

Based on CFD simulation and laboratory experiment, this manuscript proposed a framework to evaluate the relation between wind and runoff of high-rise building. Both mathematical and experimental results are well prepared and in good comparison. The topic fits well to the scope of HESS journal, the results are unique and interesting. I recommend minor revision before potential publication in HESS and have the following concerns:

- How high are the buildings to be considered as high-rise?

*Reply: In architecture, the definition of high-rise building varies with different countries and regions. Generally, buildings higher than 28 meters are considered as high-rise buildings in China. In this paper, we focus on high-rise building areas in which the average ratio of building height to distance between two buildings is larger than a threshold (for example 0.2). In these areas, the building walls can be considered to have obvious impact on runoff generation. Thank you.*

- Runoff from walls may flow into pervious areas like grass land etc. around the building.

*Reply: Yes, you are right. In some building areas, especially those older building areas, runoff from walls may flow into pervious areas. However, in many newly built high-rise building areas, runoff from building walls flow into the drainage system directly through Dispersal and cut-off ditches around buildings. Our study focuses on this type of building areas. Thank you.*

- It is concluded that rainfall with larger droplets is less influenced by the wind, while larger droplets also mean large amount of rain brought by wind, what is the balance here.

*Reply: The total amount of rain falling on building walls influenced by wind is calculated by considering both the raindrop trajectory and the rainfall intensity through Equation 14. Thank you.*

- It seems the area of building, or the ratio of building area to the whole area, is associated with the runoff coefficient calculation.

*Reply: Yes, the ratio of building area to the whole area can affect the proportion of impervious surface, so it is associated with the runoff coefficient calculation (see Equation 17). Thank you.*

- Based on the results of this study, the impact of wind on runoff coefficient is not that significant, under which circumstance the influence could become more important.

*Reply: According to Equation 17, the influence of wind can be more important in the area with more high-rise buildings and large infiltration capacity. Thank you.*

- Figure 6 reveals that... Additional explanation of the differences of rainfall intensity is expected, and should these differences be modified for reaching consistent runoff results? although the intensity values are not used in the runoff coefficient calculation as in Figure 7.

*Reply: We have put the relevant explanations of Figure 6 in the discussion section. "Figure 9 and 10 can explain the decrease in rainfall intensity caused by wind. The figures show that the rainfall area increases as wind speed increases, resulting in a decrease in rainfall intensity according to the law of conservation of mass." Please refer to line 365-368.*

*We reduce the effect of rainfall variability by dividing the runoff by the total amount of rainfall on the experiment platform (See Equation 17). Thank you.*

- In Figure 10, diameter 1.5 mm does not match with the values in Table 1

*Reply: Sorry, this is a typo. It should be 2.0 mm. Thank you.*