What is an Aerotropolis, and why must these developments be stopped?

By Rose Bridger, March 2015

All over the world, major developments called an 'aerotropolis', or airport city, are being constructed, planned and announced. These new cities are not settlements for people. They are a new urban form enabling explosive growth in aviation dependent tourism and trade. Aerotropolis projects vary in scale and sectoral focus, but a catch-all definition is airport-centric urban development. Clustered around an existing or new airport, commercial development is integrated with air services. Airport passengers are funnelled through shopping malls, hotels, entertainment complexes and cultural venues. Manufacturing, assembly, logistics and warehousing facilities are linked with the airport's cargo operations. A fully-fledged aerotropolis might also include office blocks, residential premises, recreational green space and agriculture. Spatial planning and surface transportation networks support the airport as the central node of the aerotropolis.

Aerotropolis-style development began in Europe and the US in the 1990s, most notably around Schiphol, Munich and Dallas/Fort Worth airports. Now it is proliferating around the world, at various stages of planning and construction. Sites range in scale from a few hectares to 100 square kilometres or more. Smaller aerotropolis schemes include The Circle,[1] currently under construction adjoining Zurich Airport, which will have 18 hectares of useable space, and Manchester Airport City Enterprise Zone in northern England, comprising a number of sites covering a total of 116 hectares.[2] The world's largest aerotropolis projects are allocated land areas far exceeding the requirement for airport operations, including Kuala Lumpur, where the Airport owns 100 square kilometres of land,[3] Denver Airport in the US with development planned on a 137 square kilometre[4] site and Dubai's new airport, Al Maktoum, which has been allocated a full 140 square kilometres.[5]

Non-aeronautical revenue

In a great many instances aerotropolis land is owned by the airport, and income, referred to as 'non-aeronautical revenue', from facilities on this land, operated by the airport or through leases and concessions, is used to reduce fees for airlines (such as for landing and navigation) to encourage them to use the airport, and for airport upgrade and expansion. Several airports also reap non-aeronautical revenue from land that is not built on. Golf courses are ubiquitous and non-aeronautical revenue from agriculture includes Kuala Lumpur Airport's palm plantations.[6] Denver and Dallas/Fort Worth are the largest aerotropolis sites in the US, and, in addition to commercial development, receive substantial income from oil and gas wells.[7] Allocation of land for aerotropolis non-aeronautical revenue generation is a form of state support for aviation, its ancillary industries, and aviation linked/dependent businesses.

Economic engines?

Aerotropolis projects claim to act as 'economic engines' galvanising growth in the wider region, but the primary goal is to maximise activity within the aerotropolis. A symbiotic relationship between growth of the airport and the commercial development surrounding it is established. Development on aerotropolis sites are selected on the basis that it will make use of aviation services and thus increase the airport's passenger and cargo throughput. The aerotropolis may well result in economic growth, but local small and medium sized enterprises are marginalised as the development serves the growth and profits of transnational corporations including aircraft manufacturers, airlines, oil companies, construction, concrete and tarmac firms, security firms, international tourism and hotel consortia and global retail chains selling global brands. Any economic benefits from an aerotropolis must also be weighed against the almost universal tax exemption on fuel for international flights.

Aerotropolis developments aim to be self-contained and their promotion as 'destinations in their own right'[8] - where passengers can shop, eat, stay in hotels, enjoy cultural and entertainment activities and conduct business meetings - belies claims to stimulate the economy of the host region. Furthermore, in many instances facilities on airport land are not just targeted at air passengers, but also surrounding cities and towns, to which they are well connected by major highways. For example, an 85-store outlet mall planned on land owned by Canada's Edmonton Airport is designed to attract local residents as well, who may find it easier to access than downtown shopping centres.[9] Facilities on airport land which attract host communities drain rather than boost the local economy.

Economic enclaves

Many aerotropolis developments are linked with economic zones, located within the project boundary, adjacent or connected by highways. These zones, for promoting international trade, go by a variety of names, unifying factors being the support of a raft of tax breaks - giving tenants an unfair advantage over other businesses and eroding the tax base - other incentives, and unparalleled connective infrastructure. Examples include Dube Tradeport IDZ (Industrial Development Zone), adjoining King Shaka Airport in South Africa, which describes itself as the 'heart of the emerging Aerotropolis',[10] several of India's Special Economic Zones (SEZs) are linked with airports, including the Multimodal International Cargo Hub and Airport at Nagpur (MIHAN).[11] In the UK, tenants of Enterprise Zones at Manchester and Newquay airports are granted a Business Rate discount of £275,000 per eligible business.[12]

Destructive megaprojects

In terms of scale and budget major aerotropolis developments are among the largest megaprojects pushed by governments and corporations. Along with the airport itself, the requisite 'network infrastructure' - highways, rail links, water supply, telecoms - must be provided. The even bigger picture is that aerotropolis projects are frequently key components of an integrated complex of destructive megaprojects - multilane highways, industrial

complexes, major ports, logistics hubs and trade/growth/development corridors, all of which foster long distance travel and trade and fossil fuel dependent growth.

- Istanbul's third airport is part of a megaproject complex tearing up forests and coastline north of the city – comprising a third bridge over the Bosphorus, a highway and a canal linking the Black Sea with the Sea of Marmara.[13] The new airport has been granted Turkey's largest corporate loan to date, US$5.2 billion, just for the first phase of the project.[14] A vast area for commercial space includes plans for the world's largest duty-free retail at 53,000 square metres.[15]
- King Shaka Airport aerotropolis is the focal point of a freight-oriented megaproject: Dube Trade Port, an integrated multimodal hub with ambitions to become a 'crucial gateway to South Africa'. In turn, Dube Trade Port is a key component of an 'industrial integrated township' that 'will help provide easy access and a one-stop shop for international investors, manufacturers and industrialists'[16] and is an 'important part of the government's pipeline of major infrastructure development projects' including a logistics and industrial corridor.[17]
- Kuala Namu aerotropolis, on the Indonesian island of Sumatra, is to be integrated with two ports, Belawan and Kuala Tanjung, and support development of strategic industrial areas and the Sei Mangke Special Economic Zone.[18]

Loss of farmland, forest and wildlife habits

Aerotropolis-style urbanisation requires large, preferably greenfield, sites, and the growth imperative driving these developments is a recipe for urban sprawl. Building over enormous areas of farmland entails eviction of rural communities, loss of fertile soil and food production and eroding food sovereignty in the wider region. Greenfield sites that are not cultivated are likely to be wildlife habitats including forests, so construction threatens major loss of biodiversity and deforestation. New Songdo City in South Korea, regarded as an exemplary aerotropolis by Dr. John Kasarda, the leading advocate of the concept and designer of schemes around the world, was built on inter-tidal mudflats adjoining Seoul's Incheon Airport.[19] Land reclamation meant the irrevocable loss of unique habitats for vulnerable species of birds such as Mongolian Gulls and Black-faced Spoonbills.[20]

The site for a planned second Kathmandu airport, at Nijgadh, is 80 square kilometres of predominantly forested land.[21] The Nepalese government has allocated nearly US$5 million for preparatory works before the construction phase,[22] including fencing off the site and felling the forest, clearing the land in preparation for a potential Malaysian investor.[23] Ministries in charge of the airport development reported that they were attempting to settle disputes with locals over identification of the airport area and resettlement before handing the project over to investors.[24]

Displacement of rural communities

Acquisition of farmland for an aerotropolis is likely to displace rural people in the same way as major industrial developments such as mining, dams, highway networks, manufacturing and

tourism complexes and plantations. In many instances, land acquisition is aggressive or forced, and displaced people receive inadequate compensation and rehabilitation packages. Below are some examples of planned major land acquisition for aerotropolis projects:

- In Taiwan, planned expropriation of 37 square kilometres of land, mostly highly fertile farmland, for Taoyuan Aerotropolis threatens to displace 46,000 people. The scheme includes plans for a tourist resort with hotels and theme parks, conference and exhibition space, convention centres, business premises, R&D facilities and assembly plants. But there are no clear plans for much of the enormous site, and once land is zoned for commercial use, its value rockets upwards, lining the pockets of construction firms, clear evidence that the aerotropolis is a pretext for a land grab. Affected residents have held endless protests calling for fair, open hearings.[25]
- In India, acquisition of farmland for Andal Aerotropolis and the proposed new Goa airport at Mopa which includes commercial development have been met with protracted protests, over many years, by affected communities.[26] Vigorous resistance to an aerotropolis at Aranmula in Kerala, on paddy farms and biodiverse wetlands, proved successful, achieving cancellation of environmental clearance for the project, which had been granted illegally.[27]
- Kilimanjaro International Airport in Tanzania claims 110 square kilometres as its 'estate', upon which it intends to establish 'massive shopping centres, high class tourist hotels, duty free ports, Export Processing Zones, educational institutions, custom bonded warehouses, curio shops, golf courses and a large game ranch'.[28] 10,000 people living in Maasai pastoralist communities may face eviction, and marched against the project in March 2014.[29]
- Kuala Namu Airport opened in the midst of 'lingering' land acquisition protests in five villages.[30] Construction of a toll road was stalled as affected residents refused to accept a compensation package.[31] An airport conference presentation boasts of 100 square kilometres of land 'available for development' outside the airport fence.[32]
- On 25th September 2014 villagers opposing land acquisition for a new airport for Yogyakarta at Kulon Progo blocked the road to Java with stones and their bodies.[33] Two weeks later, 500 farmers, mostly women, held another protest, unwilling to sell fertile coastal land where they make a good livelihood growing vegetables, fruits and other crops. Their spokesperson said: 'We don't want to move. We want to farm, live and die there'.[34] Centre for Aviation (CAPA), a leading aviation consultancy, states that the new airport 'will require' 68 square kilometres of land and impact on approximately 2,800 households.[35]
- The Ethiopian government is in the process of selecting a 144 square kilometre site for a new Addis Ababa airport. Five possible sites, which the project spokesman declined to name, will be presented to the government for decision, all of which are to the southeast of the city, include large areas of farmland, and would necessitate the relocation of over 10,000 people. Identification of the possible sites for the 'mega-hub project' was somewhat distant from the communities standing to be affected. Satellite images were used.[36]

Community exclusion

Most aerotropolis projects are antidemocratic, the host community largely excluded from the governance of projects that are of enormous strategic significance. The airport, or a consortium, is granted a high degree of autonomy over the entire site. In many cases foreign investors are major shareholders, placing the project even further from control of the local community. For example, Beijing Construction Engineering Group (BCEG) is an equity partner in Manchester Airport City. India is deepening bilateral ties with Singapore, which has emerged as a major investor in Andal Aerotropolis in West Bengal.[37] Part of the rationale for the project is accessing nearby coal belts.[38]

GVK, an Indian conglomerate and one of India's largest private airport operators, is a partner in the planned new airport for Yogyakarta in Indonesia, Kulon Progo, for which land acquisition is currently underway.[39] Also in Indonesia, Lion Air, the country's largest privately run airline, has been granted a permit to develop a second Jakarta airport in Lebak, with a commercial centre including a shopping city.[40] The CEO of the parent company, Lion Group, declined to elaborate on consortium's business partners. The regional government is clearing 40 square kilometres of land for the project.[41]

Climate change and the local environment

Aviation is the most carbon intensive mode of transport, and one of the fastest growing sources of greenhouse gas emissions. Yet governments and corporations are pursuing aerotropolis projects that lock us into aviation dependency,