Fast-ion losses have been observed to cause severe damage to plasma facing components (PFC) in ICRH-heated plasma. The fast-ion losses measured by scintillator based fast-ion loss detectors (FILD) [1] are in the MeV range with pitch-angles corresponding to large trapped orbits as expected for ICRH ions. In addition, a kink mode appears shortly after a sawtooth crash during the ICRH heating phase. The internal structure of the kink mode is reconstructed by means of SXR tomography. A linear dependence is found between the amplitude of the coherent losses, correlated with the kink mode magnetic perturbation, and the amplitude of the latter. Moreover, a modulation of the velocity-space of the coherent losses is observed by FILD. The temporal evolution of the losses is correlated with the heat load measured by an infra-red camera looking at the FILD head. The fast-ion distribution arising from the synergy between the ICRH and NBI heating is simulated using the TORIC/TRANSP and PION codes. The Monte Carlo orbit-following code ASCOT [2] is used to account for the resonant and non-resonant interaction between the kink mode and the MeV ions. The key experimental observations and modelling results will be presented.