

AVIATION

Flying blind

As the top executives from nearly every major Indonesian airline gathered around a table at the ministry of transportation in mid-January, a general feeling of irritability filled the air. The group rarely meets and certainly not on such short notice—a combination that led to a somewhat tense atmosphere, one executive at the meeting told the *Report*.

Following the January 1 Adam Air crash, the country's beleaguered transportation minister, Hatta Radjasa, had called the meeting to discuss the country's aviation safety procedures, which had fallen under heavy scrutiny in the wake of the recent disaster. "Some of them were grumbling," the executive said. "They said that they knew perfectly well the government's aviation safety procedures, and they didn't need reminding."

Indeed, many of those aviation executives certainly have a very professional attitude toward air safety. But since the Adam Air tragedy, accusations have intensified that not all airlines in Indonesia have prioritised the safety of their passengers and crews.

Some NGOs, DPR members and media outlets have recently questioned what they see as the development of a two-tier system within Indonesia's aviation industry. They say that many of the budget carriers are prioritising profit over safety while the more expensive carriers are doing a more professional job.

However, the jury is still out on whether these budget carriers, which mushroomed after the industry was deregulated in the late 1990s, are operating in a perilous manner. But because of the January 1 crash and other earlier episodes, many here have begun seriously questioning if Indonesia is truly a more dangerous place to fly than other countries. In an attempt to answer that query, the *Report* examined the often murky world of the Indonesian aviation industry.

Lies, damn lies and statistics

From assessments that the United States' main aviation authority, the FAA, carried out on Indonesia, the country reportedly adheres to international standards and recommended practices set by the UN's International Civil Aviation Organization (ICAO). Based on research that included a look at the country's civil aviation authority and personnel, Indonesia's report card shows an unqualified pass with a ranking of "1". Some statistics, however, tell a different story.

Generally speaking, countries have been reluctant to publicise data concerning accident records. While lists of individual incidents are widely available, a single internationally comparable data set of accident rates in relation to the number of flight hours is not available to the public. According to one industry website, an FAA spokesperson defended the position, saying that "fatal accidents are such infrequent events, that for statistical purposes of rating airline safety, it

THE MEETING OF AIRLINE EXECUTIVE WAS TENSE.

THEY FELT IT WAS UNNECESSARY DESPITE THE RECENT CRASH.

HOWEVER, ACCUSATIONS ARE RIFE THAT SAFETY MEASURES ARE LACKING.

THE AVIATION INDUSTRY SEEMS TO BE TWO TIERED IN INDONESIA.

BUT THE JURY IS STILL OUT ON THE BUDGET CARRIERS.

THE FAA SAYS THE COUNTRY SEEMS TO ADHERE TO INTERNATIONAL NORMS.

COMPARATIVE DATA IS HARD TO FIND.

just doesn't work." There are also disagreements over the best methodology to use and the fear that such information may lead to public panic.

STILL, INDONESIA APPEARS BELOW PAR REGARDING ITS AIRLINE SAFETY.

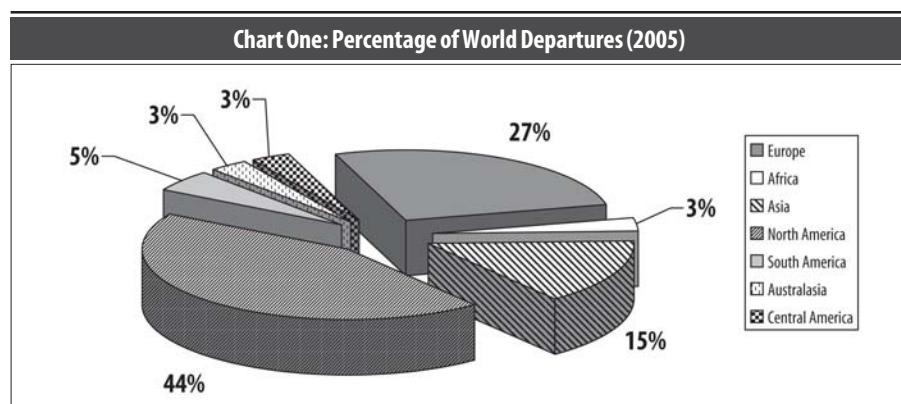
Nevertheless, approximations can be made, and the results for Indonesia are not encouraging. Table One below shows a list of the 15 countries with the highest number of fatal civil airliner accidents from 1945 onwards, not including hijackings or military accidents.

| Table One: Fatal Accidents by Country (1945-2007) | | | | |
|---|-------------|-----------|------------|-------------------|
| Ranking | Country | Accidents | Fatalities | Ground Fatalities |
| 1 | USA | 630 | 9860 | 124 |
| 2 | Russia | 185 | 5631 | 19 |
| 3 | Colombia | 153 | 2652 | 30 |
| 4 | Brazil | 143 | 2259 | 59 |
| 5 | Canada | 136 | 1611 | 2 |
| 6 | India | 86 | 2150 | 25 |
| 7 | France | 81 | 2078 | 15 |
| 8 | U.K. | 80 | 1264 | 10 |
| 9 | Indonesia | 78 | 1724 | 47 |
| 10 | Mexico | 72 | 1150 | 53 |
| 11 | China | 69 | 1736 | 47 |
| 12 | Italy | 55 | 1178 | 6 |
| 13 | Philippines | 53 | 820 | 7 |
| 14 | Bolivia | 52 | 577 | 88 |
| 15 | Venezuela | 51 | 991 | 71 |

Source: <http://aviation-safety.net/index.php>

PASSENGER NUMBERS HAVE SPIKED SINCE 1999.

While Indonesia does rank in the top 10, it must be noted that this data in ways presents a skewed picture, as the number of flights in the US since 1945 would vastly outnumber those from other countries. For example, passenger numbers on US domestic flights reached 656 million in 2006 compared to 35 million in Indonesia, which itself is a substantial rise from only 6 million in 1999. India had just 5.85 million passengers on domestic flights last year. Another indication of the level of air traffic is the percentage of international departures, which are only readily available by region (see Chart One below).



Source: <http://aviation-safety.net/index.php>

The methods are far from scientific. But even so Indonesia joins the ranks of countries such as Colombia, Brazil, India and Mexico as a place where the number of accidents in relation to flight departures is fairly high.

Risky business

“Aircraft accidents are never caused by just one factor, they are always the result of a chain of events,” explains Dudi Sudibyo, the chief editor of Indonesia’s only air transport magazine and a member of the new presidential advisory team on aviation safety.

In recent years one of those factors in Indonesia that the press has zeroed in on has been the age of the aircraft. Andry Bachtiar, an Indonesian aviation professional, says, “Here they use models of planes which have been deemed unsafe in Europe. Planes such as the 737-200 and the MD-80 were sold to countries like Indonesia when Europe’s regulations tightened up.”

The suspicion that many planes used in Indonesia are too old for the job intensified after the 2005 Mandala crash (See Table Two). The tragedy involved a 25-year-old plane that had been passed from Lufthansa to Tunisair after 13 years. It was then sold on to Mandala within a few months, where it stayed until the crash. The government, mindful of these accusations, released a knee-jerk regulation after the crash banning the purchase of Boeing 737-200s that were over 20 years old; existing planes of this type were allowed to continue functioning as long as they were “overhauled.”

MULTIPLE FACTORS ARE ALWAYS AT PLAY IN AIRLINE ACCIDENTS.

THE AGE OF THE AIRCRAFT IS ONE CONCERN IN INDONESIA.

THAT CONCERN INTENSIFIED IN SEPTEMBER 2005.

Table Two: Fatal Air Crashes in Indonesia (1997-2007)

| Date | Operator | Fatalities | Location | Description |
|-------------|---------------------------------|------------|------------------------------|---|
| 01-JAN-2007 | AdamAir | 102 | Near Sulawesi | Disappeared from radar. |
| 17-NOV-2006 | Trigana Air Service | 12 | Puncak Jaya (Papua) | Disappeared while crossing a mountain range. |
| 05-SEP-2005 | Mandala Airlines | 145 | Medan (Sumatra) | Crashed into a residential area during take off. |
| 12-APR-2005 | GT Air | 17 | Near Enarotali (Papua) | Crashed into a mountain in mid-flight. |
| 30-NOV-2004 | Lion Airlines | 25 | Solo (Java) | Skidded and crashed on landing. |
| 27-MAR-2003 | Air Regional | 4 | Near Mulia (Papua) | Crashed into a mountain in mid-flight. |
| 07-NOV-2002 | Dirgantara Air Services | 7 | Near Juwata (Kalimantan) | Crashed into a swamp after take off due to engine failure. |
| 16-JUL-2002 | Sabang Merauke Raya Air Charter | 9 | Near Long Barai (Kalimantan) | Contact was lost 15 minutes before landing. The plane was found off course crashed into a mountain. |
| 25-MAY-2002 | Trigana Air Service | 6 | Near Nabire (Papua) | Crashed during heavy rains. |
| 16-JAN-2002 | Garuda | 1 | Near Yogyakarta (Java) | Power and engine failure after the plane hit a storm. |
| 15-JUN-2001 | Manunggal Air | 1 | Jayapura (Papua) | Engine trouble forced a return to the airport where it skidded and crashed into a fence. |
| 26-MAR-2001 | Merpati Nusantara | 3 | Near Surabaya (Java) | Pilot lost control and aircraft crashed. |
| 26-SEP-1997 | Garuda | 234 | Near Medan (Sumatra) | Plane descended too rapidly and crashed after a mistaken command from air traffic control. |
| 17-JUL-1997 | Sempati Air | 28 | Bandung (West Java) | Engine trouble shortly after take off forced a crash landing. |

Using older planes is not always more profitable for airlines in the long term, but they effectively enable people to enter the business with little start-up capital. “They do it to spread the costs,” says an industry insider. “Older planes may be cheaper to lease in the first place, but their ongoing maintenance

costs are much much more than a new plane...Adam Air was started with only US\$10 million, but you really need something in the region of US\$50 to US\$100 million to do it properly."

USING OLDER PLANES DOESN'T NECESSARILY MEAN THAT ACCIDENTS WILL INCREASE.

A foreign aviation consultant working in Indonesia agrees that this is a common practice here, but disputes that there is any real correlation between the age of an aircraft and its safety. "Using older planes does not have to cause problems," he told the *Report*. "But it means that air safety is much more reliant on good maintenance, and here there is a weak culture of maintenance."

IT COMES DOWN TO THE MAINTENANCE OF THEM.

Since the Adam Air crash, pilots have told the press that navigation systems break down, tires blow out on landing, and doors and windows on their aircrafts are sometimes cracked. "Airlines sometimes skimp on equipment like the back-up battery because it is rarely used," Hasan Soedjono, the ex-director of the now defunct airline Sempati, told the *Report*. "Spare batteries are needed for communications to work in the event of a power failure and are considered an essential item by all pilots, but not always here in Indonesia." He said that such batteries cost around US\$10,000. Such disclosures have served to strengthen calls to revamp Indonesia's airline inspection process.

OVERLOADING CARGO AND FUEL SAVING MEASURES HAVE ALSO BEEN CITED AS CAUSES.

Industry insiders also cite other bad practices used in Indonesia, including overloading cargo and taking shorter routes to save fuel. Although the latter is said to be practiced worldwide, the problem in Indonesia is that it can cause a plane to be untraceable by radar because the country's radar system does not cover all of Indonesia's air space. The Adam Air crash is a prime example of that, as it disappeared from radar before crashing.

GOVERNMENT INSPECTORS ARE FALLING DOWN ON THE JOB.

An aviation expert told the *Report* that "some operators here don't follow the rules voluntarily, they feel no moral responsibility to follow the rules to the letter." But, if true, government inspectors should in the end be enforcing these regulations.

Inspect and you shall receive

THE COUNTRY'S AVIATION RULES WERE REWRITTEN IN 2001.

The foreign aviation consultant feels that Indonesia's safety regulations are good, noting that they were rewritten in 2001. The rules were based almost entirely on the FAA's own regulations, he said, when it insisted that Indonesian airlines would not be allowed to enter US airspace without them. While the right rules might be in place, they are not always followed.

RULES CHANGE AT TIMES, HOWEVER, WHEN FEES CAN BE GENERATED.

"The Directorate of Air Transport sometimes reverts back to the old British-based rules when it suits them, if they see an opportunity to earn more money," he told the *Report*. For example, the British system requires pilots to get a new license more frequently which allows transportation officials to extract a greater amount of fees.

PAYMENTS FROM AIRLINES TO GOVERNMENT OFFICIALS ARE BELIEVED TO BE COMMON.

Another insider who spoke to the *Report* described a "permissive regulatory environment." The source said that stories of airlines paying government officials to pass planes for flight without proper inspection are too ubiquitous

to be dismissed as rumour. “Inspectors are often on the airline’s payroll,” one insider told the *Report*. While another added, “Sometimes the inspectors just do the check from their office for a fee.”

A systemic cause of this lack of professionalism among inspectors is the conflict of interests which are routinely permitted in the industry. “All the inspectors from the Directorate also fly full time for airlines, but what happens when they have to inspect the planes from their own airlines?” said the foreign consultant. “This is a very bad practice; other countries only have retired pilots for inspectors.”

This trend was highlighted in February 2006 when an Adam Air plane went missing after going off course and later turned up on Sumba Island, hundreds of kilometres away. The pilot was also a government inspector. “After that the Directorate ruled that inspectors were only allowed to fly on the weekend,” one industry insider told *Report*. “But that only lasted about a month and then it was back to business as usual.”

Hasan, the ex-director of *Sempati*, points to another example of conflicting interests in the crash investigations. “The head investigator of the Lion Air crash in 2004 went on to become an aviation consultant for Lion Air, where he still works today,” he told the *Report*. “There is no rule against it, but how are these things allowed to happen? Where are the professional ethics of these people?”

There have also been suggestions that both the job of inspections and investigations should be performed by bodies that are independent from the government. “We have told the government that the body which undertakes investigations of crashes, the KNKT, should be independent from the government and the DPR has already approved this suggestion,” Dudi, the aviation expert from the new presidential advisory team, told the *Report*.

Crime and punishment

One major problem following investigations is a lack of government sanction once individuals are found responsible, sources told the *Report*. The strange case of the missing Adam Air flight in February 2006 mentioned above serves as a case in point. Eyebrows were raised within the industry when the flight from Jakarta to Sulawesi lost communication with air traffic control and later ended up on Sumba Island. The pilot claimed that the navigation system failed.

“It is obvious to all who work in the industry that the pilot was negligent,” one aviation expert explained. “There should be back-up navigation systems, but even without one any pilot should be able to know when they have gone so far off course.”

In the months that followed the incident, the legal system appeared to be swinging into action. A police team was formed, witnesses were called and procedures which both Adam Air management and the pilots had violated were identified. While waiting for a court case to be prepared, the press reported that Adam Air’s Director of Operations as well as the pilots were all fired.

SERIOUS CONFLICTS OF INTEREST EXIST IN THE INDUSTRY.

THE ADAM AIR MISHAP IN FEBRUARY 2006 IS A PRIME EXAMPLE.

INVESTIGATORS ALSO OFTEN BECOME CONSULTANTS.

THE NEED FOR AN INDEPENDENT INVESTIGATORY BODY IS HUGE.

FOLLOWING INVESTIGATIONS, SANCTIONS ARE RARELY CARRIED OUT.

BUT THE INVESTIGATION IN FEBRUARY OF 2006 SEEMED TO BE LEGITIMATE.

IN THE END, HOWEVER, LITTLE HAPPENED.

*THE EXECUTIVE DEEMED ACCOUNTABLE
WAS FIRED BUT LATER REHIRE.*

*GOVERNMENT OFFICIALS SAY THEY ARE
APPREHENSIVE ABOUT SLAPPING SANCTIONS
ON VIOLATORS.*

*TURNING PROFITS HAS TAKEN PRIORITY
OVER SAFETY, CRITICS MAINTAIN.*

*LOW-COST CARRIERS ARE NOT
INTRINSICALLY DANGEROUS.*

*DEREGULATION OF THE AIRLINE INDUSTRY
DOES SEEM TO HAVE HAD SOME NEGATIVE
CONSEQUENCES.*

But the reality, as of January 2007, is less encouraging. From the beginning the police investigation was seriously hampered when the plane was allowed to take off again without further investigation. The infamous black box that records all flight data only records one flight at a time, from take off to landing. If the plane sets off on another journey without the black box being replaced, data from the previous flight is erased and recorded over. Effectively, the evidence was removed from the scene and destroyed.

Adam Air's Director of Operations, Ade Salmair, was indeed fired from his job, but resurfaced soon after in the same company as the CEO. According to reports, the two pilots concerned are now at the helm of planes for other airlines, despite clear instructions from the minister of transportation that they should be grounded until investigations are complete. Meanwhile, the Director General of Air Transport, Mohammad Ichsan Tatang, decided that the case only merited a "strong warning letter" and there is no sight of any court proceedings on the horizon.

Setio Rahadjo, the chairman of the government's air crash investigation body, the KNKT, told the *Report* that "the government had so far never imposed any sanctions on airlines" because it would likely "ruin their business." But with pilots publicly describing the pressure that the management of some airlines put them under to keep on schedule, perhaps the time has come to ruin a few businesses.

Up, up and away

Turning a profit in the airline industry has taken priority over safety since the industry was deregulated in 1999, critics maintain. Busting an airline monopoly that had set the cost of air travel for decades, the government also made it easier for new players to enter the market. Table Three below shows a selection of indicators comparing the new carriers to the old.

"There is nothing intrinsically dangerous about low-cost carriers," says Hasan, the ex-director of *Sempati*. "The model works well in Europe and to a certain extent in the US. But comparatively speaking, in Indonesia there is one major cost which the airlines cannot save that the European ones depend on: the use of alternative airports." In other countries, he explained, airlines are charged less for using secondary airports that are located outside the city they serve. "This makes us suspicious that they rely more on making savings in maintenance. But if we had proper enforcement of the regulations this would not be a problem," he said.

There are, however, indications that deregulation has negatively impacted safety in other less direct ways. With passenger numbers in Indonesia skyrocketing from 6 million in 1999 to 35 million in 2006, the industry's supporting resources have struggled to keep pace. The Directorate of Air Transport is undermanned but did recently announce that it will employ 50 new inspectors in 2007. Planes also come under higher levels of stress when they don't receive the proper amount of downtime that industry standards require. While the number of passengers has risen almost six-fold since 1999, the number of planes only increased from 241 to just 300.

| Table Three: Selected Indonesian Airlines Compared | | | | | |
|--|--------------------------|-------------------------------------|-----------------------|-------------------------|--------------------------------------|
| Operator | Flightsafe Safety Score* | Average Age of Fleet (years) (2005) | Year of Establishment | Number of Planes (2005) | Number of Passengers (million, 2005) |
| Garuda Indonesia | 5.46 | 10.0 | 1949 | 58 | 6.99 |
| Batavia Air | 5.31 | 23.4 | 2002 | 23 | 1.97 |
| Star Air | 5.06 | - | 2001 | 7 | - |
| Bali Air | 4.87 | - | 1973 | 6 | - |
| Bouraq Indonesia | 4.83 | 25.1 | 1970 | 8 | 0.91 |
| Jatayu Air | 4.73 | - | 2000 | 1 | - |
| Mandala Airlines | 4.69 | 23.9 | 1969 | 15 | 2.37 |
| Lion Airlines | 4.54 | 17.3 | 1999 | 47 | 5.45 |
| Adam Air | 4.44 | 18.1 | 2002 | 19 | 2.92 |
| Sriwijaya Air | 4.21 | 23.5 | 2003 | 14 | 2.35 |
| Pelita Air | 4.09 | - | 1970 | 6 | - |
| Merpati Nusantara | 3.44 | 21.6 | 1962 | 42 | 1.84 |
| Wings Air | 0.99 | - | - | - | 1.78 |

Sources: *Warta Ekonomi*, August 3 2006; <http://www.flightsafe.co.uk>

* The scores are a subjective assessment from Flightsafe based on accident data, the age of the airline, the average fleet age, the type of aircraft flown and details of management ownership and operational capability. The numbers correlate to categories used by the UN to advise staff, where 6.25 and above = use without restriction, 4.00-6.24 = use if Category A carrier is not available, 1.00-3.99 = Not to be used without the approval of Headquarters and less than 0.99 = Not to be used under any circumstances.

But the biggest impact on safety, according to industry insiders, is a shortage of qualified pilots—something that can be traced to the Asian economic crisis in the late 1990s. “The domestic airline industry was very depressed after the economic meltdown of 1998,” the foreign aviation consultant told the *Report*. “No one wanted to train to be a pilot if the jobs were scarce. So when the industry exploded after deregulation, the pilots just weren’t there.”

This shortage has meant that pilots captaining planes with some of the low-cost carriers have far less flying experience than the international industry standard. “In the US captains typically have 10,000 to 15,000 hours of flight experience. Here, pilots become captains with only a few thousand hours behind them,” the consultant said. “Airlines hijack each others’ pilots with the promise of making them a captain faster. Garuda is saying that the low-cost carriers are taking co-pilots from them to become captains who would need years to become captains with Garuda.”

A familiar story

Over the years a discernable pattern has emerged in the government’s response to plane crashes. The first step is to issue a regulation or two. Following the recent Adam Air crash, it was a regulation to stop the practice of shortening routes to save on fuel costs, a move which industry experts say is unenforceable. After the Lion Air crash in 2004 came a new regulation on the proximity of residential areas to airports, which has not been enforced. The 2005 Mandala crash prompted a government regulation on the age of aircraft.

The second step is to create a new air safety team, usually under the supervision of the president. Transport Minister Hatta Radjasa reassuringly announced

QUALIFIED PILOTS ARE ALSO A PROBLEM.

THE HOURS NEEDED TO BE A CAPTAIN IN INDONESIA ARE FAR LOWER THAN ELSEWHERE.

THERE IS A DISCERNIBLE PATTERN TO THE GOVERNMENT’S CRASH RESPONSE.

*ADDRESSING SYSTEMIC ISSUES DOES NOT
SEEM TO BE PART OF IT.*

in February 2005 that the last air safety team found “all the planes are passed to fly, the airports are fine too, everything is okay to use.”

However, to make a real difference the government needs to address the systemic issues raised by the *Report*’s sources. The whole industry has to become more transparent. Investigations by the KNKT should be available to the public and all airlines should produce annual reports. The government would also do well to submit accident reports to the ICAO, a voluntary practice that the country sees fit to avoid at present.

*A PROFESSIONAL, WELL-PAID CIVIL AVIATION
AUTHORITY WOULD BE A GOOD START.*

Also, while the country waits for a sufficient number of experienced Indonesian pilots to come on tap, the government should consider making it easier for airlines to hire experienced foreign pilots. For now, this is quite hard to do.

The creation of a civil aviation authority that is independent of both the airlines and the government would be another crucial step, with immediate sacking of anyone who violates this independence. A professional, well-paid staff should be encouraged to apply the letter of the law, employing high-profile sanctions against both management and workers of negligent airlines.

*FOR NOW, EVERYONE WHO FLIES MUST PUT
THEIR TRUST IN THE GOVERNMENT.*

For those who can afford regular air travel, inept government regulation usually only leads to relatively minor frustrations, rarely involving personal life or death situations. Furthermore, those in higher income brackets are able to avoid the country’s antiquated public transport sector for safer modes of transportation. But, as in the case of air travel, when the only option is to trust the government, the experiences of countless ordinary Indonesians with negligent government services can come into a sharper focus for us all.□