We thank the anonymous reviewer for thoroughly reading the paper, providing thoughtful comments. We modified according to advice of reviewer and addressed each comment in their original order as follow:

1. Comment 1 suggests supplementing the specific scale problem in setting a relation of the hydrological similarity, parameter transferability, and regionalization.

The detail of the match between the model application scale and parameter identification scale was supplement according to the advices as follow.

Development of a generally applicable rainfall-runoff model and identification of associated model parameters require understanding of connections between physical processes at disparate scales and hydrological similarities between catchments (Pradhan, 2008). Pradhan (2008) found that the potential universality of the topographic index distribution scaling relations in catchments where runoff is dominated by subsurface flow. When the scale model applied, there will have an inconsistency. That is the result of the difference between the scale at which the model parameters are identified and the scale at which the model is applied (Pradhan, 2006). This inconsistency affected the precision of the rainfall-runoff model.

2. We now discuss the significance of vegetation heterogeneity if these parameters involved in Equation (4) are effective.

Vegetation is the important factor for the runoff process. The runoff scale model is built by the parameters of rainfall and temperature. The results showed that vegetation cover affected the precision of the model. In this study, the quantitative effect of vegetation cover cannot be identified yet. Thus， the parameter of vegetation cover was not considered in the model. We will try to research the vegetation effect on runoff process in the future.

3. Comment 3 and 5 suggest segregate catchment 1# from the other catchments. How can we explain the different characters in temperature for four catchments?

Cathment 1# has the lowest vegetation cover which was 20% account for the whole area, and the other catchments were more than 70%. The four catchments were located in forest areas with the recharge resource of glacier runoff. They have the similar characters. The runoff processes of the four catchments are considered to be self-similarity. The differences between them were the vegetation cover rate and recharge rate of glacier runoff. The recharging of glacier runoff makes runoff has a significant relationship with the temperature, especially in dry season. Thus, we combined the four catchments to analyze the scale effect.

In order to insure the expression clearly, the contradictory and ambiguous statements were clarified or removed in the manuscript.

4. Comment 4 asked to relate the scaling exponent derived from equation 3 and equation 5 to the derivation of equations 6, 7, 8 and 9.

We relate regression process of the scaling exponent.

Take the Eqs 6 as an example, the regression process was showed as follow:

First of all, we build the relationship between runoff and temperature in each catchment. The results were showed in Table 2 in manuscript.

Then, the relationship between the constants of each equation (i.e. 4.237, 0.2894, 0.0376 and 0.03

in table 2) and relatively catchment area were built. After that, we can get a relationship equation:

$$R(k_{constant}) = 0.0532k - 0.0183$$

The relationship between the coefficients of temperature (i.e. 0.0909, 0.1228, 0.187 and 0.2294 in table 2) and catchment area was built in the same way.

$$R(k_{coefficient}) = 0.1891k^{(-0.1765)}$$

Finally, the two equation of R(k) were substituted into Eqs 3 ($Q_k = F(P_k, a_k)$) in the manuscript, and the final scale modle is

$$Q = (0.0532\ k - 0.0183\ )e^{0.1891\ k^{(-0.1765\ )}T}$$

5. Comment 6 said it is not clear what parameter set is used in the first step of our scaling process. How did we calibrate or optimize the parametric values for different scales before fitting into our regression equation?
Parameters set in the first step were the coefficients (i.e. the coefficients of rainfall or temperature in the regression equation) and the constants in runoff regression equations.
Data was processed under the scale of yearly, monthly and daily scale. Comparing the data characters of rainfall, temperature and runoff, the obviously abnormal value were discriminated and rejected. The missing data were interpolated by the value of running means (five days).
The parameters were decided by the method of correlation analysis. Then, multiple regression analysis was used to test the suitability of decided parameters and built the regresstion equation based on Eq. (3).

6. Comment 7 asked if there is a limitation where uni-fractal applies in the approach.
Two critical points limited the application of this method. The one is how to identify the self-similarity of hydrological progress. The other is the reliability of scaling exponent (θ).

7. The symbol F in Equation 2 was changed to A.

8. a) Page 2170, line # 19 was changed to ‘In this study, the vegetation cover rate is an important factor to affect the hydrological simulation. However, the quantitative effect of vegetation cover cannot be identified yet.’
b) Other grammatical mistakes and awkward phrases were corrected.