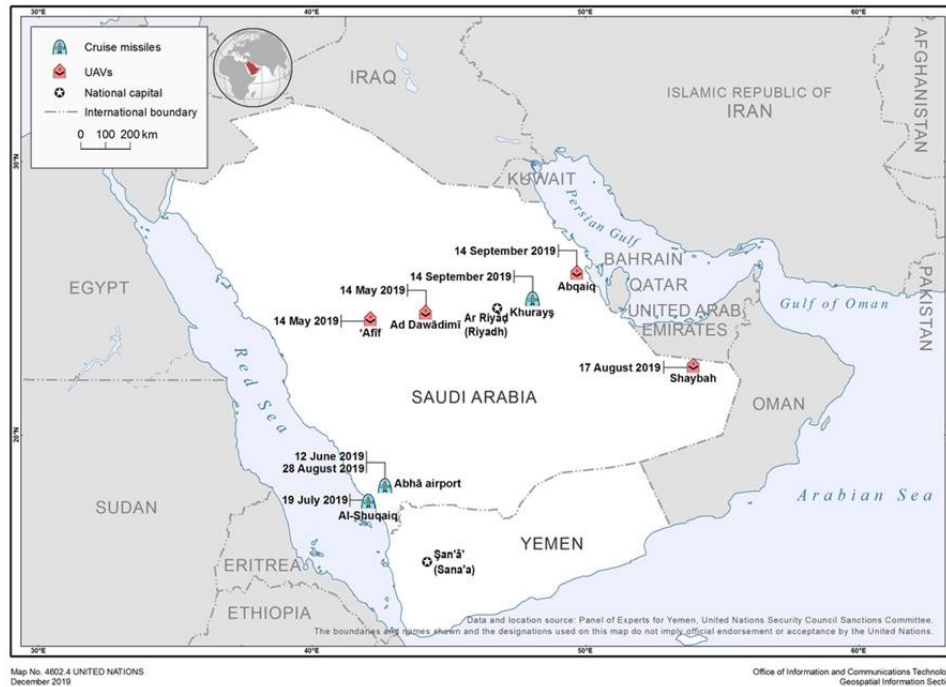


Figure II
Confirmed aerial attacks on targets in Saudi Arabia since 14 May 2019



Note: The map does not include the numerous attacks using Qasef-2K shorter-range uncrewed aerial vehicles and Badr-1 rocket artillery on targets in the southern border region of Saudi Arabia, which include the lethal attack on Abha International Airport on 23 June 2019.

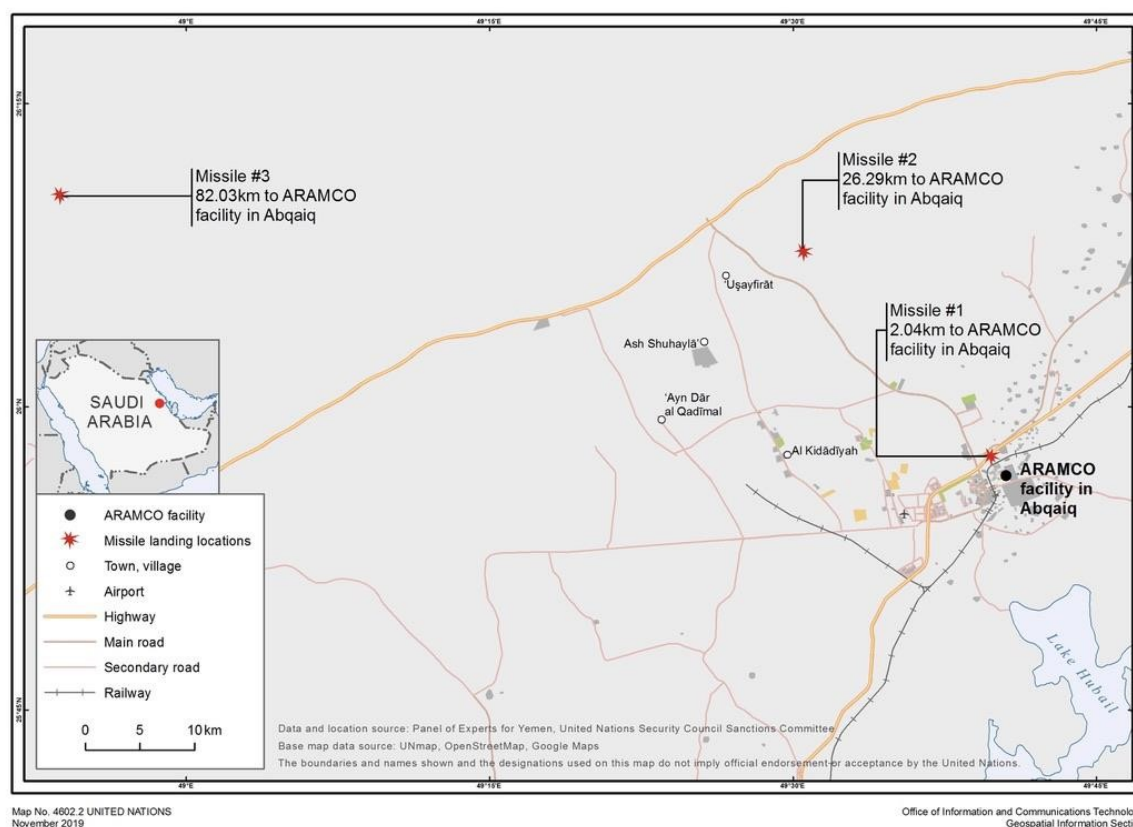
54. Houthi forces have claimed responsibility for attacks on targets up to 1,200 km away from their territory, such as the air strike on the Saudi Aramco plant in Abqaiq on 14 September 2019. The Panel doubts that the uncrewed aerial vehicles and land attack cruise missiles used in that attack had a sufficient range to have been launched from Yemeni territory under the control of the Houthis (see annex 14). Nevertheless, other attacks using the same weapons do seem to have been launched from Yemen. The Panel does not believe that those comparatively sophisticated weapons were developed and manufactured in Yemen, implying that they were imported in violation of the targeted arms embargo. The Panel is investigating the chain of custody of components in order to identify the manufacturers of both systems (see annexes 15 and 16). The higher effectiveness of those attacks also indicates that the use of such weapons poses a serious challenge for global arms control and anti-proliferation efforts as it highlights the vulnerability of critical infrastructure, despite being far from the front lines. The attacker only needs access to a modest industrial manufacturing base and high-tech components sourced from abroad, most of which are not classified as weapons or even dual-use items.

55. Unlike in previous years, there were no successful seaborne attacks attributed to Houthi forces and the number of attempted attacks by waterborne improvised explosive devices significantly decreased in 2019. The United Nations-brokered ceasefire for the port of Hudaydah, as well as the loss of other coastal bases to the Coalition, seems to have contributed to this reduction of attacks on civilian shipping.

8. In addition to the 18 UAVs, which were used in the attack on Abqaiq and the four LACMs, which were used in the attack on the Khureys oil field, the Saudi authorities informed the Panel that the debris of three additional LACMs had been found in the desert, see figure 14.5 below. The location of the crash sites implies that at least some of them targeted the Abqaiq plant. The total number of weapon systems used during the attacks on 14 September 2019 is therefore at least 25: 18 weaponized UAVs and 7 LACMs. However, it is likely that the real number was even greater given that two (out of a total of 11) separator tanks in Abqaiq as well as one of the five stabilizer towers in Khureys did not sustain any damage. It is likely that additional UAVs and/or cruise missiles were launched but malfunctioned before reaching their target. The complexity and scale of the attacks is unprecedented and shows a high degree of military capacity.

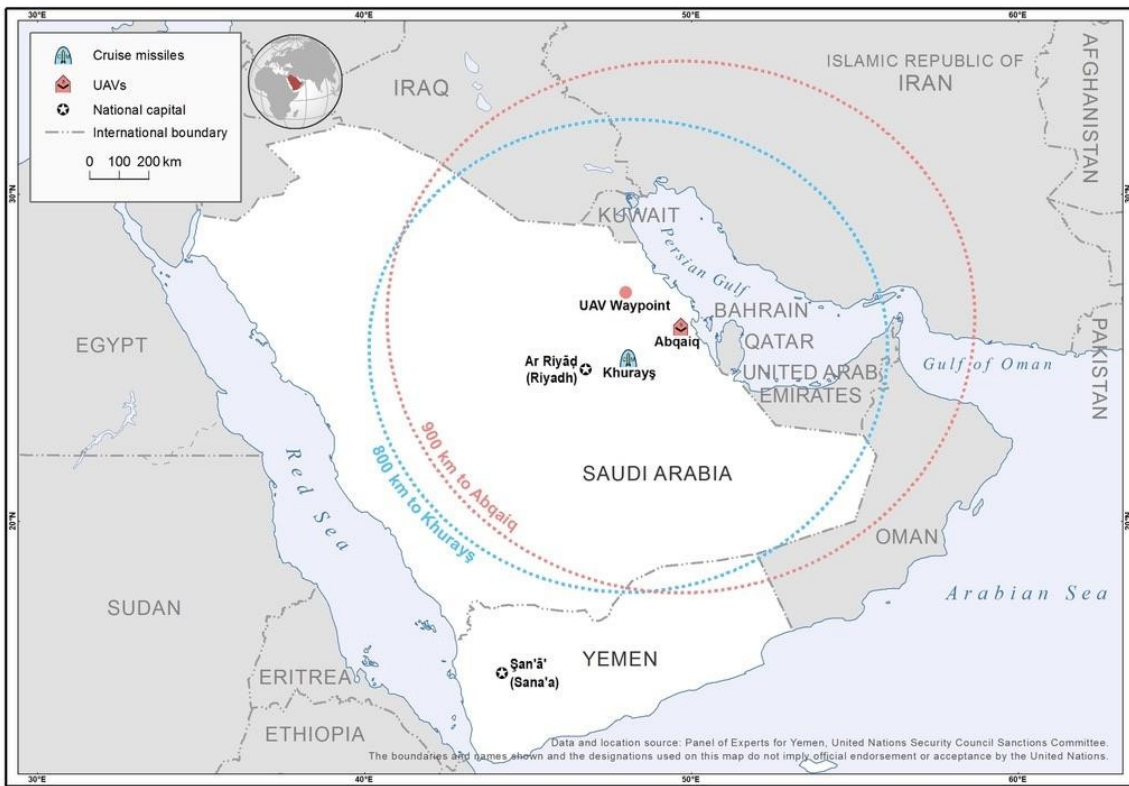
Figure 14.5

Map showing the location of the three missiles, which crash-landed near Abqaiq



9. It should be noted that the Panel did not see any debris of the weapon systems on-site in Abqaiq and Khureys, as those had already been transported to Riyadh at the time of the visits on 20 and 21 September 2019. The Panel did see images showing the debris of the cruise missiles (see figure 14.6), which crash-landed close to Abqaiq and visited the location where missile #2 landed in the desert. At the time of the Panel's visit, the impact crater, as well as discolorations in the sand (likely from a fire caused by the impact) were still visible. The Panel also noted small debris fragments, likely from the missile, near the impact site. In contrast, the only physical remnants of the weapon systems visible at Khureys were small metal cubes, part of the fragmentation of the warhead, which were embedded in some of the damaged pipes. It is likely that some debris of the UAVs was still inside the separator tanks at the time of the Panel's visit, but access to the tanks was impossible. During a second visit to Saudi Arabia in November 2019, the Panel noted the presence of additional UAV parts which were covered in oil.

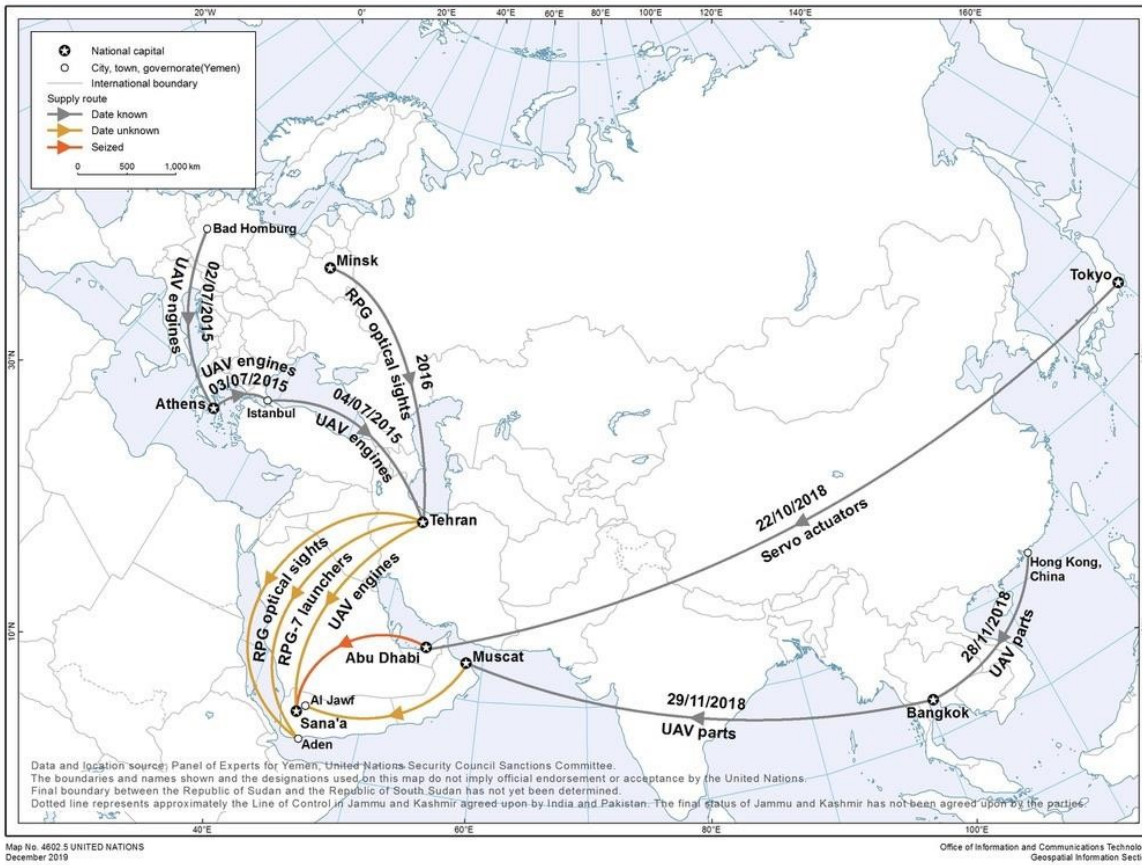
Figure 14.9
Range calculations from Abqaiq and Khureys



Map No. 4602.3 UNITED NATIONS
December 2019

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Annex 18. Map of Houthi supply networks documented during the reporting period



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