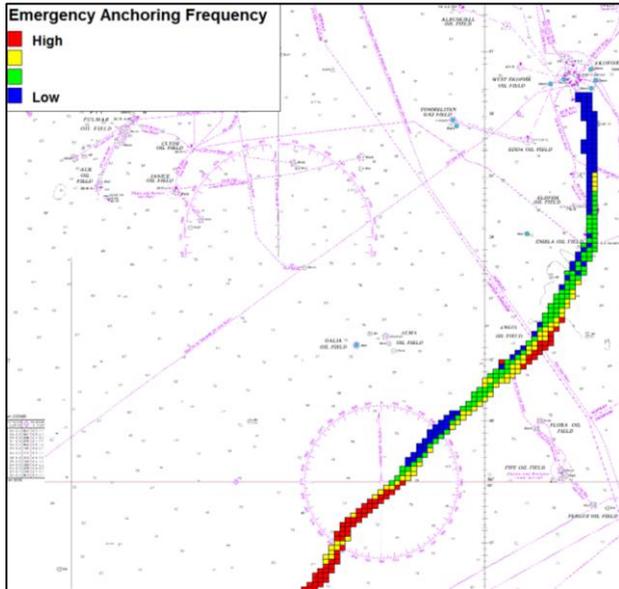


### Route Selection

When selecting a new pipeline route or assessing potential safety aspects associated with a pipeline route, there are many potential risks that need to be taken into consideration.



(Emergency anchoring in relation to a cable route)

### Modelling

Confidence in a pipeline route is integral to the security of the pipeline. Anatec's suite of pipeline risk assessment models can assist operators in choosing the safest location for their pipeline projects. For new routes it can help decide and/or optimise on the best route for a pipeline, as well as offering advice on the options available to protect it once it has been laid.

The pipeline risk assessment includes complete analysis of the possible risk factors related to the pipeline. Utilising real time shipping survey data, it can be used to identify vessels routing and anchoring in the vicinity of the pipeline, and can include details on the types and sizes of these vessels.

Anatec's models can calculate the risks associated with dragged anchors and emergency anchoring to provide a risk frequency profile along the pipeline route. Comparative risk reviews can be carried out based on penetration depths in different seabed substrates allowing clients to evaluate different mitigation options (i.e. different burial depths, mattressing, rock dumping etc).

Dropped object scenarios can be analysed to determine the sections along the pipeline route that are at risk, and the potential damage this could cause.

The fishing activity in the vicinity of the pipeline can be analysed to assess fishing-pipeline interaction frequencies. The possible impact energies and pullover forces can be calculated, as well as expected fatality rates for fishermen.

Anatec can also provide an assessment of the potential environmental and financial impact from any loss of containment suffered as a result of pipeline damage.

- Pipeline risk assessment
- Pipeline route selection
- Anchor dragging model
- Loss of containment
- Dropped objects model
- Fishing risk model
- Vessel foundering
- Emergency anchoring model

### Managing Risk

To manage the risks associated with vessels operating in the vicinity of pipelines, Anatec offer software and hardware solutions to allow clients to monitor and manage these hazards. We have extensive experience in risk analysis, and has been involved in successful cable projects for Shell, BP, and CNR, amongst others.

**Contact us below for more information.**

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