# Article information:

Energies | Free Full-Text | The Control of Sea Level Change over the Development of Favorable Sand Bodies in the Pinghu Formation, Xihu Sag, East China Sea Shelf Basin
<https://www.mdpi.com/1996-1073/15/19/7214/htm>

# Article summary:

1. The Pinghu Formation in the Xihu Sag of the East China Sea Shelf Basin consists primarily of marine-continental transitional deposits, with fluvial and tidal transgressive sand bodies comprising the main reservoirs.

2. A prestack seismic inversion approach was applied to regional seismic data to decipher the spatiotemporal distribution pattern of sand bodies across four sequences within the Pinghu Formation.

3. It is concluded that sedimentary facies and sand body distribution patterns rely on the interplay between hydrodynamics of fluvial and tidal driving forces from continent and open ocean, respectively, with drops in sea level leading to decreases in water column salinity, redox condition, organic matter composition, and development of coal seams.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article provides a detailed analysis of the control of sea level change over the development of favorable sand bodies in the Pinghu Formation, Xihu Sag, East China Sea Shelf Basin. The article is well-structured and provides a comprehensive overview of its topic by combining petrology, well log, and seismic facies analysis with prestack seismic inversion techniques. The authors provide clear evidence for their claims by citing relevant literature throughout the article. Furthermore, they present both sides equally by discussing both positive and negative impacts that sea level changes have on sedimentary facies distribution patterns as well as reservoir quality and source rocks.

However, there are some potential biases that should be noted when considering this article’s trustworthiness and reliability. Firstly, it is possible that some points may be missing from consideration due to limited space or time constraints; for example, other external factors such as climate change or tectonic activity could also play a role in influencing sedimentary facies distribution patterns but are not discussed here. Secondly, while the authors do discuss potential risks associated with sea level changes (e.g., decrease in water column salinity), they do not explore any counterarguments or alternative perspectives on these risks which could provide further insight into their implications for hydrocarbon exploration efforts in this region. Finally, it should also be noted that this article does contain some promotional content; for example, it mentions several times how prestack seismic inversion techniques can provide more quantitative interpretations than traditional post-stack methods without providing any evidence to support this claim or exploring any potential drawbacks associated with using these techniques instead.

In conclusion, while this article does provide an insightful overview into how sea level changes can influence sedimentary facies distributions within petroleum systems from marginal-marine environments such as Xihu Sag, there are still some potential biases which should be taken into account when assessing its trustworthiness and reliability.

# Topics for further research:

* Climate change and sedimentary facies
* Tectonic activity and sedimentary facies
* Prestack seismic inversion techniques drawbacks
* Sea level change impacts on reservoir quality
* Sea level change impacts on source rocks
* Quantitative interpretations of post-stack seismic data

# Report location:

<https://www.fullpicture.app/item/74c91b335e5d351e4caff5922eeab6e3>