Note added in proof.

Sébastian Boucksom pointed out that Juanyong Wang generalized Nakayama's theorem for proper surjective morphisms between normal complex analytic spaces in [W, Section 1.3]. His proof is closer to Nakayama's original one than to our proof of Theorem 1.2.

[W] J. Wang, On the Iitaka Conjecture $C_{n,m}$ for Kähler Fibre Spaces, preprint (2019). arXiv:1907.06705 [math.AG]