**Supplementary File**

**Table A1.** Coding system with themes and categories.

|  |  |  |  |
| --- | --- | --- | --- |
| **Themes** | **Categories** | **Code** | **Sub-categories** |
| **Social knowledge** | Institutional aspects and actors  Dynamics, functions, and flows  Physical aspects and spaces | *S-IC*  *S-DC*  *S-PD* | Conceptual co-design phase  Embodiment co-design phase  Detailing co-design phase |
| **Social-ecological knowledge** | Institutional aspects and actors  Dynamics, functions, and flows  Physical aspects and spaces | *SE-IC*  *SE-DC*  *SE-PD* | Conceptual co-design phase  Embodiment co-design phase  Detailing co-design phase |
| **Ecological knowledge** | Institutional aspects and actors  Dynamics, functions, and flows  Physical aspects and spaces | *E-IC*  *E-DC*  *E-PD* | Conceptual co-design phase  Embodiment co-design phase  Detailing co-design phase |

**Table A2.** The stakeholders involved in the co-design processes.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sectors** |  | **Kaukari Urban Park** |  | **Antofagasta Seaside Park** |
| Public | 1  2  3  4  5  6  7  8 | Housing and Urbanism Ministry (Minvu)  Hydraulic Infrastructure Department (DOH)  Public Infrastructure Ministry (MOP)  Municipality of Copiapó  Regional Government of Atacama (GORE)  National Assets Ministry (MBN)  Social Development Ministry (MDS) | 1  2  3  4  5  6  7  8 | Port Infrastructure Department (DOP)  Road Infrastructure Department (DV)  Public Infrastructure Ministry (MOP)  Housing and Urbanism Ministry (Minvu)  Municipality of Antofagasta  Regional Government of Antofagasta (GORE)  Social Development Ministry (MDS)  Chilean Army |
| Private | 9  10  11 | Teodoro Fernández Associate Architects  Bonifacio Fernández  *Habiterra* Consultants | 9  10  11  12  13 | Teodoro Fernández Associate Architects  Urbana ED urban management  GSI Engineers  BHP Billiton  Industrial Association of Antofagasta (AIA) |
| Third sector | 12  13 | Community Organisations (I)  School organizations | 14  15  16 | CREO Antofagasta NGO (CA)  *Urbanismo Social* NGO (US)  *Ciudad Emergente* NGO (CE) |
| Citizen | 14  15  16 | Community Organisations.  Neighbourhood organizations  Public Schools | 17  18  19 | Executive Council (EC)  Citizen Council (CC)  Community Organizations (multiple sports and cultural) |
| Academic |  | (not applicable) | 20  21 | University of Antofagasta (UA)  Catholic University of the North (UCN) |

**Table A3.** Design teams and experts involved in the co-design processes.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **Kaukari Urban Park** |  | **Antofagasta Seaside Park** |
| Expert studies | 1  2  3  4  5  6  7 | Urban development consulting  Urban planning studies  Agronomy consulting  Mine tailing consulting  Soil mechanics study  Management models study  Citizen participation study | 1  2  3  4  5  6 | Soil mechanics study  Urban planning studies  Management models study  Citizen participation study  Tactical urbanism study and interventions  Urban Management study |
| Disciplinary design projects | 8  9  10  11  12  13  14  15  16 | Urban design  Landscape design  Hydraulic engineering design  Architectural design  Structural design  Paving and rainwater design  Electrical engineering design  Sanitary Engineering design  Lighting design | 7  8  9  10  11  12  13  14  15  16 | Urban design  Landscape design  Port hydraulic engineering design  Architectural design  Structural design  Irrigation design  Paving and cycle path design  Electrical engineering design  Sanitary Engineering design  Lighting design |