This study by Clulow et al (2012) has produced some very important results for ecologists and hydrologist managing and modelling the coastal environments along the eastern seaboard of Africa. I am unaware of any comparable studies for this coastal region, an area that is critically dependent on the effective management of the water resources for sustainable development. Very few measurements of stream flow in the region allow estimates of ET from mass balance studies so few reliable estimates of ET have been measured. The results of this study are likely to be representative of the coastal plain that stretches along a large portion of the east coast of Africa.

While there are a few editorial errors in the text I have focussed only on scientific issues. I found the paper very informative and a valuable contribution to the knowledge of ET in a coastal region. For too long scientists have had to extrapolate finding from different and distant sites to estimate ET in this type of environment or employ the models examined in this study. It was important to make comparison between the results of this site and others but I am not sure how valid some of the comparison are when the description of the other sites is too brief. However, the measurement of ET over an extended period for two important land use types and their direct comparison to the more common methods of ET estimates was a very valuable contribution to the scientific knowledge of this region. In general the paper is well structured but there are some minor issues throughout the paper that need to be resolved. These are listed below.

1. There is merit in an open review comment by an unnamed critic that the description of the SR method is inadequate. If the reader is not well versed with the SR technique, then the general description of the theory in the paper does not give the reader sufficient information without expecting them to consult the references. In particular, the theory and methods required to solve for the amplitude and ramping period using the temperature structure function needs to be included/expanded. The dependence of the weighting factor on measurement height is included in Equation 2 but there is no indication of how it is dependent on the canopy architecture and thermocouple size and how these are included in the calibration process.

2. I do not think the term "residual" is the correct terminology for the determination of ET_{SR} as a component of Eq.1. It would also help to elaborate on how EL is "converted" to ET_{SR} (Page 7 line 17)

3. It also would help to elaborate on the difference between the two methods of soil heat flux measurement between the two sites as it may have a bearing on some of the interpretations.

4. The authors claim that "at night the ET_{SR} was negligible during the calibration period" (Page 9 line 20). However, it was significant during the night of the 20th at both sites (up to approx 50W/m^2) according to Figure 5 and this appears to be a significant proportion of the rate during the previous day? Does this influence the interpretations of the results when the ET from this site is influenced by the energy constraints.

5. The paper claims that "most of the rainfall occurred during summer". It is difficult to judge from Fig 2 but it seems that rainfall occurs consistently throughout the year although there are generally smaller magnitude events in winter due to the nature of the rainfall. The larger events are know to recharge the groundwater but it is expected that the smaller events would influence the soil moisture regime and hence the ET rate. I don't know if this would affect the interpretation of the resulting difference between the two sites but it may warrant a mention.

6. The reference to the drought needs to be interpreted carefully. The only physical parameter it could affect in this study is the depth of the unsaturated zone. It would influence a

comparison of the results with other areas and periods but the comparison between methods would not be affected.

7. The range in head at the Mfabeni Mire (-0.3 to + 0.3) is about 400mm between a wet and dry season if we assume a porosity of about 0.3. If we neglect the runoff from the Nkazana stream (which is about 3mm or 0.2% MAP from Grundlingh et al 2012) then the ET would be about 800mm (1200-400). Is this significantly different to the 900mm average ET measured by the authors for a dry season? i.e. would the ET and/or the stream likely to change in a wet season?

8. It would be informative if the early morning prevalence to cloud affecting the solar radiation was also noticeable in the rainfall.

9. The occurrence of minimum daily temperature below zero is not well document for this region, which is dominated by the moderating influence of the Indian Ocean. However, it does not appear to be a rare instance because there are two other periods when the temperature dropped close to 0^{o}C according to Fig 2. It would have been interesting to see if this was the case at the other site where the environmental conditions were different.

10. Page 11 line 23 : "The burn however, provided an opportunity to investigate the ET directly after a fire followed by natural re-growth". The magnitude of the increase in albedo followed by an equal decline later in the season may be more of a natural process than one that could be attributed solely to the fire.

11. Page 12 line14 "Plant senescence in winter reduced the difference in the reflected irradiance between the sites (Figs. 5b and 5d)". It is difficult to make a value judgement between these two series in Figure 5 so it would be more informative to plot them against one another.

12. The difference between sites in ET_{SR} was claimed to be due to availability of water. The exclusion of a difference due to vegetation type needs to be explained.

13. I assume the ET_{EQ} at the Mfabeni site is directly related to $LE_{(P-T)}$. This needs to be specified.

14. The paper uses ET to symbolise total evaporation (page 3:line 8). It then states that it is calculated from LE (Page 7: Line17). The paper then goes on to describes three ET estimates based on SR, ES and Penman-Monteith (ET_r). In several instances I was unsure of which one was being described when ET was used with no subscript. An example is equation 8 where I have assumed ET represents ET_{SR}. If this is not the case then I have the wrong interpretation of the calculated K_c

15. Application of ET_{EQ} to the Dune site. This methods assumes (page 16 line 2) that "ET would eventually reach a rate of equilibrium when the air is saturated and the actual rate of ET would be equal to the Penman rate of potential evapotranspiration.". Is this a reasonable assumption for the dune site?

16. Page 17 line 9; ".... after rainfall, was *ETSR* similar to *ETEQ* as noted in Figs. 5c and 5d". There are no values for ET_{EQ} in these Figures.

17. Page 17 line 10; Generally a plot of points with a regression with r^2 =0.96 would show a similar plot to Figure 7 but it could be more intuitive to see the plot of the less correlated ET_{SR} - vs - ET_{EQ} for the dune site.

18. Page 18 line 15). “The high summer rates of the Drakensberg contrast with the Embomveni Dunes and were higher due to the high summer rainfall in the Drakensberg area which sustains an adequate soil water content for transpiration”. Was a possible/probable difference in VPD considered as another important factor? A similar question relates to the last statement on page 18 line 22?

19. Page 19 line 13. It would be useful to have a similar discussion of the applicability of the method to the Dune site where α was not equal to 1.0

20. Page 19 line 26: “An alternative to the K_c method is to estimate the ET using the Penman-Monteith method”. This statement is confusing because I thought the Kc methods used the Penman-Monteith method.

Other specific issues in the text

Page 5: Line 29. The groundwater contribution to the water balance of Lake St Lucia is negligible except in extreme prolonged drought periods when the main rivers can cease to flow and groundwater and direct rainfall are the only source of freshwater for the lake.

Page 5 Line 29 Reference (Rawlins and Kelbe, 1991, ..) not in the reference list and Rawlins incorrectly spelling)

Some editorial correction
Page 16 line 26 maximum rates were higher (6.....) but more variable
Page 17 line 19 end of line should be depended
Page 19 line 11 close bracket on Moa reference
No reference in the text to Asner,et al, or Kotze et al;