



ISDSI CHIANG MAI URBAN SUSTAINABILITY STUDENT STUDY: FALL, 2009

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TITLE: Ping River Sustainability: Comparing Urban and Suburban River Health

REPORT: After observing two different sections of the Mae Ping River in Chiang Mai, we hypothesize that the urban section of the river is used for social purposes including public interaction and resource extraction while the suburban section of the river is used for aesthetic purposes including private land use. Our method was to observe an urban and a suburban section of the river on consecutive weekdays. The urban section was 400 meters of river south of the Narawat Bridge and was observed on between 1:30 and 3:00 pm. The suburban section, which was north of the second section, was 400 meters of river south of where the first Ring Road crosses over the river and was observed at the same time the following day. We recorded observations of four indicators: individuals, drainage, solid pollution, and land use.

For the individuals indicator we looked for people interacting with the river, including those who were fishing, sitting or gathered around the river, in boats or working on the riverbank. We observed 37 people in the city: nine fishermen, two individuals gardening on public property, one working on private property, seven people cooking and selling food on the river bank, sixteen socializing, and two individuals boating. Two out of nine fishermen were using multiple lines. In the suburban section of the river we observed six people: three fishermen each with one line and three men working on private property. One man was landscaping by dragging dirt and vegetation into the river creating a steeper slope. We concluded that most people in the city were using the river in order to facilitate a necessity for life whereas people in the suburb were using it for its aesthetic value.

For the drainage indicator we observed pipes leading both in and out of the river. In the city we observed only two drainpipes, one of which was pouring gray water into the river. There was one pipe drawing water out of the river to supply a fire hydrant. In the suburban section we observed 56 storm drains, none of which were actively releasing water. While we did see dumping of waste into the river in the city, further study is necessary to determine the effect of drainage in both areas especially during times of high precipitation.

For the pollution indicator we observed the pieces of trash that were on the riverbank and in the river. In the city, there were more pieces of trash counted. However, these pieces of trash were concentrated in a few specific areas around drainpipes and food vendors. In the suburban area, there were fewer individual pieces of trash but it was more scattered along the riverbank and in the river. This could indicate that in a public area the trash tends to collect around the areas where individuals are more likely to gather and in the suburban area where people do not tend to gather as frequently, the trash spreads out on its own due to wind and river flow.

For the land use indicator we observed the manmade structures and vegetation on and above the riverbank as well as access points to the river. In the city, we observed 7 public access points and 6 small private piers. In the suburban area, there were only two dedicated access points—one public and one private. Each location had large concrete walls characterizing a length of the bank as well as stretches of natural sandy or grassy bank. In the city sample, a four-lane road ran directly along one side of the river; while in the suburban sample, a small two-lane road ran near the river. More importantly, the land in the city was characterized by public spaces. However, the land in the suburb was characterized by private homes and housing complexes.

Due to the differentiation between public and private spaces, the city portion of the river is able to facilitate more social interaction and accessibility for the surrounding population, while the privacy of the suburban sample limits the utility of the river. Also considering the trash and drainage that we observed, it appears that the use of the river in the suburban area is more ecologically sustainable while the use of the river in the city encourages social interaction possibly increasing social sustainability. Further research could reveal whether the landscaped yards of the suburban area are actually ecologically sustainable. A study of how social interaction occurs without a river or at different times of day would give further insight into the river's sustainability.