Introduction

The Aleutian chain of islands along the west coast of North America is home to many active volcanoes and fault lines. Known as the Ring of Fire, it is located at the borders of the Pacific Ocean, along the eastern edge of Asia, and north across the Gulf of Alaska. This zone is one of the most geologically active regions on Earth, with a high frequency of earthquakes and volcanic eruptions.

Volcanoes that rings much of the Pacific Ocean, including the Oregon coast. Volcanoes are caused by the movements of tectonic plates. Rock beneath the Pacific Ocean, sink and rise, this movement can cause earthquakes.

The Ring of Fire is located at the borders of the Pacific Ocean, along the eastern edge of Asia, north across the Gulf of Alaska, left serious damage in Alaska (NGDC/WDC). The distant tsunamis.

Time Series Graphs and Wave Elevation Profiles

Figure 2: This image depicts the Magnitude vs. Duration of the 2006 Alaska earthquake. The figure shows the energy released during the event, with the horizontal axis representing time and the vertical axis representing energy. The peak energy release is indicated by a red line, highlighting the significant impact of the event.

Figure 3: This map shows the cumulative number of buildings in coastal areas reduced by understanding and mitigating this geologic hazard. The map highlights the extent of damage and areas at risk, emphasizing the importance of tsunami hazard mitigation.

Conclusion

Understanding and mitigating the geologic hazards along the Oregon coast is crucial for ensuring the safety and well-being of the population. Coastal areas are particularly vulnerable to tsunamis caused by distant earthquakes. By improving our knowledge of these phenomena, we can better prepare and protect coastal communities.

Tsunami Hazard Mitigation Program, which has been administered by the Oregon Department of Geology and Mineral Industries (DOGAMI), Portland, Oregon. Model data input were created by John Witter, R.C., Zhang, Y., Wang, K., Priest, G.R., Goldfinger, C., [http://pubs.usgs.gov/of/2006/1234/].

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Data References

- Don W.T. Lewis, Rachel L. Smith

Kaleena L.B. Hughes, Sean G. Pickner

Doug-02

Doug-07

Doug-08

Sulphur Springs

Smith River

Douglas County, Oregon