# Congestion on the Roads: Moving a Nation

Going nowhere fast? **Dr Scott Younger** OBE explores the causes and limitations of road congestion in Indonesia, and shares his vision of a nation on the move.

It's a rainy Monday morning and the city is abuzz. People leisurely board the monorail and buses in the knowledge that they will shortly arrive at their place of work in comfort, in safety and on time. Out of town, cars and trucks flow freely along the toll roads, keeping the economy and the nation on the move. It's 2020, and this Indonesia.

No, it's not a complete flight of fancy – it is a vision that with government commitment, foreign investment and public support is set to become a reality.

Remember Bangkok? Twenty years ago, Bangkok had one of the worst city congestion problems in the world. Today, while the density of motor vehicles remains high, a series of elevated toll roads, an elevated light rail system and an underground MRT system linking to the light rail have improved the movement of goods and people thanks to a mixture of public and private sector funding.

The example is inspiring, though few would argue that Indonesia does not have unique infrastructure challenges of its own to overcome. For one, the city of Jakarta simply lacks space for road building. In all older major cities with modern urban transport systems, the land area given to road infrastructure is 15-20%. In Jakarta it is about half of this, hence severe congestion takes place on a routine basis. Apart from the ground around feature areas, such as around Monas, most of the remaining city has a completely inadequate spatial road network.

In Indonesia, the government is, at last, responding to meet the enormous infrastructure demands required to support economic growth – and investors are hungry for the bait. Highest on the agenda is toll road development, though progress over the past 3 decades has, at times, been slow and hampered.

Until the completion of the Jagorawi toll road in 1978, which connects east Jakarta with the large population centers of Bogor and Ciawi to the south of the city, Indonesia's road network was entirely based on routes inherited from the past, whether national, provincial or district. The number of these routes, their alignments and capacity – and in many cases the in situ condition of the road structures – was, and still is, simply inadequate to carry road traffic across the nation, particularly within densely populated, industrial Java.

Interestingly, though, in 1978 Indonesia was the leader in Asian toll road development but this is no longer the case.

Of course, improvements to the existing network have been undertaken, e.g. the betterment programmes of the 1980s and 90s. In the early 1990s the government realised that expansion of the toll road network required significant funding through private sector investment and a large number of routes were opened up to private sector tender in 1995.

### Legal and Regulatory Quagmire

In 1995/6 there was an attempt to open up the toll road market to private sector funding, with some 40 toll links offered to tender. While all of the toll links listed attracted a potential concessionaire with responsibility to bring in private sector funding, most parties had neither the ability to put down the initial funding requirement nor the commercial and technical understanding or available skills to bring the projects to fruition.

Other major barriers to progress that, while acknowledged, were never properly addressed throughout the 1990s were the regulations affecting land acquisition and toll tariffs. Simply put, screening of likely investors was inadequate, and the legal and commercial risks pertaining to the investor were unacceptable and unattractive to bank lending. So nothing happened – despite the growing need for more toll roads.

By the time the Asian economic crisis struck in 1997, only a few projects had advanced sufficiently to avoid being postponed by the government until conditions improved. Meanwhile, rising car ownership – in line with economic recovery – led to increased congestion and air pollution, particularly in the major cities.

### Hopeful Signs

Fortunately, with the establishment of the new government law in 2004 affecting toll roads (Implementing Law 38/2004), followed recently by Government Regulation 15/2005, the risks to private sector investors have been reduced, with particular reference to toll tariffs. Also, a new regulation (President Regulation

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Left: Central Jakarta's Semanggi flyover, prior to today's extreme congestion. Photo by Jan Dekker.

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36/2005) concerning land purchase issues will allow the investor to deal with the costs up front - and with some certainty.

Until recently, too, Jasa Marga, the government's toll road agency served as developer, operator and regulator within the toll road sector. Now Jasa Marga is just the operator. A separate regulatory body is being established by the Ministry of Public Works, and is due to be functioning by the fourth quarter of this year. Ideally, such a regulatory body would be entirely independent. But perhaps that will be a later development, as understanding of its function and bureaucratic skills improve.

Today, Indonesia has c.650km of operating toll roads and Jasa Marga operates all but 148km. A recent, important addition to the network is the 46km link between Purwakarta and Padalarang in West Java, which allows uninterrupted toll road travel between Jakarta and Bandung. Most significantly, the journey now takes 1.5 hours – compared with 4 hours in the early 1980s.

The January 2005 Infrastructure Summit in Jakarta showed that, of all the various infrastructure areas, the framework conditions for private sector involvement in toll road development are the most advanced. And investor interest is, once again, increasing.

## Solutions

As part of its transportation development policy, the Jakarta city government recently published six inner-city toll road routes, designed to facilitate quick access to and from the expanding residential conurbations on the fringes of the city center. Some critics claim that these will simply transfer congestion from one city location to another, and encourage further traffic growth. However, as the city economy improves, it will be natural for car ownership to grow irrespective of the road network, thus doing nothing is not an option.

One solution to expedite movement could involve the introduction of a properly structured road-pricing scheme in order to control traffic volume – which has proven successful in other big cities. For commuters on the outskirts, Park & Ride facilities could and urgent to support economic growth and, happily, recent for so long were a serious hurdle for investors. The all round and for the population, will be tangible.

further reduce car congestion. What is certain is that any proposed new toll links to the city will have to be properly integrated with the light-rail public transport system, which is already under construction, a well organised road system and, in future, an underground railway system.

Completely new, modern-designed highways are essential and urgent to support economic growth and, happily, recent legislation has eradicated many of the flawed regulations that for so long were a serious hurdle for investors. The all round benefits of such investment to the economy, and for the population, will be tangible. It will give a boost to the construction industry, which in turn will cut unemployment significantly, which in turn helps to reduce poverty. And there is no doubt that free-flowing traffic will reduce air pollution in Indonesia's cities.

### Action on Pollution

Finally, to return briefly to my comparison with Bangkok. You may be thinking, "Sure, Bangkok's congestion problems may have eased, but it is still horribly polluted. We want improved infrastructure AND reduced pollution in Jakarta".

Well, today Bangkok and Jakarta rank, respectively, second and third worst of all the air-polluted urban environments in the world. In Jakarta's favour, it has double Bangkok's annual rainfall, which acts as a natural pollution reducer, and its spatial layout is far less congested to begin with. But the comparison must stop there, and Jakarta cannot afford to be complacent.

As roads and new modes of public transport are developed, the government must act swiftly to introduce more environmentally friendly fuels to help reduce air pollution. I am delighted that the city of Jakarta administration is already contemplating the use of CNG for the next round of busway transport. The hard truth is that the government's commitment to addressing environmental concerns 'in line with' infrastructure development is vital if Jakarta is ever to become not just a mobile city, but a healthier mobile city.