Current plans for implementing eastern edge of Cascadia rupture zone for Canadian hazard maps

Garry Rogers
Geological Survey of Canada
Pacific Geoscience Centre
We are considering 3 models in a logic tree approach:

- Eastward limit of thermal/geodetic defined transition zone (450 degrees C)

- Upper limit of ETS zone

- Significant seismogenic rupture may not extend to 450 degree C limit
Thermal/geodetic model

Positional uncertainty of rupture limit (450 degrees C) is estimated at about +/- 20 km

adapted from K. Wang
Region of ETS Slip Episodes for Northern Cascadia

Upper (seaward) edge of ETS slip zone delineates max. landward penetration of the next megathrust rupture.

Adapted from H. Dragert
ETS model
Seaward edge of ETS zone defines Landward extent of seismic rupture
"Locked"  

"Transition"  

![Graph showing seismic rupture](image)

Adapted from K. Wang
logic tree weights

• Eastward limit of thermal/geodetic defined transition zone (450 degrees C position) 50 60

• Upper limit of ETS zone (+20 km down-dip) 25 20

• Significant seismogenic rupture may not extend to 450 degree C limit (−20 km up-dip) 25 20