Following the deployment of the emergency Australian medical teams, in early March Interplast Australia and International SOS were contracted to provide and manage an Australian-Indonesian medical team to assist the general hospital in Banda Aceh re-establish services and provide on-the-job training. The size of the team varied between 20 and 26 members over the 5 months of the contract. The majority were Indonesian who, with their experience of working in Indonesia, knowledge of the health system, language skills and cultural sensitivity, were essential to the success of the program.

I returned to Banda Aceh with this team on 3 March, having previously worked there for 2 weeks during the emergency phase with the Victorian medical team. I took over the practical aspects of the microbiology laboratory from the excellent hands of Kate Greening from Queensland Health. This included training three highly motivated and competent local laboratory staff, none of whom had previous experience in microbiology. Before the tsunami, typical of most Indonesian hospital laboratories, the only microbiology service offered was microscopy and the staff members responsible for this had died in the tsunami.

On my return, the working conditions were still the same, but by then we were accustomed to working around power and water failures as well as the occasional earth tremors. We tried not to worry about the insect trails across the agar plates, the grinding noise of the microscope stage protesting against the dust, or the refrigerators deciding that they really didn’t like the tropics after all and wanted to go home. Our only reliable fridge was one made in Indonesia, providing a classic example for the reason why humanitarian organisations should source supplies locally.

On the night of 28 March, a severe earthquake measuring 8.6 on the Richter scale sent us all staggering from the house. Although it caused no further damage in Banda Aceh, it traumatised an already traumatised population and there were many absences from work the following day. In April, it was reported that 58% of the hospital staff were suffering post traumatic stress. The damage done by this quake in Nias has been well-documented and our Interplast SOS team immediately dispatched a medical team there.

Working conditions did gradually improve. By late March we had moved into a renovated air-conditioned room with reliable water and power supplies. The hospital had reopened their food stalls and the coffee shop, serving the best coffee in Indonesia.

My main goal was to set up a sustainable, simple, fully documented system to cover basic routine bacteriology which could be carried out by technicians with minimal training. This included providing simple algorithms for choosing potentially significant isolates from amongst the exasperating mixed enteric and environmental flora culture results typically obtained in the tropics. The SOS team included an Indonesian laboratory technician who, although having no microbiology experience, proved invaluable in assisting with revising and writing laboratory methods in Bahasa, as no comprehensive Indonesian methods could be sourced.

This goal was achieved only because of the high calibre and motivation of the Acehnese laboratory staff and the support of the Director of Pathology, Dr Harwita. The level of sophistication, however, will not be sustainable once the donated laboratory supplies run out; the hospital budget cannot support the cost of providing disposable equipment and

Microbiology staff and the Akademi Analis Kesehatan lecturer in training.
the range of diagnostic kits considered the norm in Western laboratories.

This problem was already evident in biochemistry where pipette tips were rinsed by the cleaner and reused repeatedly. Although we were using the supplied kits, where possible simple manual tests were performed in parallel for teaching purposes; many a morning session began with “…what to do/report when the kit/reagent runs out…”

Previously specimens for culture and sensitivity testing were referred to the provincial laboratory but, being a user pays service, this was rarely undertaken. Treatment was empiric and there were no hospital prescribing policies. This was reflected in our antibiotic sensitivity results which showed an alarmingly high level of resistance. Over a 2 month period, 54% of Pseudomonas aeruginosa, 24% of enterobacteria and 38% of S. aureus isolates were multi-resistant.

By mid March, most foreign teams had departed, and the hospital was again staffed by Indonesian doctors; the consequence was that the number of specimens submitted for general microbiology tailed off to only two or three a day. However, with the reopening of the TB ward and the out-patients clinic and the return of the pulmonologist, the TB programme was revived. The number of sputum specimens for Ziehl Neelson (ZN) staining increased and became the bulk of the day’s work. Around 25% of sputum samples received were positive for AFB in direct stains.

Whilst the tremendous amount of high profile foreign aid provided to the general hospital is laudable, by April it was evident that low profile training institutions had been left out of the loop and were not receiving any assistance at all.

At the request of the microbiology lecturer, we visited the Akademi Analis Kesehatan, the institution which trains laboratory technicians, which had an enrolment of 200 students at the time. The Akademi had lost most of its equipment and supplies and was valiantly attempting to carry on, but was only able to conduct lectures. Without a photocopier, not even notes could be supplied to students.

The province of Aceh has around 250 laboratories responsible for simple basic laboratory services attached to health clinics 3; it is essential that staffing of these laboratories is maintained. If the Akademi closes down, as has happened already with other training institutions, the results will show up in the years to come, with staff shortages across the province.

The materials required are basic, non-disposable, for simple manual determinations; materials possibly still to be found gathering dust in Australian laboratory storerooms. Any laboratory text books, no matter how old, would be appreciated. There is one staff member who speaks English and can translate texts. I urge ASM members to take the Akademi on board as a project.

Reference
1. A humanitarian organisation staffed by volunteer Fellows of the Royal Australasian College of Surgeons and registered nurses from Australia and New Zealand.
2. A private company providing global medical evacuation and medical services.
3. Minimally: Hb, WCC, blood glucose, urine microscopy, parasitology, malaria screens, ZN staining.