

Previous and current research

- **Life cycle assessment (LCA) of transport infrastructure**
 - LCA of components in transport infrastructure
 - LCA of transport infrastructure planning
- **Mapping yearly emissions from Swedish transport system (direct and indirect)**
- **Future studies and policy assessment**
 - Taking into account future uncertainties
 - Life cycle impacts?
 - Robust and flexible?
- **Collaboration with Trafikverket**

Life cycle impacts of tunnels (Norra Länken)

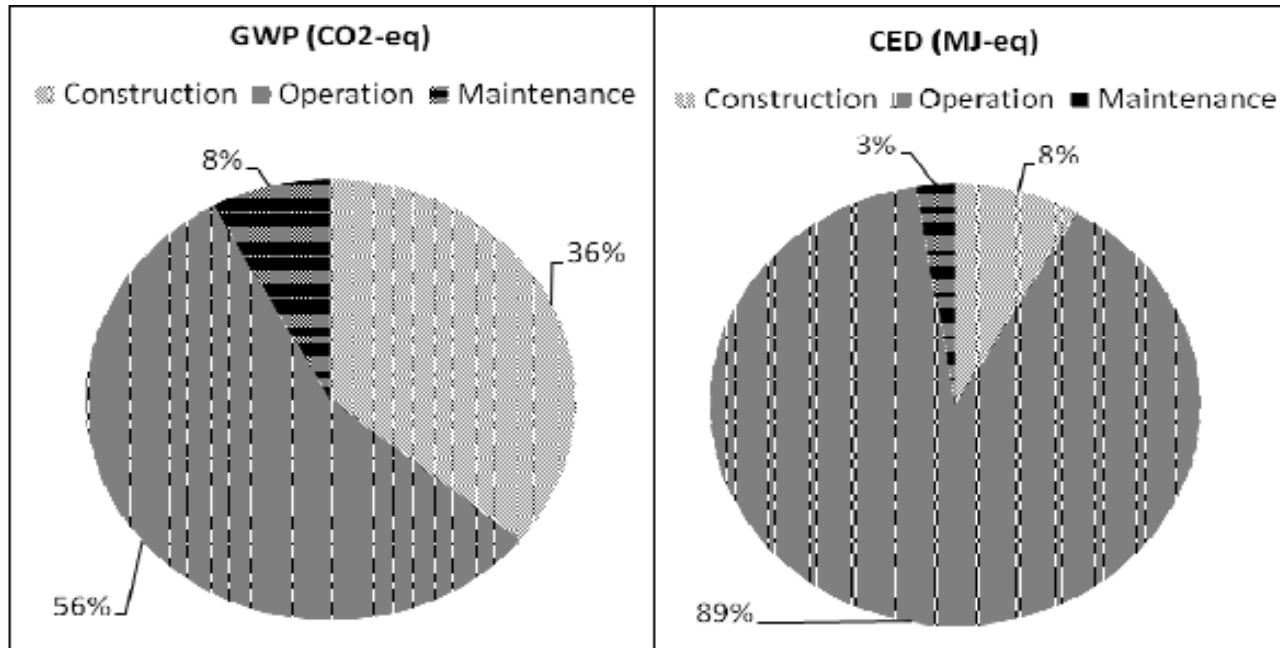
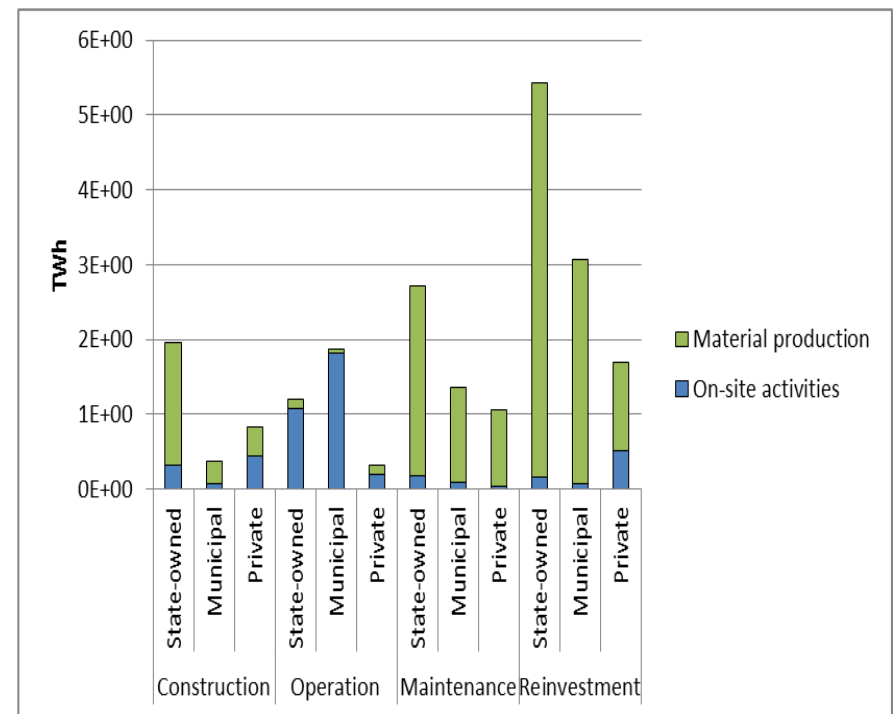
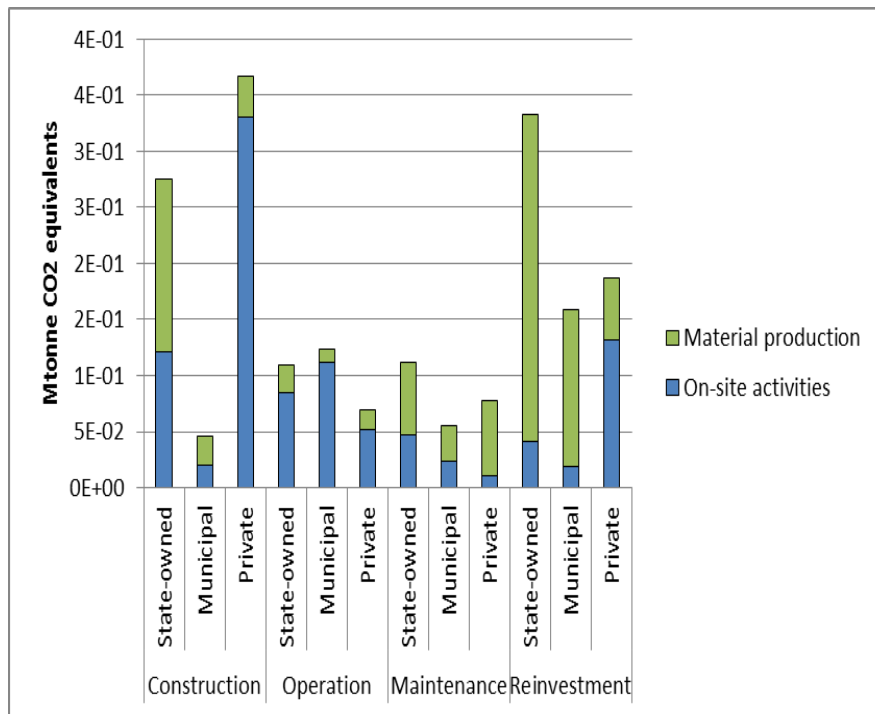
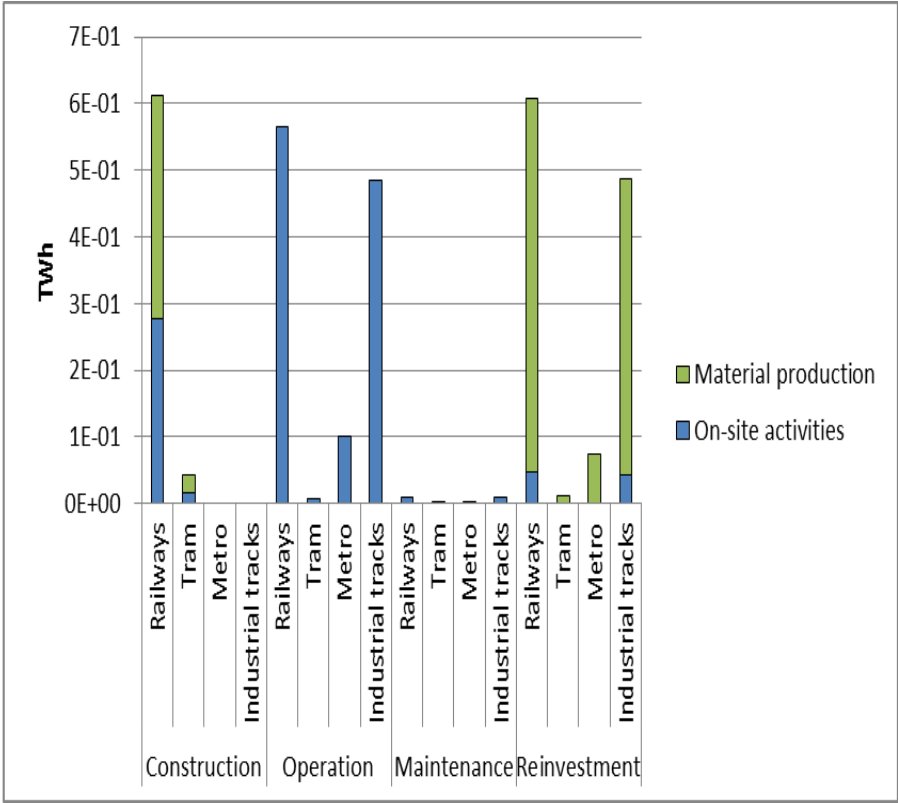
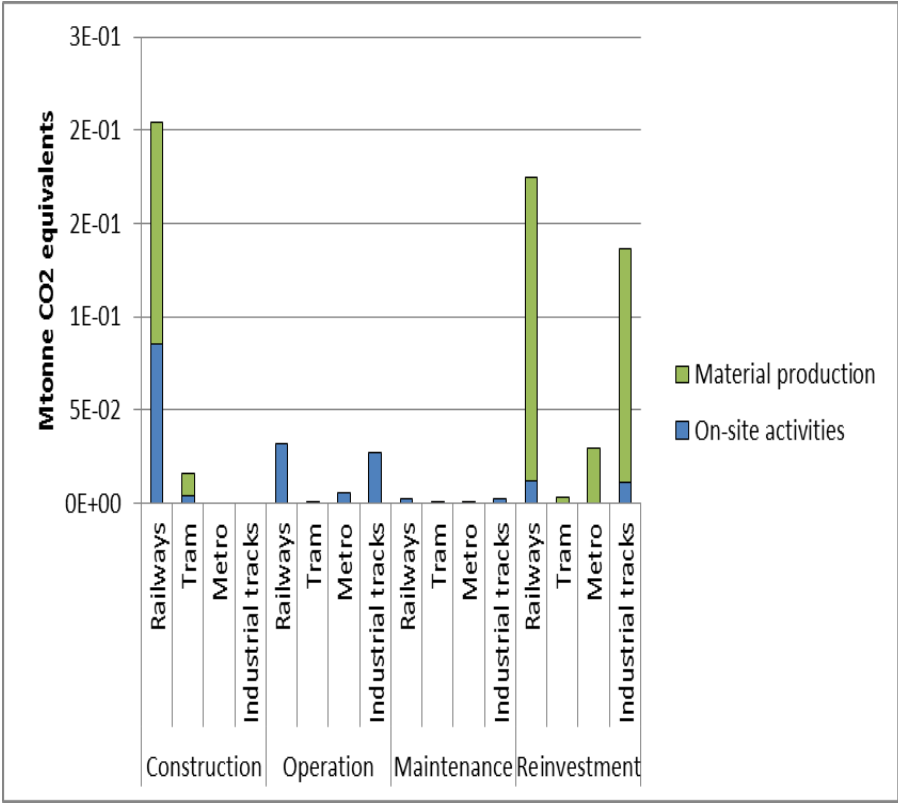


Figure 4. Share of Cumulative Energy Demand (CED) and CO₂-eq emissions during the main life-cycle stages of Norra Länken.

Annual GHG emissions (Mton CO₂ equivalents) and energy use (TWh) for new construction, operation, maintenance, and reinvestment of state-owned, municipal, and private road infrastructure



Annual GHG emissions (Mton CO₂ equivalents) and energy use (TWh) for new construction, operation, maintenance, and reinvestment of railways, tram, metro, and industrial tracks



Forskning om underhåll av infrastruktur bör...

- ...ta hänsyn till olika effekter över livscykeln tf av olika val i konstruktionfasen (TRV vill kunna ge cred för detta i Klimatkalkyl)
- ...omfatta effekter överlivscykeln av olika teknik o material för underhåll
- ...hantera osäkerheter om framtid (teknik, energisyste, materialmarknader...)