

U.S.-CHINA NUCLEAR ESCALATION RISK:

Mapping Pathways and Strategic Priorities Through 2030

Junyang Hu, Karim Kamel, Michael Story

EXECUTIVE SUMMARY

Nuclear conflict between the United States and China remains a low-probability outcome, but the analysis identifies a clear structural driver of escalation risk. Expert forecasting conducted by the Open Nuclear Network (ONN) and the Swift Centre finds that forward deployment of U.S. nuclear weapons in the Indo-Pacific functions as the single most consequential risk amplifier. While the baseline probability of a U.S.-China nuclear exchange by 2030 is estimated at 1.3%, this risk rises to 3.4% under scenarios involving U.S. regional nuclear deployments and falls to 1.1% in their absence.

These deployments could be triggered by several potential changes in regional dynamics. Most critically, a crisis in the Taiwan Strait would put core U.S. and Chinese strategic and national interests in contention, and produce the largest shifts in nuclear deployment calculations. In comparison, conflict on the Korean Peninsula reflects a different dynamic, in which potential provocations by North Korea could draw Washington and Beijing into confrontation through alliance commitments and third-party entanglement.

South China Sea scenarios, such as forcible removal of claimants from contested outposts or a China-Philippines clash resulting in significant casualties, pose the highest near-term risk of conventional conflict. While highly disruptive at the regional level, they generate comparatively limited increases in nuclear escalation risk due to weaker links to U.S. extended deterrence guarantees.

In addition to regional contingencies, the analysis examines changes in nuclear posture, including China abandoning its no-first-use pledge or either side resuming nuclear testing. These doctrinal or signaling shifts lead to moderate but notable growth in escalation risk. Specifically, they raise the probability of U.S. nuclear deployments to 8.6%, reflecting growing concerns over movement toward more preemptive doctrines. Ultimately, however, their impact on the overall probability of nuclear use remains less significant than that of acute crisis scenarios, which not only raise deployment probabilities more sharply but also directly affect alliance cohesion and strategic stability.

KEY FINDINGS:

1

Baseline risk

Nuclear conflict remains unlikely but structurally embedded. The inferred baseline risk of 1.3% reflects the integrated uncertainty across all escalation pathways and is consistent with prior ONN and Forecasting Research Institute (FRI) estimates.

2

Most risk-amplifying factor

U.S. nuclear deployments act as a systemic risk amplifier. Forward-deployed nuclear assets are a common intensifier across multiple conflict scenarios and increase the likelihood of nuclear use from 1.1% to 3.4%.

3

Most deployment-sensitive escalation scenario

Taiwan is the most deployment-sensitive and escalatory scenario. A scenario in which China establishes control over Taiwan raises the probability of U.S. nuclear deployments to 38% and nuclear use to 2.0%. Even when such control fails to consolidate, deployment likelihood remains elevated at 15%.

4

Highest near-term risk (conventional)

South China Sea scenarios pose the highest near-term risk of conventional conflict. The forcible removal of claimants from contested outposts is the most probable flashpoint (15% likelihood), followed by a China-Philippines clash with over 100 fatalities (11%). These scenarios carry potential implications for U.S. alliance commitments and regional stability.

5

Less significant escalatory moves

Doctrinal shifts subtly reshape the escalation architecture. China's abandonment of its no-first-use pledge (7.9%) or renewed nuclear testing by either Washington or Beijing (7.2%) doubles the likelihood of U.S. nuclear deployments, but does not change the underlying likelihood of ultimate nuclear use.



**OPEN NUCLEAR
NETWORK**

A PAX sapiens programme

[Read the full report](#)

Visit our website opennuclear.org