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Interactive comment on "Dynamic evaluation of ecosystem service value of the riparian zone based on remote sensing from 1986 to 2012" *by* B. L. Fu et al.

Anonymous Referee #1

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This is a relatively interesting paper on a topic of interest to the readers. However, it requires considerable revision before it is suitable for publication.

The definition of the riparian zone is not clear. The methods indicate that the width of the zone was determined by 'valley morphology' but exactly what morphological characteristics were used to define the zone and could these be replicated in any river system?

The methods for estimating the value of ecosystem services are not clearly explained. A critical step in the estimation of the value of ecosystem services is the generation of the weighting factors for different vegetation types in Tables 3 and 4. However, in the

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description of the methods used to develop these there is simply a reference to a study in Jilin province by Xie et al 2008, which is only available in Chinese language.

A summary description of the methods of Xie et al is required. A description of how the weighting factors in Table 4 were derived is also required. This should include an explanation of how and why the relative values of the vegetation for different services changed over time.

In presenting the results, the value of economic goods (food, fibre) should be separated from services like climate regulation, water regulation or soil retention. It seems to be quite misleading to suggest that the total value of ecosystem services has increased simply because the area of cropland has increased and the value of cropping products to the community has increased.

There needs to be some explanation of the drivers of the change. Why did wetlands increase in area when the introduction to the study area indicated that the riparian zone has been affected by 'vegetation devastating forest for arable land, overgrazing, transportation infrastructure, urban sprawl, sand mining, tourism development, reclaimed wetland and other human activities' ? Why did the value of wetland ecosystem services change over time and what are the implications of this.

The discussion requires some analysis of what these monetary values might mean for decision makers. How will these values be considered in land use planning and decision making?

The number of significant figures in the tables and in the text is inappropriate. Using the methods described, the accuracy would likely be, at best, to the nearest hectare. Round the figures off to whole numbers in both the table and the text.

The English is relatively poor. The manuscript requires a thorough edit by a native English speaker

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