

***Interactive comment on “Influence of
Hydrometeorological Hazards and Sea Coast
Morphodynamics onto Unique Coastal Vegetation
Sites Development – *Cephalanthero rubrae* –
Fagetum on Wolin Island (the Southern Baltic
Sea)” by Jacek Tylkowski et al.***

Jacek Tylkowski et al.

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Dear Mr. Kolander Thank you very much for your review. Answering the questions: 1)
A photo of the research area will be placed in the article. It is worth explaining that it is
an endemic habitat of *Cephalanthero rubrae*-Fagetum, associated with the occurrence
of unique soils - the cliffs naspa. *Cephalanthero rubrae*, also sold in other habitats.
2) The rate of the cliff retraction does not depend solely on the wind direction. The

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most important source for cliff erosion are storm surges. Precipitation and snow thaws are of lesser importance for cliff erosion. Aeolian processes are relatively the least important, although they are most significant in uprooted tree hollows. Uprooted tree hollows causes significant point losses of the top cliff. Cause and effect relationships (hydrometeorological conditions - cliff edge erosion) are not directly proportional. Cliff erosion also depends on the current morphogenetical state of the individual sections, which may in erosion or stagnation phase. Therefore not always intense storm surges, extreme precipitation or strong winds cause extreme cliff erosion. There was no clear relationship between the cliff exposure towards the prevailing W-N winds and the dynamics of sea shore erosion. The current stage of the cliff section development and its lithology are greater importance. Moreover, storm surges from the NE direction of waves (from the open sea zone) have the greatest erosive importance. Waves coming from the west, from the Pommeranian Bay have less energy. Yours sincerely Jacek Tylkowski and co-authors

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