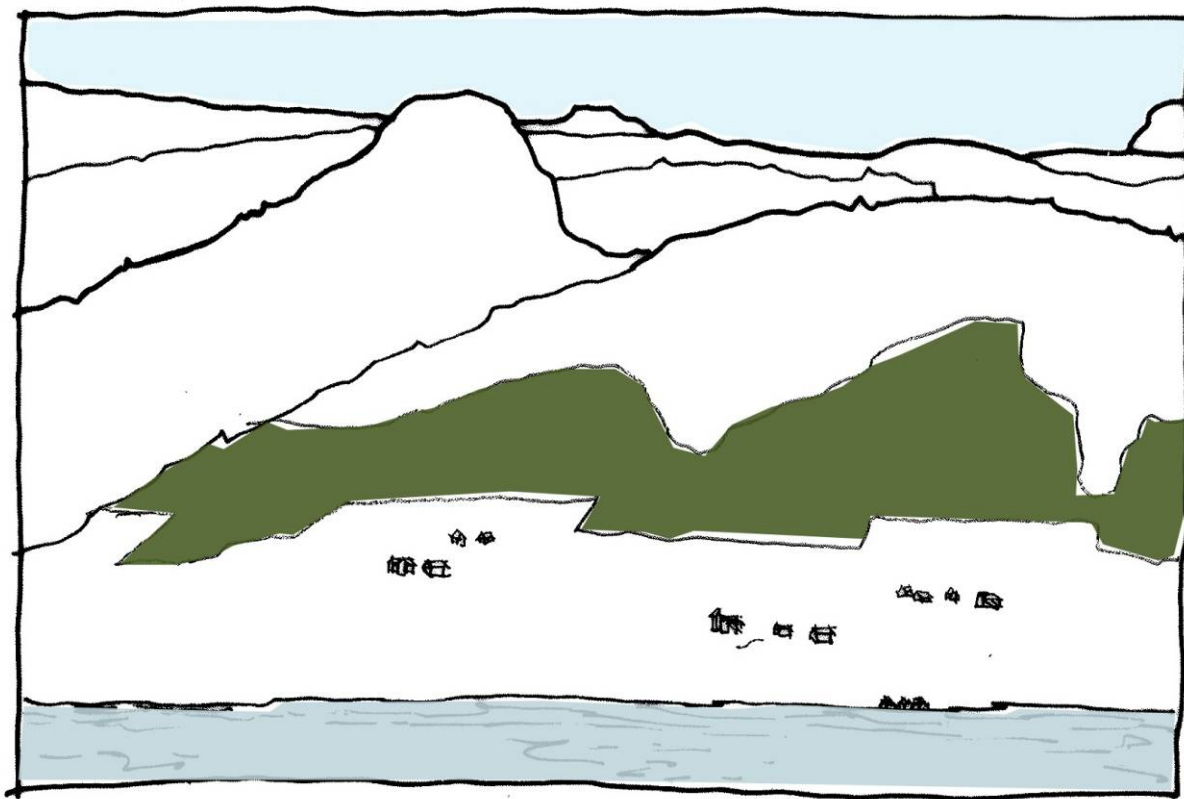
Randomly locations often make a "messy" view.

Granplantefeltene bærer mange steder preg av tilfeldig plassering.



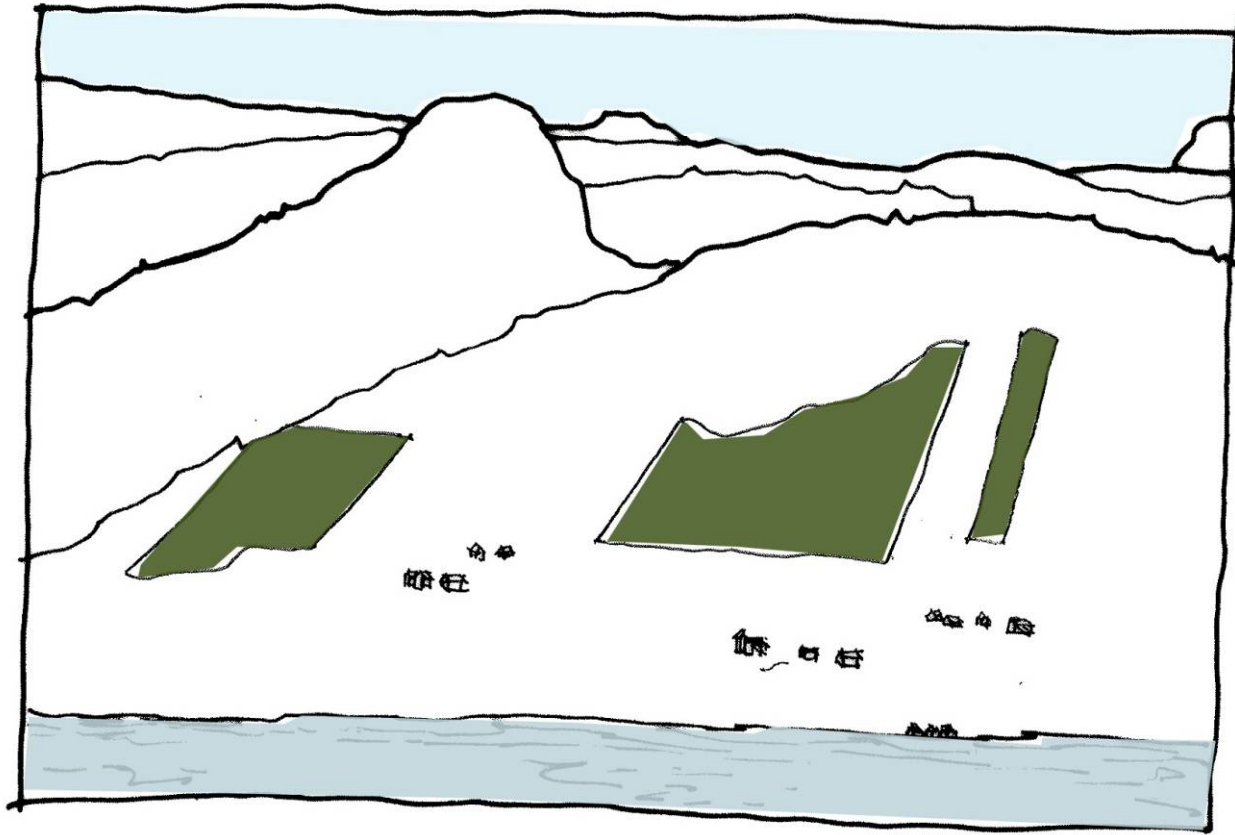
To concentrate the afforestation areas and fit it better into landscape shape improve the view.

Granplantingene glir bedre inn i omgivelsene hvis de samles og tilpasse landskapet.



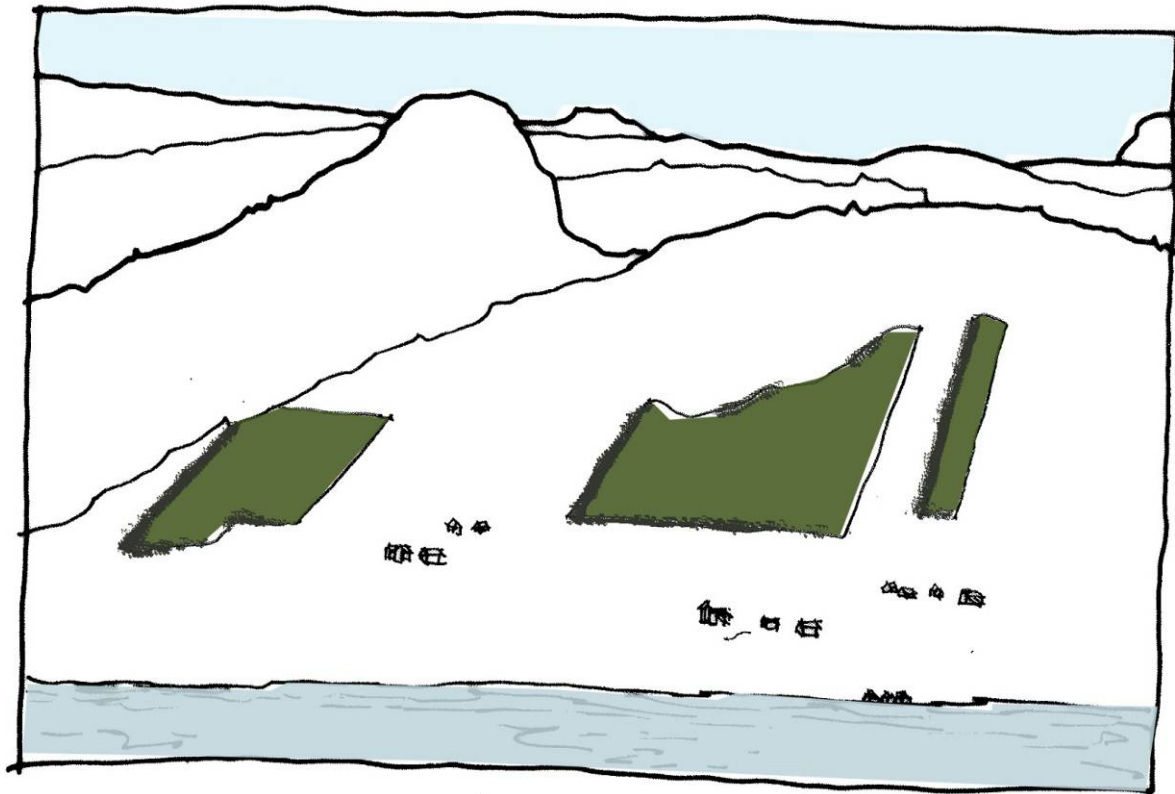
A common location in between "innmark" and the mountains

Granplantingenes har ofte en plassering i sonen mellom innmark og fjell. Innmarka spares mot tilplanting og produksjonsforholdene setter grensen mot fjellet.



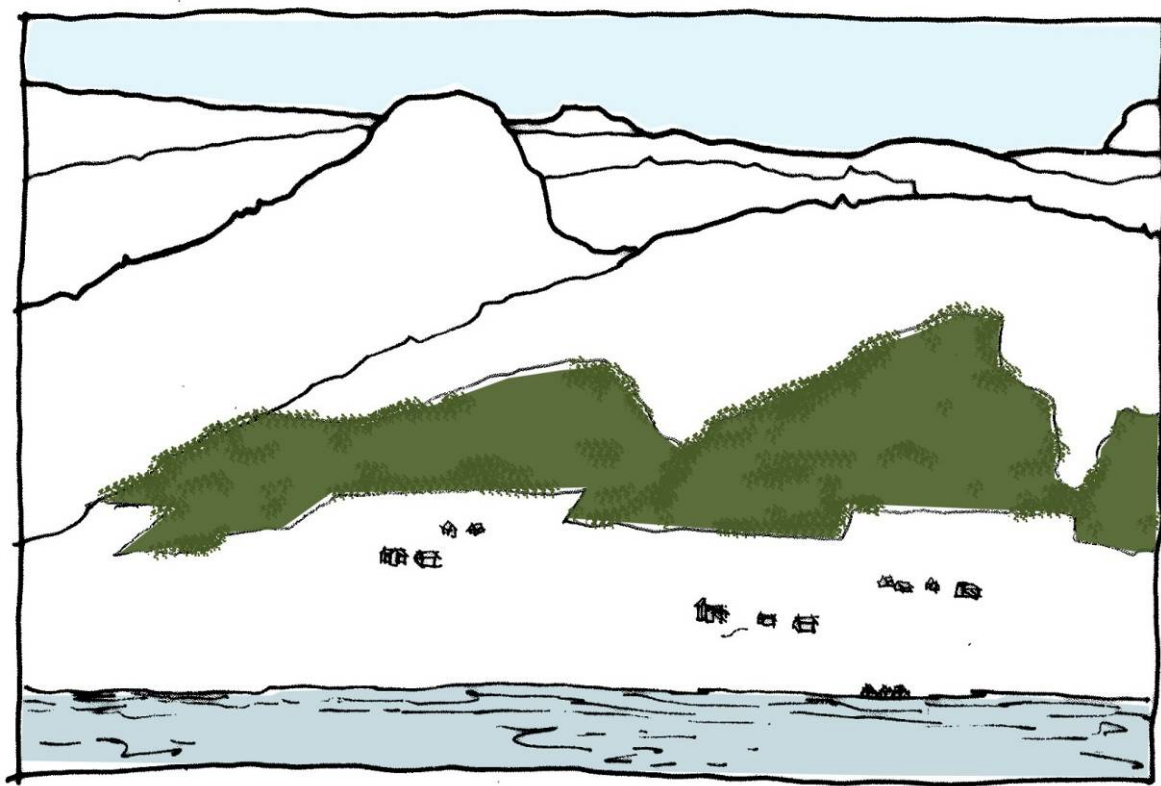
Property borders and different management goals often makes sharp lines.

Eiendomsstruktur og forskjellige forvaltningsmål kan ofte skape sterke linjer og geometriske figurer i landskapet.



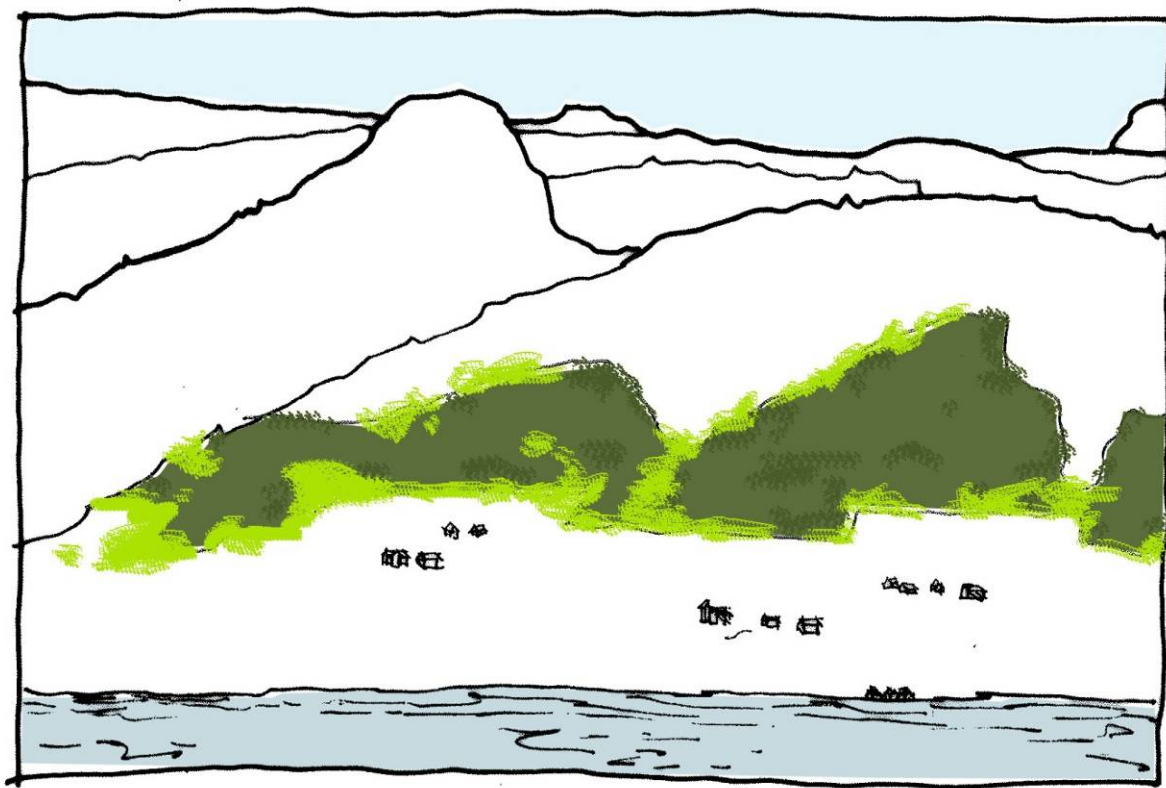
Time, and effects of shade can strengthen the visual effects of lines.

Tiden spiller inn på hvordan granplantingene oppleves i landskapet, og for eksempel skyggevirkinger kan forsterke overgangssonene til landskapet rundt.



Texture, shape and color are important factors for how the areas fit in the landscape.

Tekstur, form og farge er avgjørende for hvordan plantingene passer inn i helheten / sammenhengen i landskapet.



Mixed with hardwoods will give an "softer" view.

Innblanding av lauvskog i kantsonene vil gi granplantinger som er bedre tilpasset helheten.



Important visual forces in the landscape.

Viktige bevegelseslinjer i landskapet.



Plantation that "cut off" important visual forces in the landscape.

Granplantinger som bryter med bevegelseslinjene i landskapet.



Plantation that "fit" visual forces in the landscape.

Granplantinger som er tilpasset bevegelseslinjene i landskapet.





Stord - skogplantning

3850
Wise-Erd

Foto:
Lars Helge Frivold

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Photo: Vegard Gundersen



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Photo: Lars Helge Frivold




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Lars Helge Frivold
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A serene landscape photograph with a blue and purple color palette. In the foreground, a calm body of water reflects the sky. To the left, a dense cluster of dark evergreen trees stands in silhouette. A single, thin, bare branch extends from the trees towards the center, with a small, dark bird perched on its tip. The middle ground shows a misty or foggy expanse, with a small island or peninsula visible in the distance, also shrouded in mist. The background is a soft, hazy gradient of light blue and purple, suggesting a dawn or dusk setting. The overall mood is quiet and atmospheric.

Thank you for your attention!