

Noise Pollution Around Suvarnabhumi Airport

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Abstract

Many countries have developed policies and measures to deal with the external impact of aviation on the wider community. Suvarnabhumi airport was constructed in urban area surrounding with 34 villages, 2 universities 10 schools and other kinds of buildings. More than six months after opening, affected residents still upset by the noise of airplanes over their houses. Noise levels in the vicinity of the Suvarnabhumi Airport were reported by the relevant authorities, including the noise levels before and after its opening since 2006. While local residents are protesting about the noise from the new airport which suggests a tension between economic benefits and environmental problems at the airport. This paper aims to provide a comprehensive knowledge on the noise around Suvarnabhumi airport, discuss about their cases and the guidelines on the airport noise management.

Keywords: AOT, Noise, Noise Pollution, Suvarnabhumi Airport

Introduction

Suvarnabhumi Airport also known unofficially as Bangkok Airport, is one of two international airports serving Bangkok, Thailand. Suvarnabhumi covers an area of 3,240 hectares (8,000 acres), making it one of the biggest international airports in Southeast Asia and a regional hub for aviation. Suvarnabhumi was officially opened for limited domestic flight service on 15 September 2006, and opened for most domestic and all international commercial flights on 28 September of the same year. It is managed by the Airport of Thailand Public Company Limited (AOT). It was built with the purpose of enhancing Thailand to become an aviation hub for the region. The noise issue was one of the most concerning pollutants around Suvarnabhumi Airport, particularly people who were living in the vicinity of the airport underneath its major flight paths. There were many activities or news concerning hazard from noise pollution, publishing in the newspapers or even national news programs in television or radio broadcasts. It was the first time Thailand had experienced protests about noise pollution

and put aviation's impact on the environment into the spotlight. Although aircraft noise is the focus of protests by residents, aviation-related activities at Suvarnabhumi airport cause other impacts as well, including pollution at both the local (from increased road traffic to and from the airport and aircraft emissions during take-off and landing) and the global level along with other social and cultural impacts. Noise Impacts of Communities near Suvarnabhumi Airport due to the fact that Suvarnabhumi Airport was constructed in the urban area of Greater Bangkok which population has been gradually increased. Transport Minister attempted to cool down the angry residents and tried to find the best solution.

Research Methodology

1. To know an Impact of Noise Around Suvarnabhumi Airport

1.1 Economy - The significant impacts on economy were on competition for benefits, savings, working and doing part time jobs. As the land price greatly increases, a lot of land is sold. Some people lost their land for agriculture because their land was purchased by the government to escape from the noise.

1.2 Society - There were significant impacts on society such as conflict of views because there are both the ones who agree and disagree with this and protest problem. The noise pollution has caused the obstruction during class or when you're rest

1.3 Public utility - The main impact was on public health. There might be some problems such as hearing problems, sleeping disorders, stressful, constant stress, fatigue, high blood pressure, stroke and heart failure.

1.4 Environment: The main impact was noise pollution caused from the planes when taking off and landing, vehicles and construction. And Effect on Wildlife.

1.5 Mental Health - There were many things to be considered such as peacefulness of mind, satisfaction in life, competition of people in the community, no proper self-adjustment, annoying noise and stressful.

2. To study how Suvarnabhumi solve the Noise Pollution Problem

2.1 The Government spent 390-million-baht budget to assist people suffering from noise pollution from Suvarnabhumi Airport. The budget will be spent for 71 families suffering from the noise pollution. However, a victim who was declared death by the noise pollution would receive an appropriate compensation.

- 2.2 AOT has paid out a total of 66 million baht to buy four land plots near Suvarnabhumi Airport from the owners who have complained of the noise pollution after the airport opening.
- 2.3 AOT tried to find out a suitable and acceptable criteria of noise impact compensation. According to criteria in the study AOT will spend KMITL 214.3 million baht for the first phase of noise prevention and 907.7 million baht for the second phase.
- 2.4 KMITL was the first organization which has tried to follow up and paid awareness on noise impact of Suvarnabhumi Airport, while villagers in the noise impact zone just took action to complain and protest after the opening day of Suvarnabhumi Airport on September 28, 2006. KMITL asked for compensation from AOT many times although AOT administrator pledged to disburse 214.3 million baht to KMITL to install warning lights for aircraft and noise barriers at the campus. President of KMITL decided to protest together with the affected villagers.

3. To know How to Protect Yourself from Noise Pollution.

3.1 Earplugs and white sounds - The most obvious solution for reducing noise exposure may also be the most effective: wear earplugs, especially at night. Alternatively, block outside noises that trigger stress responses by playing some soothing masking noise

3.2 Set up your living space to soundproof it

Floor - Consider installing carpet, the shaggier the better. For a simpler, more affordable solution, get area rugs to put in rooms that generate a lot of noise think TV, laundry, and exercise rooms.

Furniture - Push it up against the walls to absorb the sound waves that make it through the wall. The more overstuffed your furniture, the more sound is absorbed. Add accent pillows, drape throws or blankets, anything tasteful that absorbs sound.

Bookcases - Put bookcases against walls that get a lot of noise exposure. The bookcase absorbs sound like a second wall, and the paper from the books absorbs plenty as well.

Curtains - Add a heavy curtain to add extra absorption on sides of the house that get more outside noise.

Appliances - If possible, close the door when running loads of laundry. Start the dishwasher when you won't be in the kitchen for the rest of the evening. If larger

appliances are in unfinished areas, think laundry in an unfinished basement, hang old blankets, towels, or clothes on the walls to act as sound absorbers.

Conclusion

Thailand should design a proper scientific measurement model to evaluate the appropriateness of compensation schemes rather than consider only noise contour. Although the airport operation and management system have complied with the regulations of ICAO and USFAA standards and are similar to other airports in many countries according to cross-country policy comparison, three regression models similarly indicated that noise and air pollution are the leading factors that affect the property value changes and should be primarily considered in the compensation policy of the airport.

Discussion and Recommendation

The environmental noise levels around Suvarnabhumi Airport after September 2006 were evidently higher, caused by the airport operation. The people living in the vicinity of the airport have been suffered from loud noise as soon as the airport has been operated. The weight of each factor in compensation models might be different according to different land use types. The noise situation may get more severe situation with increasing tendency of aircraft movements. The expansion of the airport capacity in the near future will be impossible without the implementation of effective noise mitigation measures around Suvarnabhumi Airport.

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