7. Alejandro Gutiérrez, Architect, ELEMENTAL S.A., Santiago, Chile; 2) we recommended conditioned construction right after the build massive infrastructures to protect the city, for which forbid settlements in the areas devastated by the waves, wanted to implement for the reconstruction: namis. There were three factors that different stakeholders was that our cities proved not to be prepared against tsu-

There was enough evidence that proved it would be useless because a tsunami is not just a heavy swell. Against geographical threats, geographical answers: a forest able to mitigate the impact of a tsunami. If the trees had the right density, diameter and resistance to horizontal loads, we might reduce the wave’s energy by 40%. (Empirical proof, was the island in front of the city, that not only reduced the force of the waves, but also served as a vertical escape route, that saved many)

2) “do nothing”, allowing people to go back to where they were, as they were, which would have been irresponsible, and

3) build massive infrastructures to protect the city, for which there was enough evidence that proved it would be useless because a tsunami is not just a heavy swell.

We offered a fourth path which was threefold:

1) no longer try to forest the waves, but dissipate their energy through friction. Against geographical threats, geographical answers: we proposed a forest able to mitigate the impact of a tsunami. If the trees had the right density, diameter and resistance to horizontal loads, we might reduce the wave’s energy by 40%. (Empirical proof, was the island in front of the city, that not only reduced the force of the waves, but also served as a vertical escape route, that saved many)

2) we recommended conditioned construction right after the mitigation forest, with wood and concrete elements in the lower floors. It is easier to rebuild after a tsunami than after a forest.

3) finally, an efficient evacuation plan to higher areas was designed. The combination of these three strategies allowed for a reconstruction of the city as close as possible to where it has historically been, in proximity to the sea and the river that actually are the base of its existence.

But a tragedy is always an opportunity too: the park opened the city towards the river, providing democratic public access to what the community identified as their real identity (previously owned only by a few private landlords), repairing the “historic debt” of green urban areas. With this new anti-tsunami urban DNA plus an updated urban standard for the whole city, each of the buildings, streets, squares and houses (following the Elemental principles that we have developed over the years on incremental housing) to be reconstructed, could be developed on substantiated physical and conceptual urban foundations.

The Plan for Sustainable Reconstruction (PRES) of Constitución was developed after the 8.8 earthquake/tsunami of February 27th, 2010. We were given 90 days to produce all the necessary studies and documents capable of coordinating the action of both public and private entities in the reconstruction of infrastructure, public spaces and services, housing, energy and economic activities of the city. The 8.8 Earthquake Chile – sustainable reconstruction master plan was done with the intense participation of the entire community.

Chile did well against the earthquake: building codes are appropriate and respected by the people. But the challenge was that our cities proved not to be prepared against tsunamis. There were three factors that different stakeholders wanted to implement for the reconstruction:

i) forbid settlements in the areas devastated by the waves, which was unrealistic since informal occupation would have been very hard to prevent

2) “do nothing”, allowing people to go back to where they were, as they were, which would have been irresponsible, and

3) build massive infrastructures to protect the city, for which there was enough evidence that proved it would be useless because a tsunami is not just a heavy swell.

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The jury values the thoughtful approach of proposing a long-term strategy of upgrading the built environment rather than implementing an ad hoc action plan to reconstruct that which had been destroyed by the tsunami and earthquake. Furthermore, the project’s effective establishment in the social community through citizen participation was recognized, demonstrating the contextual and social sensitivity of the master plan.