**SUPPLEMENTARY MATERIAL**

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|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **PRE-EVALUATION (2016)**  NOVEMBER | | | | |  | |  | |  | |
| **Mon** | **Tue** | **Wed** | | **Thu** | **Fri** | | **Sat** | | **Sun** | |
|  | 1 | 2 | | 3 | 4 | | 5 | | 6 | |
| 7 | 8 |  | 9 | 10 | 11 | |  | 12 | 13 | |
| 14 | 15 |  | 16 | 17 |  | 18 | 19 | | 20 | |
| 21 | 22 | 23 | | 24 | 25 | | 26 | | 27 | |
| 28 | 29 | 30 | |  |  | |  | |  | |
| DECEMBER | |  | |  |  | |  | |  | |
| **Mon** | **Tue** | **Wed** | | **Thu** | **Fri** | | **Sat** | | **Sun** | |
|  |  |  | | 1 | 2 | | 3 | |  | 4 |
| 5 | 6 | 7 | | 8 | 9 | | 10 | | 11 | |
| 12 | 13 | 14 | | 15 | 16 | | 17 | | 18 | |
| 19 | 20 | 21 | | 22 | 23 | | 24 | | 25 | |
| 26 | 27 | 28 | | 29 | 30 | | 31 | |  | |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **POST-EVALUATION (2017)**  NOVEMBER | | | | |  | |  | |  | |
| **Mon** | **Tue** | **Wed** | | **Thu** | **Fri** | | **Sat** | | **Sun** | |
|  |  | 1 | | 2 | 3 | | 4 | | 5 | |
| 6 | 7 | 8 | | 9 | 10 | |  | 11 | 12 | |
| 13 | 14 | 15 | | 16 |  | 17 | 18 | | 19 | |
| 20 | 21 |  | 22 | 23 | 24 | | 25 | |  | 26 |
| 27 | 28 |  | 29 | 30 |  | |  | |  | |

**Legend\***



\*Different colors indicate whether systematic observations were conducted in the morning, midday or afternoon.

* **Figure S2.** SOPARC coding form

**DATE**: \_\_\_\_\_\_\_\_\_\_ **OBSERVER** (Name):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Observations: 1 2 3 4 5 6

**START TIME**: \_\_\_\_\_\_\_\_ **END TIME**: \_\_\_\_\_\_\_\_\_ **Temperature and weather**:\_\_\_\_\_\_\_\_\_\_\_\_\_

**TARGET AREA**: A (La Ribera Neighborhood) B (purifying plant)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **# P** | **Location** | | **Gender** | | **Activity level** | | | **Activity (specify)** | **Age group** | | | | **Ethnicity** | **Notes** |
| 1 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 2 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 3 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 4 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 5 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 6 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 7 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 8 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 9 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 10 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 11 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 12 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 13 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 14 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 15 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 16 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 17 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 18 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 19 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 20 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 21 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |
| 22 | **U** | **L** | **F** | **M** | **S** | **W** | **V** |  | **Child** | **Teen** | **Adult** | **Senior** | **C LA B A O** |  |

**NOTES:**

**Observation:** each observation will last 7 minutes (in total we will have 6 observations of 7 minutes each, so 42 minutes observation time, with breaks of 3 minutes between sections, in total 60 minutes).

**Start time**: time at which the observation process starts.

**End time**: time at which the observation process ends.

**#P:** number of subject observed.

**Location:** U=upper part of the section (sidewalk), L=lower part of the section (near the river)

**Gender:** F=female, M=male

**Activity level**: S=sedentary (lying down, sitting, standing in a place), W=walking, V=vigorous (increasing heart rate, sweating: jogging, biking…)

**Activity specify:** indicate the specific activity the person is doing.

**Age group:** Child (<12 years), Teen (13 to 20 years), Adults (21 to 59 years), Seniors (>60 years)

**Ethnicity**: C=Caucasian, LA=Latin-American, B=Black, A=Asian, O=others

**Note:** Please indicate any events or observations of interest, including close calls, unlawful behavior, or any other information that may affect your count, or observed behaviors such as significant events or background information, i.e. free zoo day, formal event at park, etc.

* **Table S1.** Semi-structured face-to-face interviews

|  |
| --- |
| ***MONTCADA Qualitative interviews – Guide questions***  **Introduction**   * Interviewer’s introduction * Description and objectives of the interview * Permission to record the interview and sign of the informed consent * Choice of language: Spanish or Catalan |
| **Attitudes to the natural environment, use and perception**   * What do you think about natural environments (green/blue spaces) in your neighbourhood? And in particular, the Besòs River. * What do you like/dislike of these natural environments, and especially of the Besòs River? (E.g. accessibility, facilities, beauty, security, etc.) * Do you use these spaces (and in particular the Besòs River)? Why? Why not? What activities do you do? * What do you think about the non-natural (artificial) environment in your neighbourhood? (E.g. buildings, streets, services, traffic, etc.) * Why do you live in this neighbourhood? * Was the natural environment (quantity/quality) a reason to move to this neighbourhood? Why? Could you explain this? * How much is natural environment in your neighbourhood important for you? Why? Could you explain this? * Has natural environment in your neighbourhood changed over time? How has it changed? Has it improved/get worse? * What would your “ideal neighbourhood” be like? Describe the main characteristics (e.g. green/blue spaces, buildings, services, facilities, civic responsibility, traffic, etc.). * Do you do group activities (e.g. workshops, courses, neighbourhood association, etc.)? Do you interact with your neighbours? * Do you go to the river alone or with someone else? * Do you think your behaviour or well-being is related to the type of environment in which you are? How do you think it is related? Could you tell me an example? * Do you feel good/satisfied with your live? Is there anything that worries you? * Did you use to spend much time outdoors when you were a child? * What is your main mean of transport (to commute, to go shopping, to take children to school, etc.)? * Do you ever walk or cycle? If yes, why do you walk/cycle (to commute, or for pleasure)? Where do you go? Do you usually use a route next to green/blue spaces? Why (faster, nicer, shorter...)? If not, why not? Security reasons, lack of facilities, mobility problem...? * What other places do you usually visit during the week/weekend (e.g. parks, forest, canals, lakes, beach, etc.)? Why? Could you describe it? |

**Table S2.** Comparison (% of change) of the number of users in the renovated area, the non-renovated area, and in both areas of the river before (year 2016) and after (year 2017) the urban riverside regeneration project

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Renovated area | | | Non-renovated area | | | Both areas | | |
|  | PRE (2016) | POST (2017) | **Comparison between years [% of change]** | PRE (2016) | POST (2017) | **Comparison between years [% of change]** | PRE (2016) | POST (2017) | **Comparison between years [% of change]** |
|  | 1049 | 1312 | 25 | 2429 | 2319 | -5 | 3478 | 3631 | 4 |
| **Location** [N] | |  |  |  |  |  |  |  |  |
| Upper | 1031 | 1103 | 7 | 2072 | 2047 | -1 | 3103 | 3150 | 2 |
| Lower | 18 | 209 | 1061 | 357 | 272 | -24 | 375 | 481 | 28 |
| **Demographic characteristics of the users** [N] | | | |  |  |  |  |  |  |
| Gender |  |  |  |  |  |  |  |  |  |
| Female | 282 | 403 | 43 | 484 | 356 | -26 | 768 | 759 | -1 |
| Male | 767 | 909 | 19 | 1943 | 1963 | 1 | 2710 | 2872 | 6 |
| Age group |  |  |  |  |  |  |  |  |  |
| Children | 18 | 52 | 189 | 43 | 27 | -37 | 61 | 79 | 30 |
| Teens | 71 | 36 | -49 | 80 | 42 | -48 | 151 | 78 | -48 |
| Adults | 484 | 734 | 52 | 1595 | 1428 | -10 | 2079 | 2162 | 4 |
| Seniors | 476 | 490 | 3 | 711 | 822 | 16 | 1187 | 1312 | 11 |
| Ethnicity |  |  |  |  |  |  |  |  |  |
| Caucasian | 1022 | 1215 | 19 | 2390 | 2276 | -5 | 3412 | 3491 | 2 |
| Latin-American | 9 | 23 | 156 | 13 | 4 | -69 | 22 | 27 | 23 |
| Black | 2 | 8 | 300 | 5 | 5 | 0 | 7 | 13 | 86 |
| Asian | 10 | 26 | 160 | 8 | 14 | 75 | 18 | 40 | 122 |
| North-African | 6 | 23 | 283 | 10 | 16 | 60 | 16 | 39 | 144 |
| Other | 0 | 17 | 0 | 3 | 4 | 33 | 3 | 21 | 600 |
| **Physical activity level** [N] | | |  |  |  |  |  |  |  |
| Sedentary | 81 | 158 | 95 | 130 | 89 | -32 | 211 | 247 | 17 |
| Moderate | 702 | 901 | 28 | 928 | 782 | -16 | 1630 | 1683 | 3 |
| Vigorous | 266 | 253 | -5 | 1371 | 1448 | 6 | 1637 | 1701 | 4 |

**Table S3**. Distribution [N (%)] of riverside park users according to their age group, by gender and period of evaluation (i.e. pre/post-evaluation).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | PRE (2006) | | | | POST (2007) | | | |
| [N (%)] | Children | Teens | Adults | Senior | Children | Teens | Adults | Senior |
| Females | 6 (2.1) | 29 (10.3) | 114 (40.3) | 133 (47.2) | 17 (4.2) | 20 (5.0) | 235 (58.3) | 131 (32.5) |
| Males | 12 (1.6) | 42 (5.5) | 370 (48.2) | 343 (44.7) | 35 (3.9) | 16 (1.8) | 499 (54.9) | 359 (39.5) |

**Table S4**. Sensitivity analysis excluding a group of scholars [N(child)=23; N(teen)=50] observed during one session in 2016 conducting an organized academic activity on the upper part of the non-renovated area.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Renovated area | | | Non-renovated area | | | Both areas | | |
|  | PRE (2016)  **N=1,049** | POST (2017)  **N=1,312** | p-value\* | PRE (2016)  **N=2,356** | POST (2017)  **N=2,319** | p-value\* | PRE (2016)  **N=3,405** | POST (2017)  **N=3,631** | p-value\* |
| **Location [N, (%)]** |  |  |  |  |  |  |  |  |  |
| Upper | 1,031 (98.3) | 1,103 (84.1) | 0.000 | 1,999 (84.9) | 2,047 (88.3) | 0.001 | 3,030 (89.0) | 3,150 (86.7) | 0.004 |
| Lower | 18 (1.7) | 209 (15.9) |  | 357 (15.1) | 272 (11.7) |  | 375 (11.0) | 481 (13.3) |  |
| **Demographic characteristics of the users** [N, (%)] | | |  |  |  |  |  |  |  |
| Gender |  |  |  |  |  |  |  |  |  |
| Female | 282 (26.9) | 403 (30.7) | 0.041 | 450 (19.1) | 356 (15.4) | 0.001 | 732 (21.5) | 759 (20.9) | 0.542 |
| Male | 767 (73.1) | 909 (69.3) |  | 1,906 (80.9) | 1,963 (84.6) |  | 2,673 (78.5) | 2,872 (79.1) |  |
| Age group |  |  |  |  |  |  |  |  |  |
| Child | 18 (1.7) | 52 (4.0) | 0.000 | 20 (0.8) | 27 (1.2) | 0.000 | 38 (1.1) | 79 (2.2) | 0.000 |
| Teen | 71 (6.8) | 36 (2.7) |  | 30 (1.3) | 42 (1.8) |  | 101 (2.9) | 78 (2.2) |  |
| Adult | 484 (46.1) | 734 (56.0) |  | 1,595 (67.7) | 1,428 (61.6) |  | 2,079 (61.1) | 2,162 (59.5) |  |
| Senior | 476 (45.4) | 490 (37.3) |  | 711 (30.2) | 822 (35.4) |  | 1,187 (34.9) | 1,312 (36.1) |  |
| Ethnicity |  |  |  |  |  |  |  |  |  |
| Caucasian | 1,022 (97.4) | 1,215 (92.6) | 0.000 | 2,317 (98.4) | 2,276 (98.1) | 0.156 | 3,339 (98.1) | 3,491 (96.1) | 0.000 |
| Latin-American | 9 (0.8) | 23 (1.7) |  | 13 (0.6) | 4 (0.2) |  | 22 (0.6) | 27 (0.7) |  |
| Black | 2 (0.2) | 8 (0.6) |  | 5 (0.2) | 5 (0.2) |  | 7 (0.2) | 13 (0.4) |  |
| Asian | 10 (1.0) | 26 (2.0) |  | 8 (0.3) | 14 (0.6) |  | 18 (0.5) | 40 (1.1) |  |
| North-African | 6 (0.6) | 23 (1.8) |  | 10 (0.4) | 16 (0.7) |  | 16 (0.5) | 39 (1.1) |  |
| Other | 0 (0.0) | 17 (1.3) |  | 3 (0.1) | 4 (0.2) |  | 3 (0.1) | 21 (0.6) |  |
| **Physical activity level** [N, (%)] | |  |  |  |  |  |  |  |  |
| Sedentary | 81 (7.7) | 158 (12.0) | 0.000 | 80 (3.4) | 89 (3.8) | 0.004 | 161 (4.7) | 247 (6.8) | 0.001 |
| Moderate | 702 (66.9) | 901 (68.7) |  | 905 (38.4) | 782 (33.7) |  | 1,607 (47.2) | 1,683 (46.4) |  |
| Vigorous | 266 (25.4) | 253 (19.3) |  | 1,371 (58.2) | 1,448 (62.4) |  | 1,637 (48.1) | 1,701 (46.8) |  |

\*P-values based on Chi-squared tests to compare the distribution of sociodemographic characteristics of users between the pre (year 2016) and post (year 2017) intervention evaluation.

**Figure S3.** Levels of physical activity by gender (F=female; M=male).



**Table S5**. Demographic characteristics of the participants interviewed.

|  |  |  |
| --- | --- | --- |
|  | PRE (2016) | POST (2017) |
| **Gender [N]** |  |  |
| Female | 11 | 4 |
| Male | 6 | 2 |
| **Age** **group** **[N]** |  |  |
| Adult | 13 | 4 |
| Senior | 4 | 2 |
| **Ethnicity [N]** |  |  |
| Caucasian | 13 | 5 |
| Non-Caucasian | 4 | 1 |
| TOTAL [N] | 17 | 6 |