The Madden-Julian Oscillation (MJO) is the dominant mode of intraseasonal atmospheric variability in the tropics. It is commonly thought of as a sinusoidal perturbation to the lower frequency variability, and is generally assumed to have a zero mean. However, given the non-linear nature of various atmospheric variables, and of the oceanic response to surface forcing, the possibility of rectification of the MJO onto the long term mean deserves further investigation. To do this, we composite outgoing longwave radiation (OLR), surface wind stress and wind speed over all days of strong MJO activity, after first detrending, removing the annual cycle and filtering these variables. A Monte Carlo resampling technique is then used to assess the statistical significance of the anomalies. Significant anomalies are found in the OLR, zonal wind stress and scalar wind fields, with magnitudes of the order of 2 Wm$^{-2}$, 0.005 m$^2$/s$^2$ and 0.1 m/s respectively, with subsequent effects on surface heat fluxes. These anomalies also pass the field significance test for the tropical regions. The effect of the zonal wind stress anomalies on the ocean dynamics is investigated using a simple linear ocean model. The resultant sea surface height anomalies indicate, among other responses, a deepening (shoaling) of the mixed layer in the western (eastern) Indian Ocean of similar magnitude to the instantaneous dynamical response to the MJO. These effects may help to explain some of the biases in coupled General Circulation Models without a well-simulated MJO.