The realization of a Global Unified Height System – World Height System (WHS) – can be based on combinations of positioning by geodetic space techniques, levelling, gravity and tide gauge observations with a global gravity field model (GGM). To avoid inconsistencies from local gravity data the GGM has to be a satellite-only solution. It should be internationally agreed and conventional (CGGM). To reach a one-centimetre accuracy level, it is necessary to augment the GGM with local and regional gravity data. To use tide gauge observations for the unification of regional height reference systems, information about the mean dynamic topography around the tide gauges is necessary. A WHS has to be realized in context with an integrated global monitoring network, which combines space geodetic observations, highly precise absolute and relative gravity, levelling, and tide gauges. The instantaneous sea surface should be observed with respect to a reference surface having a conventional $W_0$ value, which has been agreed as the zero-level surface of a global vertical reference system and which is consistent with other defining parameters of Earth models. A unique set of fundamental parameters, consistent for spatial and gravity reference, should be adopted by the IAG. Furthermore, the different processing procedures of the relevant techniques for the WHS realization and unification should use consistent models, e.g., tidal systems. ICP1.2 has proposed conventions for the definition and several approaches for the realization of a WHS. It is expected that the work will continue and be competed under GGOS’s Theme 1.