GISERA
Gas Industry Social and Environmental Research Alliance

AUGUST **2020**
SOCIAL AND ECONOMIC FACTSHEET

Mapping future transport for improved planning and operation

This project aims to map out key impacts of road and rail network development for gas wells before onshore gas construction occurs in the Beetaloo Sub-basin, Northern Territory.

The challenge

Construction phases of onshore gas projects can impact regional road networks through increases in the type and number of vehicles along many roads. This can result in road damage, and increased noise and dust.

The Scientific Inquiry into Hydraulic Fracturing in the Northern Territory found there has so far been no formal analysis of the impacts of transport, nor the use of road and rail networks to deliver supplies to gas regions that may reduce road freight requirements.

The Inquiry's final report recommends that *'the Government assesses the impact any heavy vehicle traffic, associated with any onshore shale gas industry, will have on the NT's transport system and develops a management plan to mitigate such impacts'*.

KEY POINTS

- Construction of onshore gas wells can impact regional road networks.
- The Scientific Inquiry into Hydraulic Fracturing in the NT has recommended an assessment of impacts and the use of existing rail networks for the reduction of impacts on roads.
- Information from the project covers traffic forecasts, and feasibility of rail or road investments.
- Outputs will include detail in easy-to-interpret formats such as maps and tables for each affected location.

The Beetaloo Sub-basin

The Beetaloo Sub-basin lies south-east of Katherine, spanning an area of about 30,000 square kilometres. One of the most prospective areas for shale gas in Australia, it contains an estimated prospective resource of 178,200 petajoules (PJ) of gas.

This project will provide a pre-construction analysis of freight costs, flows and impacts for identified gas development sites in the Northern Territory's Beetaloo Sub-basin.

Objectives of this project

The project will provide freight, economic and environmental information to governments, communities and industry on the impacts of heavy vehicle transport on roads and communities for the life of the proposed development.

This study will provide transport options for reduced dust generation that may benefit communities and surrounding vegetation.

What is the project timeline?

July 2020 – July 2021

When will the results be available?

Final reporting, with intervention options, is expected in June 2021. All results will be published on the GISERA website.

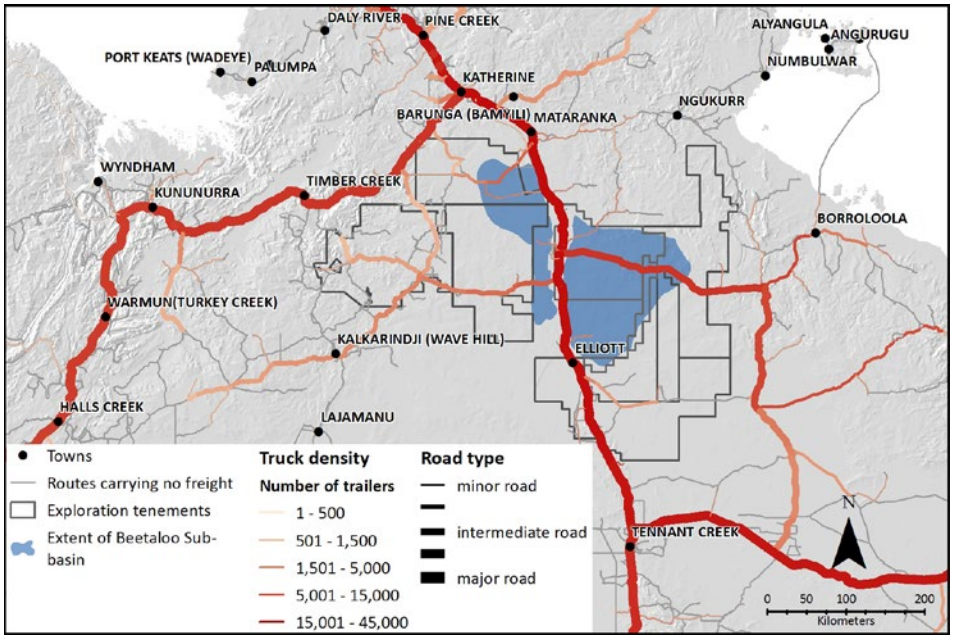
Who is funding this project?

The project is co-funded by the Australian Government, the NT Government, CSIRO, Origin Energy, Santos and Pangaea Resources.

What the project will do

The project will be undertaken in five phases.

1. Apply the Transport Network Strategic Investment Tool (TraNSIT) to produce a baseline map of freight volumes across road and rail networks.
2. Through a series of workshops and interviews, capture data on logistics, construction phase inputs and sources, freight task and supply chains throughout the proposed development.
3. Model projected heavy vehicle movements across NT road networks based on the data from point 2 above.
4. Validate modelling outputs and identify interventions that may reduce impacts.
5. Use TraNSIT to test a range of intervention options identified by stakeholders.



Density of road usage by freight vehicles that originate from, pass through, or have destinations within the Beetaloo Sub-basin area

What is TraNSIT

The Transport Network Strategic Investment Tool maps freight movements between origins and destinations across Australia. It covers 129 commodities over 650,000 supply chain paths and millions of annual vehicle and rail trips.

The tool has already been used to inform road and rail investments by estimating the impacts of industrial transport.

What are the project benefits and outputs?

This study will provide information to support improved planning and decision making across industry, government and communities.
The benefits of expected traffic flows resulting from gas development include:

- improved awareness of freight impacts across the transport network
- improved connectivity for communities
- complementary benefits in infrastructure investment and better use of rail for heavy freight
- management of potential impacts to human health, the economy and the environment.

Identifying and modelling interventions during pre-and peak construction and operation phases can positively influence:

- freight increases from existing levels
- transport costs
- CO_2 and other GHG emissions
- road maintenance impacts and road safety
- impacts of dust on agriculture and human health
- local business activities, and
- transport activities affecting the environment such as dust, noise, erosion and biodiversity loss.

The aim of the study is to improve industry and community awareness of freight impacts, identify and test interventions, and provide long-term planning methods for reducing risk and minimising these impacts. This will allow the Australian and NT Governments to use evidence-based information to plan interventions that can reduce the traffic impacts from additional onshore gas development in the region.

More information

Find out more about this **project**

Inquiry final report

About the **Beetaloo Sub-basin**

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