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Air Quality at Tran Thi Ly Bridge Da Nang Journey Map Series 2020-2021

About This Series

Building Healthy Cities (BHC) is a USAID-funded learning project in four Smart Cites in Asia – Indore, India; Makassar, Indonesia; Da Nang, Vietnam; and Kathmandu, Nepal. BHC is testing how to successfully apply urban planning approaches that improve the social determinants of health in complex systems.

BHC uses exploratory data collection, multisectoral engagement, and citizen participation. This systems approach informs project activities and the prioritization of city-funded workplans. The combined impact should improve the lives of all residents in these three cities and reduce preventable mortality.

BHC is using several tools and processes to create coalitions and organize its approach in each city. One key process is systems mapping to illustrate the key dynamics (patterns underlying problems) and define key entry (or 'leverage') points to address social and environmental determinants of health. Another way that BHC is documenting citizen experiences in each city is through Journey Maps.

The Journey Maps apply 'design thinking' approaches, which are often used to tailor products to intended customers; citizens are like customers in that they pay taxes or fees to use city services. BHC has adapted this tool to document the experience (or 'journey') of citizens who are trying to overcome one service issue in each city, over time, updated on a quarterly basis. The specific topics were identified during the first year of activities in each city and fit within the larger context shown in the systems maps. BHC is using these Journey Maps to track citizen and city official perspectives, and to document change at the neighborhood level.

BHC is training people in each neighborhood to develop and use these Journey Maps and on grassroots advocacy techniques. By bringing the citizen experience directly to city planners, BHC hopes to better align municipal planning with community priorities such as safe water, clean air, hygiene, traffic safety, and other key components of healthy urban living.

Life of Project Journey Map Summary

BHC is concluding the Journey Maps in 2021. This process brought insights into day-to-day service availability for Da Nang residents, and created a regular dialogue with the community and city offices about the causes, consequences, and potential solutions to persistent urban health-related issues.

At the beginning of this 2-year map, road closures and construction dust from the focus project initially worsened traffic congestion and air quality. COVID-19 then delayed completion of construction. Once a significant portion of the project was complete, and workers put procedures in place to decrease construction dust, pedestrians and drivers saw positive changes in traffic flow and air quality. The city also recently installed 2 air pollution monitoring stations, with plans to install 6 more across 6 districts in the near future. Journey Map Trajectory Year 3 Year 4









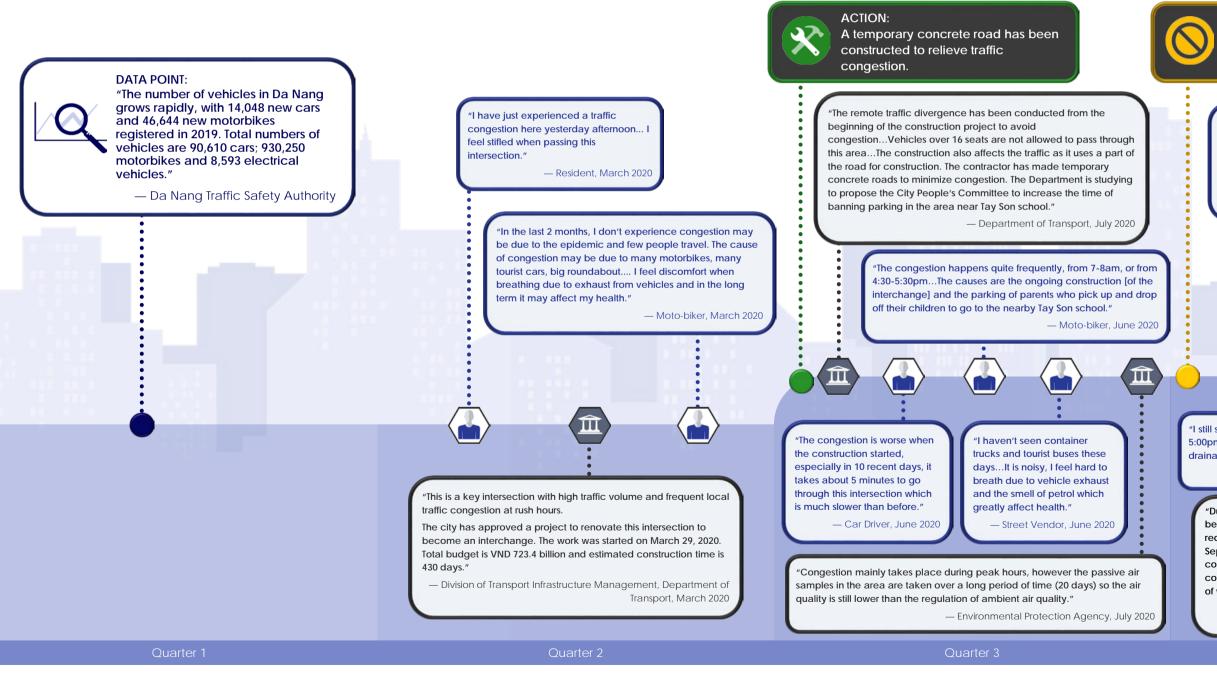


Da Nang Journey Map #3 - Air Quality at the Intersection at the Western Side of the Tran Thi Ly Bridge

YEAR 3 The intersection at the Western side of the Tran Thi Ly bridge is one of the main junctions in Da Nang. It connects the central entertainment area and social-political area from South to North, and connects the urban crowded areas and the coastal area from East to West. In recent years, with the development of the city's economy

and increased tourism, this intersection has experienced traffic congestion, which continues to get worse, especially during rush hour. This leads to reduced air quality in the area which negatively affects urban health and indirectly affects the satisfaction of tourists.







Citizen/

Building Healthy Cities is a five-year cooperative agreement funded by the United States Agency for International Development (USAID) under Agreement No. AID-OAA-A-17-00028, beginning September 30, 2017. BHC is implemented by JSI Research & Training Institute, Inc. (JSI) with partners International Organization for Migration, Thrive Networks Global, and Urban Institute, and with support from Engaging Inquiry, LLC. This report is made possible by the generous support of the American people through USAID. The contents are the responsibility of Building Healthy Cities and do not necessarily reflect the views of USAID or the United States government.





Construction site (left, source: BHC, Sept. 2020). Sidewalk under construction (right, source: BHC, Sept. 2020).

NO ACTION:

Due to a second wave of COVID-19 in Da Nang, construction has been delayed.

"I have not seen any congestion for several days passing by here. Perhaps due to the recent pandemic, the street has not returned to a normal pace. And probably because it has been raining a lot lately, I do not see much dust. It seems that construction has been delayed due to COVID and just recently reworked so there is not much impact on roads."

- Moto-biker, Sept. 2020

"The road is being narrowed so of course it is still congested, plus the passing of large vehicles and construction vehicles. Although there is a regular cleaning team, it still cannot get rid of road dust." - Street Vendor, Sept. 2020

"I still see temporary congestion at 7:30am and around 4:30-5:00pm. I see people doing construction and digging along the drainage banks, there is dust but as not as much as before."

- Car Driver, Sept. 2020

"Due to the COVID-19 pandemic, the construction has been delayed between 31 July and 31 August. So, the progress is behind against the requirement of the Da Nang CPC that the project is completed on 2 September 2021. The PMB [Project Management Board] therefore is pushing contractors to step up the progress to make up for the lost time. Now, the contractors are focusing on such works as constructing a road at the back of wedding restaurants, drainage on 2/9 street, etc."

> - Project Management Board of Traffic Works Investment and Construction Leader, Sept. 2020







Da Nang Journey Map #3 - Air Quality at the Intersection at the Western Side of the Tran Thi Ly Bridge

YEAR 4 The intersection at the Western side of the Tran Thi Ly bridge is one of the main junctions in Da Nana. It connects the central entertainment area and social-political area from south to north, and connects the urban crowded areas and the coastal area from east to west. In recent years, with the development of the city's economy

and increased tourism, this intersection has experienced traffic congestion, which continues to get worse, especially during rush hour. This leads to reduced air quality in the area which negatively affects urban health and indirectly affects the satisfaction of tourists.



Construction at Tran Thi Ly Bridge, October 2021

NO ACTION:

Construction continued on the intersection, with no improvements to congestion.

"It is a bit congested during the time of 7:20-7:45 and 17:15-17:45 every day. The air quality in this area is not a concern since I ride my car and it is better in the rainy season. I hope that the construction will be completed soon and there should be a functional force to quide the traffic flow in rush hour to ensure the safety and convenience for the traffic participants" — Car Driver Dec 2020

I worry about the traffic safety and the dust from this area will affect to our health. I hope that the construction will be completed as soon as possible and there should be a wide aisle to reduce the traffic iam. It is better if there is one police officer who can coordinate the traffic for this area."

— Moto-biker, Dec. 202

"I find that the temporary roads are too bad, it is easy to cause the traffic accidents and dust in the dry season. It also affects to the health and lives of traffic participants. I suggest that the temporary roads should be upgraded and the police officers should be there to control the traffic, especially for rush hour. The construction company needs to handle the air dust and dirt on the road." — Car Driver, Dec. 2020

The congestion due to the road under construction is inevitable. However, there should be a coordination meeting between the relevant departments before the construction. This can help prevent many problems caused related to air pollution and traffic iam. During the construction, there should be a mist or water spraying system 2-3 times a day to minimize the dust and air pollution."

- Moto-biker, Dec. 2020

"The citizens' suggestions are highly appreciated and to be honest, the local authorities are trying our best to implement the proposed plans. We really hope to receive the coordination from the citizens, we encourage the citizens to not iostle when travelling, especially for across the roads under construction.

Quarter 1

Negative Action

- Department of Tourism Official, Dec. 2020

NEGATIVE ACTION:

While shields were installed to minimize construction dust, citizens were still bothered by it. Expanded construction also caused traffic jams. The combination of dust and vehicle exhaust increased air pollution.

"The air pollution and traffic jam of this road currently receives great attention from the city and project contractors. In these times, the contractors regularly arrange staff to control the traffic and take many actions to minimize the effect of the construction. The construction is also well-shielded and always supervised to ensure the safety of the citizen."

- Project Officer of Tran Thi Ly Construction, March 2021

"If this construction takes a long time to implement, it will affect to the traffic safety and the health for the citizens. This is an important road which many vehicles travel continuously every day." - Driver March 2021

...Due to the dust of the construction, the customers come to my stall are decreased. We hope that the construction will be finished as soon as possible, the related agencies will take more actions to reduce the air pollution so that the city will be more beautiful."

- Seller, March 2021

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"I regularly travel in this road and I found that there are corrugated iron barriers to minimize the noise and dust from the construction. In peak hours, there are responsible staff control the traffic. I hope the construction will be completed soon." — Driver, March 2021

"Due to the construction, the traffic is often jam in the peak hours. It is heavily dust in the sunny days and there is standing water in the road in the rainy days. I am worried about the effect of air pollution and traffic jam. I hope that the construction will be completed soon so that the citizens will be travel easily and the air will be not polluted." — Driver, March 2021

Quarter 2



After a period of delay, the overpass portion of the project was completed and opened for use

The construction project is a 3-level overpass, which tunnel, drainage system, pumping station, water and electricity supply, lighting, and green landscape system. During construction, it was discovered that the geology under the road was different than expected, and work temporarily stopped. The construction plan was revised and the city extended the completion deadline from 30 June to 31 December 2021

> "The project was built very quickly, the amount of dust has decreased much. The project is expected to be completed in June but so far it has not been put into operation. I feel very excited because Da Nang has such beautiful and large-scale architectural works. I propose that there should be more solutions to reduce noise, dust and traffic jams - Driver, June 2021 during peak hours."



construction. I feel very happy because the project is very big and begutiful. I hope it will be completed soon to prevent traffic igms and convenient for travelers." - Driver, June 2021

"According to the initial signing of the project, it will be completed by the end of June 2021, it is approved for an extension due to objective factors. The project must be completed not later than December 31, 2021. The project is in the stage of completing the asphalt concrete mat on the bridge and opening the technical traffic to assemble electric lights on the bridge. It is more difficult to manage the work due to Covid-19 since it is impossible to gather many people...the supplies transport are also more difficult than before. The dust and noise is limited and controlled well in this time. The management board took many actions to ensure the safe and convenience for citizen."

- Project Officer, June 2021

Quarter 3



Special Note

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ACTION:

The road construction project is nearly complete, and has already improved air quality and traffic levels. The city installed 2 new air pollution monitoring stations.

"Due to the strict regulation of pandemic prevention, there are a few people travel in this road. We are finishing the underground tunnel at Duy Tan Street. The project is in good progress and expected to complete in the end of 2021."

- Construction Worker, Sept. 2021

"In Da Nang, there are 2 air pollution monitoring stations now. From what I know, the government is investing 6 more monitoring stations in 6 districts to reduce the air pollutions in the city."

- Project Officer, DONRE, Sept. 2021

"I usually deliver goods through Tran Thi Ly Bridge. I have found that the intersection is nearly completed and we can travel easily now. The air quality here is better than before. There is still a construction in the Duy Tan Street, but the workers are always ready to prevent the traffic jam. - Shipper, Sept. 2021

Journey Map Summary

Road closures and construction dust from this project initially worsened traffic congestion and air quality at the beginning of this 2-year map. COVID-19 then delayed completion of construction. Once a significant portion of the project was complete, and workers put procedures in place to decrease construction dust, pedestrians and drivers saw positive changes in traffic flow and air quality. The city also recently installed 2 air pollution monitoring stations, with plans to install 6 more across 6 districts in the near future.

Quarter 4







How Does This Story Connect to the Da Nang Systems Map?

Loop 8: Left Behind

hile the beauty and hospitality offered in Da Nang City has created growth and advancement in many areas, the poor and vulnerable members of the population have struggled to access these resources and so disparities in health, economic, and social factors have increased. As these groups are further marginalized, barriers to participation in improvement efforts also increase; access and comfort with technology, level of awareness, fit of programs to community need, to name a few. When a large portion of the population is not able to support city policies for improvement, it has an impact on the ability of the city to provide the high level of environmental beauty and citizen hospitality that it is known for.

Example 1: (Hoa Chau socialization) Due to rapid urbanization and economic development, Da Nang citizens and many rich immigrants have invested in real estate and tourism and become richer. As a result, there is an increasing gap in Da Nang society between rich and poor. Such investment and development boosted the living prices, especially land and house prices that the majority groups (farmers and workers) will never be able to afford. This phenomenon may result in the growth of crimes and negative impacts on the physical and mental health of those groups. Such social and economic hardship also reduces the time to think or desire to participate in the city development plan. They do not know how to invest and transform their lives, and meanwhile other high-resourced immigrants have the latest information to invest and earn more.

Example 2: While the increase in IT infrastructure and utilization has supported city advancements in many ways, those with limited literacy or access to technology have struggled to keep up. As the city continues to focus development efforts in this way these individuals (such as farmers, fishermen, and other low-wage workers) face increased barriers to accessing needed resources, as well as speaking up to share the challenges they face. The result is increased disparities in key health and social factors which, ultimately, limit whole-city growth.

