



Food Security in the Australian Overseas Aid Program

by Margaret Thomas and Andrew Mitchell

Food security is one of the major issues on the international development agenda, its profile highlighted by the World Food Summit to be held in Rome in November 1996. This will be the first summit level meeting on food since the World Food Conference in 1974.

Access to sufficient and nutritionally adequate food is a fundamental human right. However, the continuing ability of the world to feed itself has long been the subject of debate.

Without doubt, much has been done to overcome hunger and malnutrition, to bolster agricultural growth and to ensure the available food is distributed more equitably. Indeed, there have been significant gains in this area, with the number of chronically hungry people declining by 150 million (from 950 million) over the last 25 years. A key reason for this improvement has been the increasing agricultural yields realised by technological gains from the 'Green Revolution'.

However, despite these achievements, in developing countries, nearly 800 million people remain chronically undernourished and some 200 million children under the age of five suffer from protein or energy deficiencies. This is an unacceptable position in a world which currently produces sufficient food for everyone.

The problems confronting food security for the world's poorest remain enormous. As well as the question of ensuring access of the poor to available food, issues such as increasing food needs due to population growth also need to be addressed.

With the annual increase in the world's population larger than ever, around 90 million people each year, considerable effort will need to be devoted to increasing food production without further degrading natural resources.

What is Food Security?

The critical issue at present is not food supply *per se* but a lack of access to food, a major cause of which is poverty.

Food security is not just about making more food available, nor is it just about increasing agricultural productivity. It is about improving the access of the poor and vulnerable to enough food so that they are no longer hungry and malnourished.

The key solutions revolve around addressing the problems of distribution and ensuring that finite natural resources are used in a sustainable and increasingly productive way. Investing in productive people through the provision of basic health and education services, as well as in infrastructure to ensure access to markets and efficient post-harvest handling techniques, are equally relevant.

Australia strongly supports an approach to food security based

on self reliance which recognises the complementary roles of domestic production and trade, based on the principles of comparative advantage, as the most effective way to achieve food security.

Food Security and Trade Liberalisation

A commitment to food security through efficient resource allocation requires an equally firm commitment to liberalised trade.

The progressive liberalisation of markets which commenced with the conclusion of the Uruguay Round of trade negotiations will boost economic growth. Over the longer term this will have a major impact on alleviating poverty and improving access to food.

Free trade allows countries to better exploit their comparative advantage and to increase production and trade in areas in which they have an advantage.

Removal of trade barriers and trade-distorting subsidies will provide incentives for farmers, including in developing countries, to invest in agriculture, expand economically efficient production and contribute to food security and economic growth.

Special Needs of Least Developed Countries

The final agreement of the Uruguay Round also explicitly recognises that its outcomes may, in the short term, adversely affect the cost and availability of food supplies in some low income food deficit countries.

Australia is committed to ensuring the concerns of those affected countries are taken into account.

Vaccine Success in Zimbabwe

A new vaccine to protect Zimbabwe's cattle against tick fever has been successfully trialed and is close to being registered by the Zimbabwe Government for general use, largely through the efforts of Australian project scientists, working through the Australian Centre for International Agricultural Research. The vaccine costs a fraction of previous treatments, is less harmful to the environment, is more easily administered and gives longer term protection to livestock.

Many Zimbabweans live subsistence rural lifestyles and the health of their farm animals is a matter of survival. Tick fever in cattle has become an increasingly expensive problem. When the Government faced the very real prospect that it could no longer afford the weekly dippings of cattle used to guard against the disease, an alternative method of protection was sought.

Similarities with the Zimbabwean terrain and climate and a 30 year track record in the development of vaccines against tick-borne diseases put Australia in a unique position to work with Zimbabwe to find a solution to the tick fever problem.

With the technology transfer now nearly completed, it is expected that the benefits of the new vaccine will flow to other countries of the region. The research will also lead to improved disease control strategies in Australia. Most importantly, Zimbabwe has developed the capacity to mass produce the new vaccine and the local expertise to conduct future research in this important field.

The World Food Summit

In this context, the World Food Summit to be held in Rome in November 1996 will consider the difficult questions of how to eliminate hunger and malnutrition and to take specific action to ensure food security for all. The challenges before the World Food Summit are complex and demanding. Australia is playing an active role in the lead up to the Summit.

In recognition of the desirability of all countries participating in the Summit and of Australia's special relationship with developing countries in the South Pacific, Australia has provided funds to enable representatives from those countries to participate.

Australian Aid for Food Security

Australia has long given considerable support for improving food security in our partner developing countries, principally through: assisting sustainable land management and agricultural production; supporting agricultural research, largely through the Australian Centre for International Agricultural Research; providing both humanitarian relief and developmental food aid; and by providing technical assistance to help countries adjust to the new trading environment.

Other aspects of the aid program also help promote food security. For example: providing agricultural marketing infrastructure and policy advice; ensuring water resources are used properly; and investing in the provision of basic education and health services for the rural poor, particularly women and girls who are critically involved in agricultural production.

Expenditure on agriculture and food aid amounts to about 15 per cent of the aid program - second only to education expenditure.

Dr Jenny Turton, an Australian veterinary scientist employed by the Overseas Service Bureau, works with members of ACIAR's tick fever project research team in Zimbabwe

Agricultural Projects

Most of AusAID's bilateral country programs include some form of agricultural project activities. About \$40 million is spent each year on agricultural production and services, agricultural storage and land survey and conservation. Another \$10 million is spent on forestry activities and \$5 million on fisheries.

In many developing countries, characterised by large, although often unproductive, agricultural sectors, agricultural growth is the key to development. Kick-starting domestic demand necessitates raising productivity in the agricultural sector in developing countries. Many of AusAID's projects focus on exactly that.

Support is also provided to international organisations with a focus on agriculture, including the International Fund for Agricultural Development and the UN's Food and Agriculture Organisation.



Photo: OSI/Debra Pluechahn

Agricultural Research

About \$40 million is spent on international agricultural research under the aid program, principally through the Australian Centre for International Agricultural Research (ACIAR), including support for international agricultural research centres.

ACIAR promotes research into improving sustainable agricultural production and natural resource management in developing countries. ACIAR facilitates research collaboration between Australia and developing countries for mutual advantage by mobilising appropriate Australian research expertise to help developing countries to help themselves.

ACIAR contributes to Australian and global food security by underwriting research aimed at three aspects of the security issue:

- *availability*: through research on improved production, post harvest technologies, food quality and risk management;
- *access*: through investigation of agricultural policies, marketing and distribution; and
- *sustainability*: through research for sustainability of production systems and renewable natural resource management.

THE MANY FACES OF FOOD SECUR

Cambodia: Increasing Rice Production

Cambodia is one of the poorest countries in the world and is still recovering from the long period of war and isolation between 1975 and 1993, during which the country's infrastructure, human resources and economy as a whole were severely damaged.

Rice is the staple food of Cambodia although yields are the lowest in Asia. For many years, rice-based farming systems have been unable to meet the basic food and income requirements of the Cambodian people, particularly those living in rural areas.

Since 1989, Australia has been assisting Cambodia, through the International Rice Research Institute (IRRI), to increase rice production which was also devastated during this period. Australia has provided nearly \$10 million to support rice production during this period and is likely to double this amount over the next five years.

Under the project traditional varieties of rice which were lost through the dislocation of farmers from their land have been reintroduced, along with new high-yielding rice varieties which are acceptable to consumers.

The introduction of new technologies and farming systems under the project has been of major benefit to low-income rice farming households, many of which are headed by women. Increased farm production should enhance the nutritional status of people in these households and provide farm surpluses to sell. The urban poor will also benefit from increased rice supplies and stable prices.

In early 1996, the Royal Government of Cambodia announced that, for the first time in more than 25 years, Cambodia had generated a rice surplus. This was due to a number of factors including favourable seasonal conditions. The technological development and capacity building in the sector generated by Australian and IRRI

assistance has no doubt contributed to this positive result. Support under the project will continue for another five years, during which time Cambodia looks forward to even more dramatic improvements in the productivity of rice based farming systems.

Papua New Guinea: Agricultural Quarantine Support Project

Agriculture provides a subsistence livelihood to 85 per cent of the population in Papua New Guinea (PNG), as well as involving significant employment in the formal sector. To protect the health status of its native flora and fauna and agricultural crops and livestock, PNG must maintain an effective quarantine barrier. Agricultural development is also important to increase employment opportunities and provide greater export earnings, substitute for imports and improved food security.





In 1995 Australia commenced funding a \$9 million project to help improve the PNG government's capacity to provide quarantine, animal and plant health services. A large part of the project will focus on the institutional strengthening of AQIS, along with pest and disease control, feral cattle and buffalo control and legal enforcement.

A strengthened quarantine service will help protect PNG from exotic pests and diseases that pose a serious threat to the country's agricultural industries and environment.

The project will also play an important role in developing quality control of PNG's traded agricultural goods. Agriculture accounts for about 15per cent of export earnings. The changes in the global trading system following the successful completion of the Uruguay Round require that greater attention is paid to quality

assurance of traded produce. The project will assist with the development of systems to inspect and certify the health status and quality of animals and plants being exported.

Indonesia: East Timor Water Supply and Sanitation

East Timor is one of the poorest Indonesian provinces. Over 90per cent of the population is employed in agriculture, often at subsistence levels. Health and nutrition levels are considerably lower than the national average.

Lack of access to a safe and reliable supply of water and sanitation facilities is a major constraint for many people. It contributes to long hours of work for women and children collecting drinking and household water and a high incidence of diarrhoea and other water borne diseases.

The East Timor water supply and sanitation project is a five year, \$13 million program of assistance to improve the welfare of the people of two districts, Kabupaten Dili and Kabupaten Covalima, through sustainable improvements to water supply and sanitation facilities. The project will benefit 100 000 Timorese people.

A significant part of the project is the provision of low cost water facilities and environmental health education to low income communities not covered by urban water supply systems. Local groups are involved in working with communities in the planning, implementation and maintenance of sanitation and water facilities and community health activities.

Women have been the main beneficiaries of an improved water supply system through a reduction in the time spent fetching water. Water is now available for cultivation in home gardens and nearby fields and for livestock. It allows more time for activities such as weeding, planting and harvesting, enabling the family diet to be improved. The improvement in family hygiene conditions has also reduced the incidence of diarrhoea and skin and eye diseases.

As water supplies and community networks have been established, one of the spin-offs has been the development of income-generating activities such as the development of vegetable and fruit gardens. Such activities, while small scale in nature, can help to improve the nutrition and food security of local communities. Income generated from the sale of produce provides women with the opportunity to further improve their families' diets and pay for schooling for their children.

Ethiopia: Rehabilitation for Food Security

Ethiopia is one of the poorest countries of the world. Until the early 1980s, it was self sufficient in food, but its agricultural base was severely damaged by the civil war. Today an estimated 2-3 million people remain vulnerable to food shortages. Ethiopia has the potential to ease its chronic food deficit, but if the chronic cycle of famine is to be beaten, Ethiopia needs to rebuild its agricultural base, environment, water supplies, health systems and infrastructure.

The Australian Government has recently approved an \$8.6 million package of financial and food aid to help Ethiopia rebuild after decades of civil war. Of this package, some \$3 million was used to provide Australian wheat for the Emergency Food Security Reserve (EFSR). The Reserve is



an innovative mechanism to ensure that at least 300 000 tonnes of food grain is available in emergencies. Food stores are located at strategic locations in Ethiopia in readiness for providing grain for distribution during emergencies. Not only does the EFSR act as a bank for food security, it lends food for use in food-for-work rehabilitation programs. Food-for-work provides resources for important water and soil conservation activities. The Ethiopian Government and other donors which contribute to the EFSR all consider it to be an outstanding success.





Among the achievements of ACIAR's research projects are biological control, detection and management of serious pest and weed problems in Asia, Africa and the Pacific; development of more productive, disease free lines of crops traditional in these areas such as banana, coconut, sweet potato and cassava; and improved techniques for measuring nitrogen fixation by leguminous food, forage and tree crops.

Australia provides about \$10 million per annum to a range of international agricultural research centres. Examples of these centres are the International Rice Research Institute (IRRI) in the Philippines and the International Maize and Wheat Improvement Centre (CIMMYT) in Mexico. Six of the centres are headed by Australians. We are on the governing boards of 14 of them.

The returns to developing countries from agricultural research and development are very high and include social and economic benefits beyond the agricultural sector. The benefits to Australia from international agricultural research are also enormous, estimated at \$3 billion over the last 20 years.

Food Aid

Food aid continues to be an important element of Australia's aid program, at about \$100 million each year. As a signatory to the current international Food Aid Convention (FAC) (1995-1998), Australia is committed to providing a minimum of 300 000 tonnes of food aid per year in wheat (or its equivalent in other grains and commodities). An important part of Australia renewing its commitment to this level was the

need to ensure low income food deficit countries have access to adequate amounts of food aid following the implementation of the Uruguay Round reforms in agriculture. Australia's strong support for food aid is in contrast to the decline in food aid levels among some of the other major food aid donors.

Food aid is provided for both development and humanitarian relief purposes and as such is an important development resource.

About three quarters of Australia's food is provided as development food aid, assisting countries predominantly in Asia and Africa. Developmental food aid helps countries reduce their need to import food commercially and can be targeted at the poor and food insecure. Australia provides food aid which is used to support projects which improve agricultural production and food security.

Activities include food-for-work projects in which agricultural improvements (including land conservation activities) are carried out using local labour, providing employment opportunities and building the infrastructure necessary for sustainable development. Food aid is also used in school feeding programs, providing benefits such as nutritional improvement and an increased incentive for school attendance.

Australia provides developmental food aid through bilateral country programs and through the UN World Food Programme (WFP). Last year, Australia provided nearly \$52 million to the WFP, two thirds of which was as food commodities. The major recipients were Bangladesh (\$12 million), Ethiopia (\$7 million) and Pakistan (\$3.7 million).

Another \$25 million is provided through bilateral country programs. The largest recipients last year were Bangladesh (\$14 million), Mozambique (\$4.5 million) and Cambodia (\$3.4 million)

DIRECT AID EXPENDITURE ON FOOD SECURITY (\$MILLIONS)

	1991-92	1992-93	1993-94	1994-95	1995-96
Agricultural projects (incl. forestry & fisheries)	65.0	67.5	55.3	59.4	46.7
Agricultural research	26.0	29.6	33.7	36.7	40.0
Total projects + research	91.0	97.1	89.0	96.1	86.7
Food aid (relief)	30.2	21.1	28.0	17.7	25.6
Food aid (development)	76.1	68.2	73.5	77.1	77.0
Total food aid	106.2	89.4	101.4	94.9	102.6
TOTAL	197.2	186.5	190.4	190.9	189.3



Australian food aid is also provided as humanitarian relief, assisting the victims of natural disasters and human conflicts. Most relief nowadays is needed as a result of conflicts such as civil wars and ethnic rivalries. Australian food aid contributes directly to the food security of some of the world's poorest people.

Last year, Australia provided about \$25 million of food aid to support humanitarian relief operations in places such as Angola and Ethiopia, as well as providing vital food commodities for refugees and internally displaced persons in Afghanistan and Mozambique. Australia also helped relieve severe food shortages in Cambodia and Iraq.

Support for Food Security in the Area of Trade

A recent innovation under the aid program has been the introduction of trade-related activities to assist developing countries to adapt to the new global trading regime. For developing countries, the post Uruguay Round trading environment offers unprecedented opportunities to achieve economic growth and development, including food security, through focussing economic activity on areas of comparative advantage.

Australia is providing assistance through high level trade policy training courses to help a number of countries establish a pool of people with trade policy skills who support trade reform and can move the issue forward.

Technical assistance in such areas as customs procedures, intellectual property rights, and quarantine systems has also been extended to assist countries to put in place trade systems which comply with international trade agreements.

Other Aid That Contributes to Food Security

Many of AusAID's activities in other sectors contribute to rural development and poverty alleviation, thereby enhancing food security for the poorest. These include activities in health and education, water resources, transport and communication infrastructure and good governance. Support for programs that directly benefit women and girls are also vital for increased agricultural production. These related activities are estimated to involve expenditure of well over \$100 million per year.

Conclusion

Despite the challenges which food security and rural development present, this is an area where Australia has a comparative advantage. Australia has a fine record in the provision of relevant agricultural and other expertise and the provision of assistance in this area is also in Australia's own long term interests. Helping developing countries achieve food security will continue to have priority in the aid program.

Trade Related Support for the Philippines

In 1995, Australia established a Technical Advisory Services Facility to assist the Philippines' economic liberalisation program. Australian experts will provide short-term technical and policy assistance in key areas affecting international competitiveness. A range of consultancies have been let under the project including: for the Department of Trade and Industry on laboratory accreditations and import valuations, dumping and countervailing measures, and for the Department of Agriculture on how best to foster international competitiveness.

Senior-level Philippine trade officials will also participate in a trade policy training course in Australia in September this year. The course aims to provide participants, which will also include officials from Indonesia, Thailand and Malaysia, with an improved understanding of trade policy reform and the outcomes of the Uruguay Round.





Bringing infant health care into the home - (left to right) village nurse, Artini; Dukun Bayi (traditional birth attendant), holding newborn; mother, Minerah Arfin; and the Bidan Desa (village midwife), Minarep. Kebun Ayu village, West Lombok, Indonesia.

GIVING CHILDREN A HEALTHY START

by Geoff Adlide, AusAID
photos by David Haigh

Lombok, a short ferry trip from the tourist mecca of Bali, is set to be the next big holiday destination in the region. International hotel chains are building new resorts along the coastal strip and there are hopes that the planned extensions to the airport will bring more visitors and their money to this relatively poor island. Away from the tourist beat, in the villages across the province of 3.6 million people, the AusAID-supported Healthy Start for Child Survival Project has introduced an innovative system of home based health care to improve the chances for new mothers and the 100 000 babies born each year. Geoff Adlide spent a day with a village health team seeing the new system in action and met the most recent addition to Lombok's growing population.

The fragile swaddled boy isn't even a day old. Minerah Arfin sits quietly on the lounge cradling her treasure. She is surrounded by older women: the three *Dukun Bayi* (traditional birth attendants) who had helped her labour through the previous morning and her own mother who wears the proud smile found on new grandmothers the world over. The young village midwife, the *Bidan Desa*, fits into the scene comfortably. She too was at the birth yesterday. It had been a difficult breech delivery and Minerah had haemorrhaged but



about 1pm they had all shared the beauty of a healthy birth. Now they are joined by the nurse from the local health post to give the young boy, and his mother, a healthy start to life.

Minerah listens intently to the advice from the other women and grimaces silently as she and her newborn get their shots. The boy's weight is recorded on his baby health care card which also pictorially explains basic infant care. By the time we leave, an hour later, the boy has received his first Hepatitis B and polio vaccinations and he'll soon taste the benefits of the megadose of vitamin A given to his mother. The local health post records show that Minerah is due for a tetanus injection and because of the high prevalence of goitre in the district, the opportunity is also taken for a dose of iodine. They leave behind the baby's *Road to Health* card, which she will bring to her next check up at the local health post, a packet of iron supplements and a cake of soap to reinforce the baby care cleanliness message.

It is Minerah's fourth child, her first boy, although only three survive. The youngest daughter had died in infancy.

Unfortunately, infant deaths are not uncommon in Lombok. In suburban Australia the infant mortality rate is six per 1000. Here 110 children per 1000 don't get to celebrate their first birthday. In this province, Nusa Tenggara Barat, centred on Lombok island in eastern Indonesia, that equates to 11 000 babies dying each year. And until recently, half of the deaths occurred in the first two months, before any health provider saw the baby.

The statistics are shocking - the worst in Indonesia - and would challenge any health official. But the determined head of the Provincial Health Office, Dr Ismuhadi is not daunted.

"To reverse the statistics and get Lombok on top, it's mission possible, not mission impossible," he says with unswerving confidence.

The Healthy Start project introduced a new approach with health workers and traditional midwives combining to deliver care at home. First-time parents, Jumaiyah (also pictured right) and Saidah are keen to receive advice about caring for their newborn from Dukun Bayi (traditional birth attendants, in green shirts), the village nurse, Artini (in white) and the Bidan Desa (village midwife), Minarep. Kebun Ayu village, West Lombok, Indonesia.

His confidence is boosted by the experience of the Healthy Start for Child Survival Project, an innovative model program run by the Provincial Health Ministry in collaboration with the US-based Program for Appropriate Technology in Health, Australia's Macfarlane Burnet Centre for Medical Research and a local non government organisation, YKSSI. Jointly funded by AusAID and the United States Agency for International Development, USAID, the project has introduced a system of home visits, made possible by a new community-based registration of pregnancies and births. As a result of the training and advice provided by the project team, traditional birth attendants, village volunteers, local government and health



department staff are now cooperating to promote antenatal care, safe birth and early home visits by the village midwife.

"We have learnt how to work together among different programs and to integrate the service delivery," says Dr Ismuhadi.

"*Healthy Start* is a new approach. For the first time we provide the services at home. Secondly, we combine health workers and village midwives as a team."

The project is an extension of another AusAID-funded model project which started in 1987. Its focus was on increasing coverage of Hepatitis B vaccination of young babies. Over the ensuing years, a small team of expatriate advisers worked closely with local health authorities to develop a health record and monitoring system and an integrated program of delivering services to mothers and their babies. After nearly ten years, during which the program evolved to include a wide range of integrated maternal and child health services, the project is now drawing to a close.

"It's had a fantastic impact," says outgoing project team leader, Dr Tony Stewart, a medical epidemiologist from the Macfarlane Burnet Centre's International Health Unit.

"The real measure of success can be gauged from the fact that the system has been taken on board by the Ministry of Health as their standard method of delivering health care around the time of birth across the whole province."

And there has already been a reduction in the infant mortality rate, in particular deaths from tetanus and diarrhoea - conditions particularly targeted during the project. The prevalence of diarrhoea has been reduced through the active promotion of

THE POSYANDU

There is system in the apparent chaos of the throng of mothers, babies, young children and older relatives gathered on the verandah of the local community leader. Once a month he turns his house into a *Posyandu*, an integrated health post. Local volunteers assist the village nurse and the midwife.

It's the dry season and with little attention required to the growing rice crop, attendance at the *Posyandu* is up this month. By the morning's end they will have seen 37 mothers and infants, and done several more antenatal check ups.

The first table is for registration. Infants are weighed in a sling suspended from a rafter and their growth charted on their *Road to Health* card and recorded in the *Posyandu* book. At the next table,

concerned mothers get nutrition and family planning advice and further along, the nurse dispenses vaccinations. In a room inside the midwife is examining pregnant women.

The *Posyandu* book, together with a wall chart hanging inside the front room, record vital details of births, deaths and pregnancies in the community. It also tracks individual progress and enables volunteers or health workers to follow up on people who have fallen behind in their treatments and so enhances vaccination coverage.



breastfeeding and of the need for simple hand washing in baby care. The introduction of routine tetanus vaccination for pregnant mothers and training in clean delivery and cord cutting practices has substantially reduced the incidence of neonatal tetanus.

From the beginning, the project was implemented by the staff of the Ministry of Health.

“This is very important,” says Dr Stewart. “If we, as outsiders, did all the work, the whole thing would fall in a heap when the project finished. By involving them from the outset, it continues. We also worked with health officials to identify continuing sources of funding for the program from their own recurrent budgets.”

At the start of the Hepatitis B model project, a community-based registration system for births and pregnancies was developed to enable enhanced coverage of the vaccination.

“In areas where there’s a high rate of transmission of the virus from mothers to babies during birth, as we find in Indonesia, the Hep B vaccine is most effective when delivered to newborns within the first days of life,” explains Dr Stewart.

With over 95 per cent of infants in the province born at home and a cultural practice of mothers not taking their babies outside of home for forty days, it was recognised that the mother’s home must be the starting point if early interventions are to be effective. “Rather than focusing on the potential negative aspects of home births, the *Healthy Start* program uses the home setting to its advantage,” says Dr Tony Stewart.

“The central focus for the interventions is the birth of a baby and the subsequent home visit within the first week of life. From there, further services were added



Checking babies' growth at the Posyandu (health post), Penarukan Lauq, Lombok, Indonesia.

stretching backwards in time to providing antenatal monitoring and care, and forwards into early childhood.”

The *Healthy Start* approach built on the new decentralised health care system established by the Government of Indonesia in the mid-1980s. Central to the Government’s plan is the placing of a *Bidan Desa*, a village midwife, in each community. The *Bidan Desa*

are qualified nurses who have completed an additional year of midwifery training. Supporting and strengthening their role is the key to the *Healthy Start* approach.

The decentralised system established village level health centres servicing a network of integrated health posts, known as *Posyandu*. The *Posyandu* are not dedicated buildings, rather they are a house volunteered by a community member which once a month becomes a hive of activity. (see box)

*A busy day at the Posyandu (health post),
Penarukan Lauq, Lombok, Indonesia.*

Health information is recorded in the *Posyandu* book allowing the health workers to pick up missed attendance and follow through to ensure that immunisation and treatment programs are maintained.

“Enhancing community participation in health care services and their involvement in maintaining vital registration systems, increases their sense of responsibility and control,” says Dr Stewart.

“Before a records system was introduced, health workers measured success by how many people turned up at the clinic. If ten mothers turned up for vaccinations, that was good, if twenty turned up, that was better. But there was no way of knowing how many infants were being missed. A proper records system allows health workers to actively follow up all mothers and infants and so improves immunisation coverage.

“The registration system of pregnancies and births that was set up under the *Healthy Start* project is now feeding children into the *Posyandu* system. Also by documenting infant deaths and the causes of death, patterns can be detected which enable health workers to identify problem areas and intervene.

This month, the project staff are clearing out their offices. The last three year phase of the project is complete.

“Will it be difficult to continue once the team has gone?” I ask Dr Ismuhadi. “The main thing is there’s the commitment,” he replies. “I can tell you that the provincial health office in Lombok has the commitment and we can combine the national budget and the local budget to continue the work. It will continue.”



NEW TECH FOR NEW KIDS

Pitching the focus of infant care at home visits by village midwives was greatly assisted by a new method of delivering inoculations developed by PATH with AusAID assistance. The radical but simple UniJect is a nonreusable injection device prefilled with a single dose of vaccine. It was successfully field trialed during the *Healthy Start* project where midwives travelled to the homes of newborns to deliver a maternal Tetanus Toxoid dose to the mother and Hepatitis B vaccine to the infant.

UniJect was developed specifically for rural areas for vaccines and medications that don't require refrigeration. The small pre-filled syringes can be stored in the homes of the village midwives for up to a month. Being non-reusable, the risk of spread of blood-borne viruses such as HIV and Hepatitis B and C is reduced.

Cost analyses have proved their efficiency. Being prefilled with a single dose, the wastage associated with the more common multi-dose vials is

eliminated. As well, better immunisation coverage is more likely - experience shows that health workers are often reluctant to open a multi-dose vial of vaccine to administer a single dose. In fact a recent cost analysis suggests Indonesia could save \$1.5 million a year in Hepatitis B vaccine alone.

UniJect also proved to be better accepted by mothers and easier to administer by health worker than the traditional larger syringes.

A recent breakthrough which should see UniJect adopted on a large scale is the licensing of its production to a commercial manufacturer in Singapore. From mid-1997, UniJects will be available in commercial quantities to vaccine and pharmaceutical manufacturers.

Another technology which was field tested in Lombok helps in the early detection of low birth weight babies. Low birth weight babies are most at risk of sickness and death. In Lombok and surrounding areas newborns are weighed by *Dukun Bayi* (traditional birth attendants),

many of whom cannot read or write. So the *Healthy Start* team provided *Dukun Bayi* with simple colour-coded scales, trained them in their use and in the care of low birth weight infants.

If the infant weighs more than 2 500 grams, a blue colour appears in the window, otherwise a yellow colour appears indicating a high-risk infant needing special care. *Dukun Bayi* send birth notification on cards of matching colour to register the birth with the village-based birth reporting system. In this way the village midwives, the *Bidan Desa*, can quickly know if there is a high risk baby in her area.

The BIRTHweigh scale and UniJect were developed by the Program for Appropriate Technology in Health, PATH, an international non profit, non government organisation which seeks to improve women and children's health in developing countries.

Uniject - a cheaper and user friendly way of delivering vaccinations in rural areas.



In fact, Dr Ismuhadi is confident that the effect of the project will be felt much farther afield: "The approach developed in *Healthy Start* may be adopted in other provinces," he says. "The influence of *Healthy Start* in this province was presented at a national conference in early June."

While one AusAID project team is moving out, another has just arrived. When I spoke to Dr Ismuhadi he had just returned from opening the first formal training session of the new Women's Health and Family Planning Project. "It also hopes to help reduce the Infant and Maternal Mortality rates," he adds.

For at least the next five years, keeping mothers and babies alive and healthy will be a continuing focus of AusAID's work in Lombok.



... AND LOOKING AFTER MUM

"Our basic rationale is to focus on maternal mortality - the high death rate amongst mothers during pregnancy and childbirth," explains Dr Kris Hort, who is heading up the small team of midwives and trainers in the new *Women's Health and Family Planning* project based in Lombok.

"In this province Infant Mortality Rates have halved over the past 20 years, but Maternal Mortality Rates haven't come down.

"Dying in childbirth is the cause of one quarter of deaths of women of child bearing age and

half the deaths of 20-30 year old women. A large number, perhaps 50 per cent, are caused by post partum bleeding - bleeding following childbirth.

"The Health Ministry is placing a *Bidan Desa*, a trained midwife, in each village. They're often young graduates, perhaps 19 to 20 years old with three years training after high school. We're looking at ways of strengthening the *Bidan Desa*."

The project will develop new training modules for midwives and strengthen local midwifery schools. It's other focus is to

train family planning workers, particularly in the areas of diagnostics and referrals and help to improve management systems.

"Indonesian Family Planning policy planners have recognised the need to shift the emphasis of their program from a mass social approach to one which is based on individual choice," says Dr Hort. "The whole thrust of our project is to support the strengthening of individual choice in family planning decisions."