Making childbirth a village affair
A publication in the German Health Practice Collection
**Acronyms and Abbreviations**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>BMZ</td>
<td>Germany’s Federal Ministry for Economic Development and Cooperation</td>
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<tr>
<td>Desa Siaga (DSAJ)</td>
<td>Alert Village (Desa Siap Antar Jaga)</td>
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<td>DFID</td>
<td>United Kingdom Department for International Development</td>
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<td>DHO</td>
<td>District Health Office</td>
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<td>GDC</td>
<td>German Development Cooperation (with institutions BMZ, GIZ and KfW Entwicklungsbank)</td>
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<td>GHPC</td>
<td>German Health Practice Collection</td>
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<tr>
<td>GIZ</td>
<td>Deutsche Gesellschaft für Internationale Zusammenarbeit*</td>
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<td>GTZ</td>
<td>Deutsche Gesellschaft für Technische Zusammenarbeit (German Technical Cooperation)</td>
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<td>MDG</td>
<td>Millennium Development Goals</td>
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<td>MNH</td>
<td>Maternal and Neonatal Health</td>
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<td>NGO</td>
<td>Non-Government Organization</td>
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<td>NTB</td>
<td>West Nusa Tenggara Province (Nusa Tenggara Barat)</td>
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<td>NTT</td>
<td>East Nusa Tenggara Province (Nusa Tenggara Timur)</td>
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<td>PHO</td>
<td>Provincial Health Office</td>
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<tr>
<td>Polindes</td>
<td>Village Birthing House (Pondok Persalinan Desa)</td>
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<td>Posyandu</td>
<td>Integrated Health Post (Pos Pelayanan Terpadu)</td>
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<td>SBA</td>
<td>Skilled Birth Attendant</td>
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<td>SISKES</td>
<td>Sistem Kesehatan (Health System)</td>
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* The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH was formed on 1 January 2011. It brings together the long-standing expertise of the Deutscher Entwicklungsdienst (DED) gGmbH (German development service), the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH (German technical cooperation) and InWEnt – Capacity Building International, Germany. For further information, go to www.giz.de.
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How ‘Desa Siaga’ improves the health of mothers and babies in Indonesia

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Acknowledgements

The German Health Practice Collection (GHPC) would like to thank the Ministry of Health of Indonesia for providing the technical oversight, strategy and policy framework of the Desa Siaga programme. It would like to thank the Provincial Health Office of Nusa Tenggara Barat (NTB) and the Provincial Health Office of Nusa Tenggara Timur (NTT) for being the implementing agencies for Desa Siaga at provincial level, as well as the many District Health Offices which oversaw the Desa Siaga programme at local level. It would also like to thank all the institutions and the NGOs that contributed to the successful implementation of the Desa Siaga programme.

A special thanks to all the people in the health facilities and the villages who agreed to share their experiences with Desa Siaga during the preparation of this publication: we were impressed by their enthusiasm and commitment to keeping Desa Siaga alive, and by the stories of its success.

The Desa Siaga programme was made possible through the UK Department for International Development’s financial support of the SISKES (Health System) programme. This important co-financing contribution is gratefully acknowledged.

In addition, GHPC would like to thank the following individuals for their contributions:

- Dr Lily Sulistyowati, of the Health Promotion Centre, and Dr Lukas Hermawan, of the Sub-directorate of Delivery and Post-partum in the Directorate of Maternal Health, both at the Ministry of Health, for providing us with detailed information on the national programmes for Community Empowerment and Mother and Child Health.
- Dr Nyoman Wijaya Kusuma, of the Health Infrastructure Section in the Division of Basic Health Service, for providing valuable information and feedback during the visit to document the Desa Siaga programme.
- Dr Handomi Hasan, of the Health Promotion and Empowerment section in the Division of Health Promotion and Human Resource Development of the NTB Provincial Health Office, Dr Bachtiar Hasan, of the District Health Office in Kota Bima, and Hj. Khadijah Amd, of the Community Health Division of the District Health Office in Kota Bima, for facilitating visits to Desa Siaga villages in NTB province.
- Anwar Fachry and Dr James Sonneman, for their contribution in the Evaluation of the Desa Siap Antar Jaga Programme in villages supported by GIZ SISKES.
- Dr Rahmi Sofiarini, Team Leader NTB Project Office; Karsten van der Oord, PR & Knowledge Management Advisor; Maddi Mina Djara, RBM and Knowledge Management Officer; and Dr Lieve Goeman, Technical Advisor PAF, for organizing the GHPC documentation of the programme, the preparation of the interviews, images, and other resources, and assistance in graphic design.
- Dr Krystyna Makowiecka, of the Maternal Health Group, London School of Hygiene and Tropical Medicine, and Dr Martin Weber, of the World Health Organization, South-East Asia Regional Office, for acting as independent peer reviewers for this publication.
- Dr. Peter Hill, Associate Professor, School of Population Health, University of Queensland, Australia who visited programme sites, conducted interviews and prepared the initial version of this publication.
- Karen Birdsall, the consultant who prepared the final version of this publication.
- Anna von Roenne, Managing Editor of the German Health Practice Collection, for editing consecutive draft versions and coordinating the entire process.
Showcasing health and social protection for development

German Health Practice Collection

Objective

In 2004, experts working for German Development Cooperation (GDC)1 and its international and country-level partners around the world launched the German HIV Practice Collection and, in 2010, expanded it into the German Health Practice Collection (GPHC). From the start, the objective has been to share good practices and lessons learnt from BMZ-supported initiatives in health and social protection. The process of defining good practice, documenting it and learning from its peer review is as important as the resulting publications.

Process

Managers of GDC-supported initiatives propose promising ones to the Managing Editor of the GPHC at ghpc@giz.de. An editorial board of health experts representing GDC organizations at their head offices and in partner countries select those they deem most worthy of write-up for publication. Professional writers then visit selected programme or project sites and work closely with the national, local and GDC partners primarily responsible for developing and implementing the programmes or projects.

Independent, international peer-reviewers with relevant expertise then assess whether the documented approach represents ‘good or promising practice’, based on eight criteria:

- Effectiveness
- Transferability
- Participatory and empowering approach
- Gender awareness
- Quality of monitoring and evaluation
- Innovation
- Comparative cost-effectiveness
- Sustainability

Only approaches meeting most of the criteria are approved for publication.

Publications

All publications in the GPHC describe approaches in enough detail to allow for their replication or adaptation in different contexts. Written in plain language, they aim to appeal to a wide range of readers and not only specialists. They direct readers to more detailed and technical resources, including tools for practitioners. Available in full long versions and summarized short versions, they can be read online, downloaded or ordered in hard copy.

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Do you know of promising practices? If so, we are always keen to hear from colleagues who are responding to challenges in the fields of health and social protection. You can go to our website to find, rate and comment on all of our existing publications, and also to learn about future publications now being proposed or in process of write-up and peer review. Our website can be found at www.german-practice-collection.org. For more information, please contact the Managing Editor at ghpc@giz.de.

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1 GDC includes the Federal Ministry for Economic Cooperation and Development (BMZ) and its implementing organizations: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and KfW Entwicklungsbank. GIZ was formed on 1 January 2011. It brings together the long-standing expertise of DED, GTZ and InWEnt. For further information, go to www.giz.de.
Although Indonesia’s maternal mortality ratio has been declining gradually, the current ratio of 228 deaths per 100,000 live births remains one of the highest in Southeast Asia and the country is unlikely to meet the targets it has set for the fifth Millennium Development Goal, related to maternal health, by 2015. To address this, the Government of Indonesia has pursued a number of complementary strategies: an ambitious Village Midwife programme, which has trained and placed more than 50,000 midwives in villages nationwide; investment in health services and improved access to emergency obstetric care; and the launch, in 2006, of the Desa Siaga programme, which uses a community mobilization approach to promote safe pregnancies and deliveries at village level.

Germany, via BMZ and GTZ/GIZ, has been supporting the Government of Indonesia’s health strategies since 2000. Between 2006 and 2009, the German-led SISKES (“Strengthening District Health Systems”) project provided technical assistance to the Provincial and District Health Offices in Nusa Tenggara Barat (NTB) and Nusa Tenggara Timur (NTT) to implement the Desa Siaga approach in 140 villages. This publication describes the innovative Desa Siaga implementation model developed by SISKES and Indonesian health authorities in these provinces, and summarizes its achievements and challenges.

The phrase Desa Siaga means ‘Alert Village’ and is the short form of the Indonesian phrase ‘ready to bring and to take care.’ An Alert Village is one in which is vigilant and prepared: its inhabitants notice those in need and bring them to where appropriate care is available. This approach to reducing maternal and infant deaths is based on the idea that everyone – husbands, neighbours, community and religious leaders, midwives, and health facility personnel – has a role to play in promoting birth preparedness and in responding to complications which might arise. Pregnancy should no longer be private concern affecting only women, but rather transformed into a village affair.

In an Alert Village, community members work together to save lives by agreeing to establish and support five ‘alert systems’ which address some of the greatest risks facing women during pregnancy and childbirth: a registry of all pregnant women in the village, a financial support scheme to defray childbirth-related costs, a network of vehicle owners willing to transport women who need care, a pool of blood donors who know their blood types, and a family planning information post.

Desa Siaga is designed to be ‘of and for the community’: villagers are guided in the process of becoming an Alert Village by a trained Village Facilitator who, with the backing of the village leadership and support from health facility personnel, leads the community members in a process of participatory reflection about actual cases of maternal or infant death which have happened in their community and the factors which have led to these situations. Villagers learn about the non-medical assistance they can provide to help reduce the number of deaths in their village and reach agreement on the rules and procedures which will govern their own alert systems.

The Desa Siaga systems were successfully established in all 140 villages, and are known, used and trusted by villagers. Regular monitoring and two programme evaluations have generated encouraging evidence that Desa Siaga is stimulating a positive approach to problem-solving in communities and has contributed to improved uptake of reproductive health services, including an increase in antenatal care visits, an increase in the proportion of women assisted by skilled birth attendants.
at delivery, an increase in the proportion of women giving birth at health facilities, and improved knowledge of family planning methods.

The approach has also led to important changes in community dynamics. Villagers are now more aware of pregnancy-related risks – and more prepared to confront medical emergencies. Gender relations have also been transformed through the active involvement of women in all aspects of the programme and the emphasis placed upon men’s involvement in pregnancies and deliveries.

Once the Desa Siaga systems are established, responsibility for maintaining the alert network shifts to the community itself. Like any programme that depends upon the contributions of volunteers and enthusiastic champions, Desa Siaga faces the challenge of sustaining the interest and commitment of individuals who are not compensated for their time and efforts. Another lesson learned from the SISKES-supported programme is that it is important to have strong coordinating structures in place to manage the contributions of the many groups and individuals involved in implementing the approach.

The Government of Indonesia aims to extend Desa Siaga to 80% of the country’s 75,000 villages by 2015 and is interested in broadening the approach to address issues that go beyond maternal and neonatal health. The experience and insights generated in the German-supported programme – and the resource materials developed during this project phase – can be drawn upon by provincial and district authorities as they continue to roll out Desa Siaga to other parts of Indonesia.
Maternal and Neonatal Health in Indonesia

Over the past three decades, the Republic of Indonesia has achieved marked progress towards a number of developmental goals, including bringing down levels of extreme poverty, improving primary education completion rates, and reducing the incidence of malaria and tuberculosis. However maternal and child health remain issues of significant concern: the country’s maternal mortality ratio of 228 per 100,000 live births is one of the highest in the region (Statistics Indonesia and Macro International, 2008: 216) and although the infant mortality rate has dropped by half over the past two decades, the current rate of 34 per 1,000 live births (Ibid.: 117) is still higher than in neighbouring countries (Government of Indonesia, 2004: 50). Infants in Indonesia are 4.6 times more likely to die in their first year of life than are infants in Malaysia\(^2\), while their mothers have a 1 in 65 lifetime risk of dying in childbirth, compared to 1 in 1,100 for mothers in Thailand (Ibid.: 56).

These troubling mortality rates suggest a need to further improve access to and quality of health services for Indonesian women and children, particularly in the period during and immediately following delivery. This includes better antenatal services, ensuring that deliveries are attended by skilled healthcare workers, increasing the availability of emergency obstetric services, and strengthening postnatal care. And, because there are strong disparities in mortality levels across Indonesia’s diverse regions and between women with different levels of wealth and educational achievement, there is a need to pay particular attention to these issues in poor and underserved areas of the country.

While the effectiveness of the health system is a critical issue, there is also work to be done in shifting the care-seeking behaviours of pregnant and post-partum women, their families and broader communities to place a greater priority on healthy pregnancies, safe deliveries and early childhood survival (Ibid.: 52). As the Indonesian Government’s 2010 report on the Millennium Development Goals notes, there is still a ‘lack of knowledge and awareness on the significance of safe motherhood’ which may limit the demand for services and contribute to the high level of maternal deaths in the country (Ministry of National Development Planning/National Development Planning Agency, 2010: 74).

What explains Indonesia’s high maternal death rate?

As many as 20,000 Indonesian women die each year as a result of childbirth-related complications. The main medical causes of maternal deaths in Indonesia are haemorrhage, eclampsia and related hypertensive conditions, abortion-related complications, obstructed labour and infections (Ibid.: 52). With prompt and proper treatment, most of these deaths could be prevented.

In Indonesia most maternal deaths can be traced to the so-called ‘three delays’: delays in making the decision to refer the pregnant women to a facility that can manage her complications, delays in finding transport to get her there, and delays in obtaining appropriate medical care or blood for transfusion upon arrival (see a typical case in the box below). Reducing the interval between identifying the risk and obtaining emergency obstetric care is the key to reducing maternal mortality.

There are a number of factors which contribute to these delays, among them poor access to health facilities – due to great distances and/or poor roads – and lack of funds to pay for transportation costs. However fear, myths and taboos related to pregnancy and childbirth sometimes compound the delays. Rather than seeking the assistance of a skilled birth attendant, when complications arise some women visit traditional healers or Traditional Birth Attendants; precious time is lost and a potentially manageable complication can turn into a life-threatening one.

Medical causes of maternal death in Indonesia are

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The ‘Three Delays’: How delays in accessing proper care contribute to maternal mortality

One day around 9.30 PM, just back from working at her farm, a 27-year old pregnant woman complained of pains in her stomach and chest. She couldn’t wake up properly. Her husband fetched the traditional healer, who said that the woman had gotten a disturbance from the devil on the mountain and gave her prayers to say. Her husband then called the Traditional Birth Attendant – he later admitted he did not call the midwife because he was afraid of the cost – and the baby was born at 1 AM. At 6 AM, the mother found that her sight was blurred and she couldn’t see anything. On a neighbour’s suggestion the husband called the midwife. The midwife examined the woman and proposed to bring her to the health center, but the husband wanted to know about the costs involved, so the midwife went to the health center to consult. By 10 AM the woman finally reached the health center, which referred her on to the hospital because they were unable to treat her. Shortly after reaching the hospital, the woman passed away in the emergency department.

- Adapted from a case study in the Toolkit: Community Empowerment in MNH (p. 70), for the toolkit refer to www.ighealth.org/en/product/downloadfile/92/MNH-Community-Empowerment-Toolkit

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compounded by a set of indirect ones, including the so-called ‘four tooos’: women give birth when they are too young or too old, they have too many children, and they have them too close together. Among adolescent girls (aged 15 to 19) in Indonesia, 8.5% have already begun childbearing; among the rural population this figure increases to 13% (Statistics Indonesia and Macro International, 2008: 57). The proportion of couples of reproductive age who wish to limit the number of children they have, or to have them further apart, but who are not using contraceptives (referred to as ‘unmet need’) is 9.1%, a figure which has remained virtually unchanged for more than a decade (Ministry of National Development Planning/National Development Planning Agency, 2010: 71). There are wide disparities in unmet contraceptive need across provinces, ranging from 3.2% in Bangka Belitung province to 22.4% in Maluku (Statistics Indonesia and Macro International, 2008: 273). Greater access to and use of family planning techniques to limit fertility would help to reduce maternal mortality by limiting the number of times a woman is exposed to the risk of childbirth.

**Policies and Strategies**

In an effort to bring down the maternal mortality ratio, the Government of Indonesia has followed the guidance of the World Health Organization for safe motherhood programmes, most notably through the introduction of a large-scale village midwife initiative which has sought to increase the proportion of births attended by a skilled health provider. Since the launch of the Bidan di Desa programme in 1989, more than 50,000 midwives have been trained and placed in villages nationwide, tasked with attending births and providing antenatal and postnatal care, as well as health promotion and healthy baby services.

The initiative has succeeded in raising the proportion of births attended by a skilled professional, particularly among the poor (Hatt et al., 2007) and in rural areas, where the proportion of midwife-assisted births doubled to 55% between 1993 and 2003 (Makowiecka et al., 2008). However the midwife programme has also faced a range of challenges: it has proven difficult to retain midwives in remote areas, where they feel isolated and sometimes experience low social acceptability by the local population, and the initial one-year training programme had to be extended to three years to ensure that midwives had the necessary knowledge and practical skills to carry out their responsibilities effectively (D’Ambruoso et al., 2009). Despite this, studies have found that midwives are better at diagnosing emergencies than they are at the clinical management of complications (Ibid.) and that midwifery services in remote areas are still the least developed in the country (Makowiecka et al., 2008).
Although the maternal mortality ratio in Indonesia has been falling gradually, current trends are such that the country is unlikely to meet the MDG target of 102 deaths per 100,000 live births by 2015. Re-examining progress in light of recent experience suggests that the initial strategy – focusing on increasing the proportion of births assisted by skilled birth attendants – has, in and of itself, not been enough: there is a need to place pregnancy and childbirth within a ‘continuum of care’ in which women benefit from integrated service delivery which begins before conception (i.e. with contraceptive and reproductive health services) and continues through pregnancy, delivery, the postnatal period, and into the early childhood period. In addition, while the Bidan di Desa programme has placed great emphasis on outreach services in the community, there remains a large unmet need among much of the population for access to facility-based emergency obstetric care (Hatt et al., 2007), an essential counterpart to the routine work of midwives and health professionals during pregnancy, delivery and the post-partum period (Bullough et al., 2005).

Among the Indonesian government’s current priorities in the area of maternal health (Ministry of National Development Planning/National Development Planning Agency, 2010: 75-76) are:

- Improving facility-based outreach services to pregnant women, including through more and better quality health clinics and ‘mother and baby friendly hospitals’
- Increasing access to family planning services as part of the goal to achieve universal access to reproductive health
- Expanding the village midwife function and strengthening community care via integrated health posts at village level (Posyandus)
- Strengthening referral systems to ensure that pregnant women receive the necessary care in time (reducing the effects of the ‘three delays’)
- Raising awareness about safe motherhood at community and household level through public education campaigns

The German Contribution

On behalf of the Government of Germany, German Technical Cooperation (GTZ) – now known as Gesellschaft für Internationale Zusammenarbeit (GIZ)⁴ – has been supporting the Government of Indonesia’s health strategies since 2000 through the implementation of five different health projects. These projects have addressed core areas of health systems strengthening, including good governance, health financing, human resources for health, information systems and service delivery at both the national level and in the provinces of Aceh, Central Java, Nusa Tenggara Barat (NTB) and Nusa Tenggara Timur (NTT).

One of these projects – SISKES⁵ – has supported improvements in the functioning of district health systems in NTB and NTT, including strengthening health services at community level. Since 2006, with co-funding from the British Government, the SISKES Project has focused specifically on maternal and neonatal health, including support for the Desa Siaga approach, which is described in the remainder of this publication.

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⁴ The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH was formed on 1 January 2011. It brings together the long-standing expertise of the Deutscher Entwicklungsdienst (DED) gGmbH (German development service), the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH (German technical cooperation) and InWEnt – Capacity Building International, Germany. For further information, go to www.giz.de.

⁵ SISKES is an acronym for the Indonesian phrase ‘Sistem Kesehatan,’ or health system.
The Desa Siaga Approach

‘Ready to bring and to take care’

In 2006, the Ministry of Health of the Republic of Indonesia launched the Desa Siaga programme as one of the four pillars of its national strategy Healthy Indonesia 2010 (Depkes, 2006). Under this strategy emphasis has been placed on health promotion and prevention, with a particular focus on the idea of self-reliant communities pursuing healthy lifestyles and proactively addressing their own health challenges (World Health Organization, N.N.).

Desa Siaga fits logically with this approach. The term Desa Siaga – which means ‘Alert Village’ – is the short form of a colourfully descriptive Indonesian phrase: ‘Desa Siap Antar Jaga’, which means ‘ready to bring and to take care.’ An Alert Village is one which is vigilant and prepared: its inhabitants notice those in need and bring them to where appropriate care is available. In a broad sense, the Desa Siaga programme can be understood as the process of community members drawing upon their own resources and capacities for preventing and overcoming health problems and emergencies, based on mutual support and in a spirit of togetherness.

The Desa Siaga concept originated in the 1990s when it was first used in women’s empowerment projects in Indonesia. It has since been applied to programmes for women and children in West Java, as well as to family planning programmes in West Nusa Tenggara. When the Desa Siaga concept was adopted nationally by the Ministry of Health in 2006, its scope was broadened to cover a wide range of health-related challenges at community level, going beyond maternal and child health concerns to include malnutrition, healthy lifestyles, sanitation, epidemiological surveillance and disaster preparedness.

In 2010 the Ministry of Health intensified its focus on Desa Siaga, launching the Desa Siaga Aktif programme under the Center for Health Promotion, a sub-division of the Ministry (Depkes, 2010). By late 2010, 56% of Indonesia’s 75,000 villages had been designated as ‘active’; by the end of 2015, this proportion is targeted to rise to 80%.

6 The work in West Java was supported by USAID, while AusAID introduced Desa Siaga into 20 villages in NTB through its Indonesian Women’s Health and Family Welfare Project (IWHFWP).

7 The Ministry of Health has designated four categories of Desa Siaga villages, ranging from the least active (“initial”) – in which certain minimum criteria have been met, such as the presence of community health workers, a Posyandu integrated health post, and the provision of financial support by the village administration – to the most active (“self relying”), in which village forums are held monthly, community-based health programmes are active alongside the Posyandu, external financing is available to support community activities, and support for healthy lifestyles is provided to at least 70% of households.
In Nusa Tenggara Barat (NTB) and Nusa Tenggara Timur (NTT) provinces, which have some of the weakest health indicators in all of Indonesia, it has been the overall goal of the SISKES project to reduce levels of maternal and infant mortality and morbidity. The maternal and infant mortality rates in these provinces consistently rank among the highest in the country, and have stubbornly resisted the efforts of a range of health interventions aimed at reducing them. Against this backdrop, the Desa Siaga concept holds particular promise: the introduction of this approach in NTB and NTT contributes to SISKES’ overall goal by creating supportive environments in which community members are able to access reproductive health services.

This publication describes the innovative approach to Desa Siaga that has been taken in 50 villages in NTT and 90 villages in NTB over the period 2006 to 2009, with support from Germany’s Federal Ministry for Economic Development and Cooperation (BMZ) and the United Kingdom’s Department for International Development (DFID). ^8^,^9^
Building on traditions of mutual support

NTB and NTT societies are characterized by long-standing traditions of mutual support and assistance. Cultural values stress the need to be aware of those who are more vulnerable, the importance of villagers assisting one another, and the value of sharing responsibilities, particularly around key milestones in family and community life: marriage, the building of a home or place of worship, religious celebrations and deaths.

For the Sasak ethnic group of the island of Lombok, this is known as ‘Banjar Kawin’ or ‘Banjar Kematian’; for the Bima, Dompu and Sumbawa ethnic groups it is ‘Mboloweki’. The saying ‘Berat sama dipikul, ringan sama dijinjing’ – which means ‘Whether light or heavy, we carry the burden together’ – encapsulates the characteristic approach to community life in the provinces of Nusa Tenggara Barat and Nusa Tenggara Timur.

With this idea in mind, the team working to introduce Desa Siaga to NTB and NTT saw existing cultural practices of mutual support at village level as a ready-made bridge towards community interventions to reduce the risks of pregnancy and childbirth. Sofiarini explains:

Desa Siaga is not something new – we are just strengthening our own cultural values. It already existed, but we are strengthening the structure, and bringing a deeper focus on community empowerment to the programme.

The Desa Siaga approach to reducing deaths among mothers and babies is based on the idea that everyone – husbands, neighbours, community and religious leaders, midwives, and health facility personnel – has a role to play in promoting birth preparedness and in responding to complications which might arise during pregnancy or delivery. Pregnancy should no longer be a private affair affecting only women, but rather transformed into a common concern: the ‘burden’ of ensuring healthy pregnancies and safe deliveries – whether light or heavy – should be shared throughout the community.

The overall vision of the approach is the creation of the Alert Village – Desa Siaga – which, in turn, comprises a network of key individuals who are aware of and prepared for their roles: the Alert Husband – Suami Siaga – who is actively engaged in his wife’s pregnancy and responsible for her; the Alert Religious Leader – Dai Siaga – who leads his community to be aware of others and support them; and the Alert Midwife – Bidan Siaga – who coordinates much of this support, and whose clinical judgment is the trigger for mobilizing community action. In short, the whole community becomes Siaga, everyone alert to their own role in caring for women during their pregnancy and birth.
In an Alert Village, community members work together to save lives by agreeing to establish and support five key ‘alert systems’ – described below – which address some of the greatest risks facing women during pregnancy and childbirth. They are guided in this process by a trained Village Facilitator who, with the backing of the village leadership and support from health facility personnel, leads the community members in a process of participatory reflection about cases of maternal or infant death which have happened in their own community and the factors which have led to these situations. Through this participatory process, villagers develop a heightened sense of responsibility about the well-being of pregnant women and their babies and learn about basic actions they can take to help reduce the number of deaths in their village.

In Nusa Tenggara Barat, a province with a predominantly Muslim population, community meetings for the Desa Siaga programmeme are often held at small mosques, called mushollah.
Implementation of the Desa Siaga approach requires contributions from many different institutions and actors, from government authorities at the provincial level down to community volunteers. Before an alert network can be set up, many different people need to be mobilized, introduced to the Desa Siaga concept, and commit to its objectives. The following are some of the key institutions and individuals who help to realise the Desa Siaga concept:

- **Desa Siaga** is a national programme of the Ministry of Health of Indonesia. The **Provincial Health Office** and **District Health Office** are the primary implementing agencies and are responsible for all Desa Siaga activities at provincial and district level.

- In some cases, an **external development partner**, such as a donor agency or international NGO, works in close cooperation with the provincial and district health offices and provides resources and technical expertise in support of the process.

- A number of district-level institutions are involved as trainers or resource institutions in the establishment of Desa Siaga; they also have roles to play in the functioning of the alert network. These include **district health facilities**, such as the district hospital, the district Red Cross, and the district Blood Transfusion Unit, as well as **non-governmental organizations**, like the district women’s organization, the district midwives’ association, and the district family planning association.

- **Partner NGOs** are sometimes contracted to act as District Facilitators, linking together key stakeholders and providing technical support to the district health offices in conducting training programmes. The NGOs’ role is complete once the Desa Siaga systems are operational.

- Many village-level institutions participate in the Desa Siaga process: the health center, the midwife coordinator and individual midwives, women’s organizations, family planning coordinators, the heads of villages and sub-villages, village parliaments, and religious leaders are all involved. **Village Facilitators** also play a critical role. At the heart of the programme are the community members themselves, who agree to support and contribute to the alert network.
The five Desa Siaga systems

The Desa Siaga approach is built around five key ‘systems’ in the community which, together, work to ensure that all pregnant women access appropriate care in a timely manner and to reduce the incidence of risky or unwanted pregnancies. The elements of this alert network are:

- A notification system, in which all the pregnant women in the village are identified and recorded
- A blood donor system, in which villagers willing to donate blood for medical emergencies are identified and their blood types tested and recorded
- A transportation and communication system, in which community members who own means of transportation or mobile telephones agree to assist in getting pregnant women to health facilities
- A financial support system, in which funds are collected to defray childbirth-related costs and to encourage facility-based deliveries
- A family planning information post, where families can get information and guidance on family planning techniques they can use following childbirth

These are described in more detail in the sections below.

**Linking pregnant women into a network of care: the notification system**

At the heart of every Alert Village is the notification system, in which details about the pregnant women in a village are recorded in a central register, maintained by a volunteer coordinator. Once listed in the register, the women are linked up to the village health facilities for regular antenatal visits, as well as assistance with delivery and post-partum care. The notification system helps to bring pregnancies out into the open and to build a sense of shared responsibility within the community for the well-being of the village’s pregnant women.

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The notification system takes the form of a simple handwritten ledger containing basic information, such as the names of the pregnant women and their husbands; where they live; the woman’s expected due date; the number of the pregnancy; and where they intend to give birth. The volunteer who keeps the register reviews its contents with health staff at monthly meetings held at the Posyandu, the integrated health care post. In this way, the
register supports efforts to improve the uptake of antenatal care, as well as the proportion of deliveries attended by skilled professionals.

This is important, because it is not uncommon in NTB and NTT that women rely on the help of relatives and neighbours, or on Traditional Birth Attendants, instead of seeking out professional help for deliveries. Only 32% of births in NTB and 21% of births in NTT take place in health facilities, compared to a national average of 46% (Statistics Indonesia and Macro International, 2008: 287).

For the village midwife, or bidan, who assists with childbirth and provides antenatal and postnatal care to women in the village, early notification of pregnancies provides an opportunity to approach the women and their husbands with antenatal materials, and to seek an early and public commitment on their preferred birthing location. Women are encouraged to deliver in a health facility and, if they agree, a brightly coloured ‘birth preparedness’ sticker is placed on the front door of their house, detailing this decision. The sticker confirms the name of the pregnant women and her estimated due date; it identifies who will assist her in the delivery, and where she will have her baby. In line with the Desa Siaga systems, it lists who will accompany her to the health facility when in labour, who will provide the transportation and, if necessary, which compatible blood donors are willing to provide blood. The sticker symbolizes the principle of ‘making childbirth a village affair.’

The proportion of births assisted by Skilled Birth Attendants is also lower in these provinces than nationally: 64% of births in NTB and 46% in NTT, compared to the national average of 73% (Ibid.: 288).
A midwife in the village of Penanae, NTB, explained how the notification system has changed the way she works:

*As soon as I know someone is pregnant I go and talk to them and ask them their preference for delivery. If they agree to come to the Polindes [village birthing house], I put a sticker on their door with their information. I say, ‘This sticker means there’s an agreement between you and me: I will help you if you come [to the birthing house].*

By reframing pregnancy and childbirth as issues of concern to the whole community, the notification system helps to ensure that growing proportions of women receive regular, qualified antenatal care and are attended by Skilled Birth Attendants during labour. If a woman experiences pregnancy-related complications or a medical emergency, it is much less likely than before that this will go unnoticed by those in a position to help.

**Addressing resource needs: the financial support system**

A lack of financial resources is one of the main deterrents preventing women in NTB and NTT from attending a health facility to give birth. Even in emergency situations, the decision to refer a woman to the health center is sometimes delayed because of concerns about the cost of medical and other services or lack of funds to pay for transportation.

Under Desa Siaga, a community agrees to establish a financial support system in which individual or household contributions are collected and used to offset the costs of transportation and medical care during and after childbirth. By encouraging villagers to think ahead about the costs involved when delivering a baby, this system can alleviate one of the main sources of anxiety facing women and their families when making decisions around obstetric emergencies.

In keeping with Desa Siaga’s general approach, each community decides for itself how to structure its fund and there are therefore variations in the financial systems across villages. However two main approaches can be singled out.

The most common, and simplest, approach is a self-savings scheme in which pregnant women contribute small amounts of money to the fund on a regular basis for the duration of their pregnancies and receive the money back as a lump sum upon delivery. This is the approach being taken, for example, in the village of Banyumulek, in NTB, where pregnant women in the village are encouraged to contribute 1000 Rupiah a day (approximately €0.08) to the fund and receive their savings back in full once the baby is born. New mothers appreciate having funds available to cover any unexpected costs related to the birth, or simply to have money in hand to purchase clothing or supplies for the new baby.
In other communities, the financial support system takes the form of a local insurance scheme which extends to all members of the community, not only pregnant women. In the village of Kel Penanae, NTB, for example, every household in the community contributes a fixed sum on a monthly basis, and its members are eligible to receive payments of up to 100,000 Rupiah (approximately €8) in the case of hospitalization or the delivery of a baby. Smaller amounts are paid out to villagers requiring outpatient medical care. This approach is more complicated to establish and to maintain, since it requires a consensus among community members to share personal resources for the benefit of others. It requires strong support from the village leadership to succeed.

The financial support system is the most challenging of the five components of Desa Siaga to establish and maintain, and sometimes several meetings must be held in the village before a consensus is reached on the approach that will be used. Not all villages succeed in maintaining a scheme, but in those which do, it can make a significant difference. One new mother from Karang Pule, who had to pay 350,000 Rupiah (23 Euros) for delivery services, explained:

*For me, it was expensive, especially given that I work as a household servant. However I feel so thankful that, through the existing financial support system to which I donated 500 Rupiah every two weeks, I received support worth 100,000 Rupiah in return. I realized that we cannot help each other with a big amount of money all at once, but we can easily solve difficulties together when we have an agreement.*

**Ensuring blood supplies: the blood donor system**

A woman who is hemorrhaging during or after childbirth can be saved quickly with transfusions of compatible blood. However if she is not treated, or blood is not available, she can die in a matter of hours. What could be a relatively simple medical procedure often becomes prolonged and highly distressing: the pregnant woman may not know her own blood type, requiring additional time for testing before the search for a blood donor can begin. Family members and friends willing to donate blood may not know their own blood types, only to find out at the health facility that their blood is not compatible. Or it takes so long to locate willing
The blood donor system is intended to remove barriers to the availability of blood for women who require it. In this part of Desa Siaga, villagers learn about the process of donating blood and are encouraged to volunteer to have their blood groups tested and listed in a village registry, so that compatible donors can be readily identified when needed. The growth in mobile phone usage greatly enhances the effectiveness of this system: midwives, Village Facilitators, blood donation system coordinators, blood banks and blood donors are able to contact one another quickly in cases of need.

Blood donation is not familiar to many rural inhabitants in NTB and NTT and initially the concept raised some fundamental anxieties: If someone donates blood, does this mean that he or she will always have less blood in their own bodies? And is this harmful? Is it permissible for people of different faiths to donate and receive blood from one another? In order to generate support for the blood donor system, health personnel, representatives of the Red Cross, and religious leaders all play a role in explaining the benefits of blood donation, demonstrating the clinical procedures involved, and reassuring villagers about the cultural acceptability of blood donation.

The blood donor system is utilized less frequently than other elements of Desa Siaga, but when it is activated it saves lives. As the midwife from Banyumulek explained,

Before Desa Siaga it was so difficult to find blood. I remember the last time we had a woman bleeding heavily after birth, we took up the whole family to be tested. No one’s blood matched. We looked many times. Now we know someone for all the groups – it’s much easier.

Accessing care in an emergency: the transportation and communication system

In rural areas of Indonesia there is little public transportation, especially at night time, and very few people own a car. Many villages are dozens of kilometers from the closest hospital, often over rough terrain with poor quality roads. For families
without telephones, it can also be difficult and time-consuming to notify midwives that a woman has gone into labour, to coordinate logistical arrangements for transferring a pregnant woman into care, or to locate a potential blood donor. When complications arise during pregnancy or childbirth, it is a matter of life and death that a woman be able to reach appropriate health facilities as quickly as possible. However many women never discuss these issues as they plan for their births: only 54% of women in NTB and 42% in NTT had discussed the issue of transportation prior to giving birth to their most recent child (Ibid.: 291).

Explaining that delays in reaching health facilities are a leading cause of maternal death in Indonesia, a Desa Siaga facilitator challenged those at a community meeting to think about how they could help to prevent this from happening to women in their own village:

*Why are the women too late getting help? Because they have no means of transportation. Yet right here among us... there are people that have a vehicle. Still, we are reluctant to ask for help, even from neighbours and family, because the topic has never been discussed before.*

When pregnancy or childbirth-related emergencies arise, people feel hesitant to ask assistance from neighbours or other community members, even in cases where they know one another quite well. And those who own vehicles or mobile phones – and might be willing to help – often aren’t aware that a pregnancy-related emergency has taken place, since these matters are traditionally kept private.

The fourth component of Desa Siaga – the transportation and communication system – tackles this situation head on by bringing the transportation challenge into the open and turning it into an opportunity for community members to demonstrate their willingness to help one another. The recent explosion in mobile telephone use and the increasing availability of motorcycles and, in some cases, cars, are radically changing emergency transportation options, even in rural areas. Where the system operates well, it brings together those needing assistance with those willing to provide it.

In an Alert Village vehicle owners volunteer their support in cases where pregnant women need to be referred to higher-level health facilities. As with the notification and blood donor systems, a volunteer coordinator maintains a registry containing the names and contact details – including mobile phone numbers – of vehicle owners who are willing to assist pregnant women in need. Each village discusses and agrees how the scheme should function in their community: What kinds of vehicles are appropriate for what circumstances? Should a rotating schedule of ‘on call’ drivers be set up, or should drivers simply be contacted when the need arises? What is reasonable to offer the vehicle owner as compensation and who pays for the service?

In rural areas of Indonesia relatively few people own their own cars. One favoured means of transport in the NTB province is the ‘Ben Hur,’ or Cidomo, a horse-drawn wagon.
Showcasing health and social protection for development

So close, yet so far: Failure to reach health facility means the loss of a baby’s life

‘Please, look for some kind of vehicle,’ I said. ‘Anything will do – a horse cart, a car – as long as I am given some kind of vehicle.

I waited and waited, but no vehicle. ‘Just a minute, wait a moment,’ they said. Then the husband arrived. ‘Where is our vehicle?’ I said. ‘Oh, I will try to find some transport,’ he replied. ‘Please, anything will do, we need transport,’ I pleaded.

The woman was already giving birth. The legs of the baby were protruding up to the knees. I had to start helping her on the spot. And we were so close to the hospital, only 200-300 meters away. ... If I remember this incident now, I become angry and hurt all over again. I feel that I have failed as a midwife [she begins to cry].

– Midwife, Penatoi village, Bima City, NTB

These final questions – about cost and compensation – are often the most difficult to resolve. It is not uncommon that wealthier members of the community are initially sceptical about the initiative, because it is not apparent to them what they will gain from it. At the outset some refuse to participate, but in doing so, they run the risk of losing the respect of their fellow villagers. According to an advisor to the Desa Siaga programme, those who are hesitant at first often change their views once they see the benefits of the scheme in operation.

The transportation and communication system is one of the most commonly used elements of Desa Siaga: between 2006 and 2009 it was used on average more than 15 times in Alert Villages in NTB (Fachry et al., 2009). As a midwife from Banyumulek explains, the system plays its intended role quite effectively:

Before the agreements were made, we were shy about asking our neighbours for help, especially at night. Now we are not afraid to ask. We can wake them at midnight because we have the agreements... And they rarely ask for reimbursement, even when we offer it.

Reducing unwanted pregnancies: the family planning information post

Reducing the number of unwanted pregnancies is an important component of any strategy to bring down maternal mortality ratios: fewer unwanted pregnancies means a reduction in women’s exposure to the risks of delivery and potentially to unsafe abortions. In NTT, only 30% of currently married women use a modern method of contraception, compared to the national average of 55% (Statistics Indonesia and Macro International, 2008: 266), and the unmet need for family planning in NTB and NTT is estimated at 13% and 17% respectively (compared to 9% nationally) (Ibid.: 273). With greater access to information and contraceptive methods, women and their male partners would be better able to make decisions about how many children to have and when.

The final element of the Desa Siaga system is the family planning information post, which deepens and expands existing family planning activities at village level and seeks to increase the uptake of family planning following childbirth. A volunteer from the community – often the so-called Kader...
who links pregnant women and mothers with the village midwife and family planning coordinator at the Posyandu – participates in a training programme on reproductive health organized by the district family planning organization.

He or she is provided with educational resources – such as posters, brochures, and demonstration kits (showing, for example, different forms of contraception) – and uses these when working individually or in small groups with women, men, and adolescents of both sexes who are interested in learning more about family planning. In some areas, the local health center holds special reproductive health courses for adults or for adolescents when there is sufficient interest.

Greater access to and use of family planning methods would help to lower the maternal mortality ratio in Indonesia by reducing the number of times women are exposed to the risks of childbirth or potentially unsafe abortions. Here a group of adolescents participate in a discussion on family planning and reproductive health.

The family planning information post complements the other elements of Desa Siaga by working to create an environment where there are fewer dangerous pregnancies which require emergency intervention. In an evaluation of Desa Siaga in NTB province, 60% of the surveyed mothers (n=280) had accessed information from the family planning information post in their village. They also demonstrated increased knowledge about family planning techniques after the introduction of Desa Siaga, suggesting wider knowledge in the community and better awareness of family planning options.

More information on the training programme for the Family Planning Information Post – including a facilitator’s manual and handouts – can be found at www.german-practice-collection.org/en/download-centre/doc_download/935
Showcasing health and social protection for development

The Meaning of Desa Siaga: In mothers’ own words

‘When my due date came, I needed to go to the hospital and there was no car in my hamlet. However, the transportation coordinator in my hamlet arranged transport for me. He contacted the transportation coordinator from another hamlet to borrow a car. It was very quick; the car came and brought me to hospital. I was happy I got help very quickly, because at the time I was in a very desperate condition. I hope this helping each other will be continuous.’
– Zusnawati, 25 years old, Sembung Village, West Lombok District

‘I became unconscious after giving birth, and after the doctor examined me, he asked my family to provide two bags of blood. Hearing this, I did not panic because I knew very well that in my village there are blood donors available with my type-O blood type, and this was not difficult to get. My husband contacted the blood donor coordinator, and the blood donor was sent to the hospital. I am proud of the Desa Siaga programme. The many benefits generated by it make going to the health facilities easier, getting blood donors is easier, and financial support is available through our own savings. Through Desa Siaga people are encouraged to work hand-in-hand to ease painful suffering and to overcome critical conditions.’
– Yati Citra Dewi, 24 years old, of Poto Village, Sumbawa District

Desa Siaga helps to alleviate some of the greatest risks facing Indonesian women during pregnancy and childbirth.

How villages become ‘alert’

As important as the key systems themselves is the process through which communities become Desa Siaga. Establishing an Alert Village can take as long as four months and is not a simple process: it often involves lengthy discussions, debates, disagreements and prolonged efforts at consensus-seeking.

Some of the themes which must be discussed and confronted, such as those concerning reproductive health, are not ‘culturally comfortable’ for villagers to discuss in public, particularly in mixed age groups containing both men and women. When establishing a Desa Siaga system, villagers have to confront and reconsider certain traditional views – such as where the responsibility for pregnancy lies – which reflect entrenched views about gender and family life. Similarly, class issues may also rise to the surface, as those who are better-off in the community sometimes question why they should act selflessly on behalf of their less privileged neighbours.
Establishing an Alert Village can take as long as four months and is not a simple process: it often involves lengthy discussions, debates, disagreements and prolonged efforts at consensus-seeking.

With all of these complex dynamics, how can the establishment of an Alert Village succeed? As is described in greater detail below, Desa Siaga is introduced through a carefully designed multi-step process (see the flowchart below) which, when carried out successfully, generates a sense of genuine ownership among villagers. Critical to this sense of ownership is the use of real-life stories which bring the reality of maternal and child deaths closer to everyone’s consciousness.

Given the high rates of maternal and infant mortality in NTB and NTT, it is likely that every village has experienced at least one pregnancy-related death or life-threatening complication. While villagers are likely to be aware that a woman has died, since funerals are organized with community support, the circumstances surrounding the case are generally not known.

With the permission of the surviving family members, Desa Siaga facilitators use the stories of maternal and child deaths from the village to unlock a complex subject area and bring it into the open: as Rahmi Sofiarini, an advisor to the Desa Siaga programme in NTB noted, ‘The stories touch people’s hearts.’ Using these stories as an entry point for analysing the conditions which contribute to high levels of maternal and infant death, it becomes easier for facilitators to encourage villagers to reflect on steps they can take to ensure that such cases do not happen again in their village, to women or girls who could be their wives, daughters, granddaughters, neighbours, or friends.
Laying the groundwork for Desa Siaga: securing political commitment and partner support

Although Desa Siaga ultimately becomes embedded in the daily life of the village, it begins at a distance: with planning and orientation meetings convened by the Provincial Health Office and District Health Office. In order for a complex initiative such as Desa Siaga to be set up and maintained over time it is necessary to have the political support of key government institutions and the cooperation of a range of partner organizations. The orientation meetings are the fora in which the Desa Siaga concept and approach are introduced to provincial and district-level institutions and decisions are taken about where and how the approach will be implemented.

As the first step, representatives of the provincial planning board, parliament, family planning institutions, midwives’ associations, women’s organizations, hospitals, and the Red Cross gather together in the provincial capital for a one-day meeting where they decide the criteria for the communities which will become Alert Villages in the province. At the district meeting which follow, the district-level counterparts from these same institutions are joined by representatives from the villages where Desa Siaga will be introduced: the village head, the village parliament, the head of the health center, village midwives, and the village women’s association.

The district-level meetings are particularly significant because, within Indonesia’s decentralized system of government, responsibility for creating Alert Villages lies at the district level. At these planning meetings participants lay the groundwork for the start of Desa Siaga implementation: they agree the roles and responsibilities of each institution and the heads of participating villages give their consent for the approach to be introduced in their communities. In addition, a particularly important decision is taken at this stage: the village head, the representative of the village parliament and the village midwife agree upon a suitable individual to act as Village Facilitator.

At the district meeting, the implementing agencies outline the criteria for a successful Village Facilitator: someone who has a basic education and is motivated to ‘work for their heart’, as a Desa Siaga advisor put it. Apart from the reimbursement of transportation costs, Village Facilitators receive no payment or incentives for their efforts and most have other jobs or sources of income. The ideal candidate is someone who sees involvement with Desa Siaga as a way to make a social contribution to the village. Village Facilitators can be male or female, although the implementing agencies strongly support the selection of women for this role. To date about 40% of Village Facilitators have been female.

Building a facilitation team for each village

Many Village Facilitators are lay persons with little background in health issues or community...
development initiatives. Given this, there are limits – even for the most enthusiastic and committed Facilitator – to what he or she can accomplish alone in navigating a complex and sensitive community mobilization process.

The next step in implementing Desa Siaga is to prepare a small team of individuals to initiate the Alert Village. The Village Facilitator anchors this team, but works alongside a staff member from the village health center with experience in maternal and child health issues and a District Facilitator, from an outside NGO, who brings to the table facilitation skills and experience in managing community processes.

The relationship between the three members of this facilitation team begins during a six-day training programme organized by the District Health Office and co-led by the NGO which acts as District Facilitator. The Village Facilitators and health center representatives from participating villages in an area – up to 30 people in total – come together for an intensive and interactive immersion into issues of maternal and child health and community development.

The training workshop is a new experience for many of the participants. Some Village Facilitators are not initially comfortable with the expectation that they speak openly in mixed-gender and mixed-age groups, or the assumption that their views and experiences can be valuable learning for others. In every training there are some participants who are sceptical of the ‘games’ that are used to help participants get to know one another better, or to illustrate key concepts. Not everyone is at ease with the idea of role-playing exercises in which participants observe one another and give feedback on how to improve interviewing or moderation skills.

However as the training programme proceeds, these interactive methods become more familiar and their benefits become clear. The trainers engage the participants in small-group exercises and continuously mix the groups so that everyone has the chance to interact with everyone else. The goal is to create a dynamic in which all the participants feel equally able to speak and be listened to. The health center representatives are encouraged to share their knowledge of maternal and child health issues, but also to learn from the experiences of others who bring stories and deep insights into community health issues from a non-clinical perspective.

The content of the training is far-reaching. Some of the early sessions, led by district health personnel, introduce participants to the basics of maternal and neonatal health and describe the situation in their particular area: the number of maternal
and infant deaths, the main causes of death, the proportion of women who deliver in health facilities with skilled birth assistance, and other key indicators. Participants are presented with case studies of maternal deaths that have occurred in their districts and work in small groups to analyse the causes underlying these deaths.

Other sessions introduce participants to participatory methods which can be used to assess maternal and child health issues in their villages. The participants practice how to interview the families of women who have passed away, in order to gather stories about the circumstances surrounding maternal deaths in their villages; how to lead small group discussions on topics such as access to health services or perceptions of pregnancy in the community; and how to moderate discussions in large groups.

These are all difficult skills to learn in a short period of time and not all Village Facilitators complete the training feeling fully confident about the tasks which lie before them. However none of the individuals trained as Village Facilitators through this particular approach dropped out, and all were eventually successful in establishing the five systems in their villages. This is attributable in part to the support they received during the next stage of the process from the health center representative and District Facilitator, with whom they interacted closely during the training programme.

**Talking about maternal and child health issues at the village level**

Returning home after the training programme, the Village Facilitators lead a series of activities intended to get community members thinking and talking about the health and well-being of pregnant women, new mothers and babies in the village. This process takes place over a period of one to two weeks and includes small group discussions followed by a community-wide meeting. In these discussions villagers talk about the circumstances surrounding the deaths of women and newborn babies in the village and consider what could be done to prevent similar cases in the future. The Desa Siaga facilitators refer to this stage of the process as the ‘village self-assessment’.

Prior to the community meetings, the Village Facilitator collects data about maternal and neonatal health from the village health facility in order to build up a picture of the health of newborn babies and their mothers in the community. As part of the process, health personnel direct them to households which have experienced childbirth-related deaths or medical emergencies and the Village Facilitator arranges to meet with surviving family members to learn about the
In all but a few instances, the husband or head of the household gives permission for the Village Facilitator to share the details of the story publicly in the community meetings, in the belief that this could prevent similar cases from affecting other families in the future. It can be challenging to create an atmosphere which is conducive to public discussions of personal issues such as pregnancy, childbirth and reproductive health. The use of real stories helps to break down people’s hesitation.

Next, the Village Facilitator and staff from the health facility convene a series of informal discussions on 13 health-related themes. These discussions cover a wide range of topics, from the social and demographic structure of the village to attitudes towards health services and family planning. Between five and 20 people take part in each small discussion, and the participants represent a cross-section of the community: adults and adolescents (both male and female), community leaders, religious leaders, health service providers, midwives, traditional birth attendants and others.

The Village Facilitator begins each discussion with a personal story about pregnancy and childbirth in the community and explains the purpose of the discussion. Each group then works through a series of questions related to their designated theme. Examples include:

- What is the physical structure of our village (e.g. its borders, roads, neighbourhoods, public facilities and religious sites)? What is its social structure (e.g. what kind of people live here, where do they come from, what is their economic, social and educational profile)? What would a map of our village look like?
- What formal and informal health services are available to residents of our village? How much do health services cost? How easy is it to access them?
- What does it mean to be sick? To be healthy? When do people seek help for their health?
- What activities do women undertake in a typical day in this village? Which do men undertake? Who has more tasks and who has more time for rest? What effect does this have on women’s health?
- What are attitudes towards marriage in this community? At what age should men and women marry? What are the benefits and disadvantages of early marriage?
- What do villagers know about family planning? What family planning services are they aware of? What are its benefits? What are its downsides?

It can be challenging to create an atmosphere which is conducive to public discussions of personal issues, such as pregnancy, childbirth and reproductive health. The use of real stories helps to break down people’s hesitation.
As each discussion proceeds, the facilitator or another member of the team records important points on flipchart paper to generate a record of the discussion. In some of the groups, the villagers create maps and depict their points with images. This approach is unusual for many villagers, who aren’t accustomed to having their thoughts captured on paper.

According to a Desa Siaga advisor, these informal group discussions are the place where a lot of ‘hard work’ takes place in terms of raising awareness of maternal and newborn health challenges and building villagers’ comfort level to discuss sensitive topics. There is sometimes resistance to the idea of talking publicly about ‘women’s issues’ such as contraception, menstruation and childbirth; others feel that these topics are sexually explicit and therefore inappropriate subjects of conversation.

A map of the community of Penanae, in Nusa Tenggara Barat, created by villagers in one of the small group discussions. It shows the main streets of the village, the location of key facilities, and the physical landscape, including rivers and fields. Later, coloured dots can be added to the map to indicate the houses of pregnant women and other villagers, such as vehicle owners and blood donors, who have volunteered as part of Desa Siaga.

Women as Village Facilitators

A significant proportion (40%) of the Village Facilitators involved with Desa Siaga in NTB and NTT are women. Female facilitators often face greater difficulties than their male counterparts in gaining the trust and acceptance of their fellow villagers, who are relatively unaccustomed to attending meetings led by women. Since 2000, it has become possible for women to be elected as village leaders, but this remains uncommon, and women’s public roles are generally limited to work with the local women’s organization or family welfare society.

Married women acting as Village Facilitators tend to bring their husbands with them to at least the first Desa Siaga meeting. His presence lends legitimacy to her playing this role and helps to build acceptance among other community members. Young or unmarried women must work particularly hard to establish their authority as facilitators; here, the active and public support of the village leadership is important in establishing her credibility. Experience has shown that these challenges usually diminish over time and villagers become more accustomed to the idea of a female facilitator.
In order to overcome this hesitation, the Village Facilitator, health center representative and District Facilitator take a matter-of-fact approach. They explain that, although it may not be common practice to discuss such things aloud, it is necessary to do so, because there are problems in the community which need to be addressed. The discussions are about building knowledge, they explain, and address real-life issues which affect every household and every member of the community. As Ibu Rahmi Sofiarini, a Desa Siaga advisor explained, ‘At the start, people are reluctant to take part in such discussions, but because they have problems themselves, eventually they do speak.’

The culmination of this part of the Desa Siaga process is a formal village meeting in which a cross-section of villagers comes together to talk about how to address the health challenges facing pregnant women, new mothers and infants in the community.

The village leader invites approximately 40 people to this meeting, including the heads of the sub-villages, members of the village parliament, representatives of the District Health Office, the village midwife, health centre staff, the village women’s organization, religious leaders and other influential members of the community. A representative from each of the informal discussion groups also attends.

At the meeting, the Village Facilitator begins by sharing key health statistics for the village – for example, how many maternal and newborn deaths have been recorded in the recent past – and by recounting the circumstances surrounding a recent case of maternal death. After sharing the story, he or she asks those present to talk about the case, building upon themes which were explored in the small groups: What were the reasons for the death or medical emergency? What could have made a difference and saved the woman’s or baby’s life? Are there things that villagers – as neighbours, friends, and community leaders – could do to prevent such cases in the future?

As the meeting proceeds, a representative from each of the informal discussion groups speaks about the main points which emerged in their group and which are relevant to explaining the phenomenon of maternal and newborn death. The group which explored perceptions of marriage, for example, describes the common belief that women should marry young (between the ages of 15 and 20) and the fact that young people know little about pregnancy and childbirth before they marry. Another group, which talked about health-seeking behaviours in the village, explains that many poor villagers prefer to visit traditional healers, rather than formal health facilities, for...
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reasons of cost or belief. These reflections from the small group discussions complement the health statistics and personal stories to help create a ‘big picture’ of the health conditions facing pregnant women and newborns in the community.

The Village Facilitator then shifts the discussion towards a joint reflection on the resources which are available in the community to address some of these challenges and on the actions individuals could take to help reduce maternal and newborn deaths. Villagers are also encouraged to think about how the existing traditions of mutual support could be applied to the task of saving the lives of women during pregnancy and childbirth. The Village Facilitator introduces to villagers the concept of the ‘Alert Village’ and the Desa Siaga systems and describes how this could help to address some of the challenges which have been discussed.

Here the meetings can become quite contentious: not everyone agrees that it is a public responsibility to care for pregnant women. ‘This isn’t my business,’ argue some. ‘It’s the husband’s job to take care of his pregnant wife.’ The village meetings can stretch late into the night as villagers debate and argue whether and to what extent it is reasonable to expect community members to help one another by providing access to transportation, money, and blood donations.

According to a Desa Siaga advisor, it can be challenging to convince villagers why they should proactively help one another. Here, particularly in the predominantly Muslim province of West Tenggara Barat, religious leaders or religious teachers, called Ustadz in Indonesian, play an important role by explaining the importance of helping others before they die, not only following a death. While helping with preparations for a funeral can assist the surviving family members, it does not bring any benefit to the deceased, the Ustadz explains, while taking action in advance can actually save someone’s life. When this argument is made by a religious teacher, whose job is to teach the contents of the Koran, it is accepted more readily by villagers and often shifts the direction of the discussions. For this reason, the Village Facilitators always meet with religious leaders prior to the community meetings to explain the Desa Siaga approach, ask for their support, and invite them to attend the meetings. They do the same with other influential villagers – for example, wealthy residents who own vehicles or respected members of the community – to secure their participation in the process.

It can be challenging to convince villagers why they should proactively help one another. Religious leaders play a very important role by explaining the importance of helping others before they die, not only following a death.

Villagers participating in a Desa Siaga community meeting. The process of becoming an Alert Village can take up to four months and involves lengthy discussions and deliberations.
The village meeting ends when agreement is reached to establish the Desa Siaga systems in the community. Although this takes considerable time in some cases, all 140 villages supported through the approach described in this publication did eventually reach an agreement to establish a community network. Following the meeting, a document called ‘A Picture of the Village’ is produced, summarizing the main points from the small group discussions, incorporating images of the maps and other diagrams which were produced during the process, and overviewing the demographic and health profile of the community. This document becomes a resource for the village leadership and health facility personnel.

Establishing the five Desa Siaga systems

Following the village meetings, the facilitation team – Village Facilitators, representatives from the health facilities, and District Facilitators – come together again at the provincial level for an additional five-day training programme in which the facilitation teams are prepared to conduct meetings to establish each of the five Desa Siaga systems. The main emphasis in this second training is on role-playing. The trainers help each participant to sift through the information gathered during the village self-assessment process and to think about how best to use this ‘evidence’ to make the case to villagers for each of the Desa Siaga systems. Participants practice how to plan and structure each of the five meetings, whom to invite (and whom to meet with individually prior to the meetings to secure support), how to open the discussions, which points to cover in each meeting, and which decisions to reach during the discussion.

After the training, the Village Facilitator, with the support of the village leadership and the participation of the village midwives, health centre personnel and the District Facilitator, convenes a series of five planning meetings, one for each of the Desa Siaga systems. The meeting for the notification system is held first, and other meetings follow one by one, once it is clear that the already established systems are operating as intended. It can take a few months until all the meetings have been held and the systems are up and running.

11 The meetings for the notification system, transportation and communication system, financial planning system and family planning information post are held at the sub-village level, where it is more feasible to maintain accurate records of the population and to organize financial and transportation systems. The blood donor system is organized at the village level. This allows for blood donors from several sub-villages to be brought together in one common registry, which ensures greater coverage of different blood types and a larger pool of donors on which to draw in emergencies.
Approximately 40 people are invited to each meeting; their task is to discuss and agree how to best organize the given Desa Siaga system in their village. While the basic concept behind each element of Desa Siaga is fixed, individual villages exercise a great deal of flexibility in determining how the system is actually implemented. For example: What type of information should be collected and recorded in the notification system? Should the owners of vehicles be compensated when they help to transport a pregnant woman to a health facility? Who should contribute to the financial support system and who has the right to claim support from the system?

The goal of the community meetings is to reach consensus on each system, in keeping with the traditional way of reaching agreements in the village around, for example, contributions to funeral costs. The decisions taken at these meetings are written up and posted in a central place, along with the mobile phone numbers of key contact people.

They are also publicized via the health centre and formally presented to the full community at future village meetings.

The final step is to select a coordinator to oversee each system – an individual who is trusted by fellow villagers to be fair and responsible (e.g. in the case of managing the contributions to the financial support system), who is willing to volunteer his or her time, and who possesses the requisite level of literacy and numeracy. Once the five systems are operational, these so-called ‘system coordinators’ work closely with the Village Facilitator and communicate with one another frequently, as well as with the midwives, health care personnel and village leadership. They are key to coordinating an integrated response when emergencies arise.

About 45% of the volunteer coordinators are female, and 55% are male. This relatively equal gender distribution is encouraging in two respects: first, that women are assuming leadership roles in the village; and second, that men are demonstrating an interest in issues of maternal and child health.
The Meaning of Desa Siaga: In One Midwife’s Own Words

The last year was a good one for me as a village midwife. This is because the things that used to worry me when assisting a delivery don’t happen anymore. This year, no mothers or babies died under my care. Of course I do feel exhausted sometimes - I assisted 162 women to deliver their babies in the last year. But when I see a lovely baby born safely from a mother who has just passed through a critical time, I am simply happy. I am sure this is happening because my village became an Alert Village.

I will never forget the maternal deaths and haemorrhage cases that I had to deal with before Desa Siaga started. Nowadays, I no longer face these kinds of situations because the village developed an alert system. Maybe as an outsider you will not believe how many changes occurred just within one year, but I can tell you that when I need to refer a woman now, it is very easy to find a means of transportation. I just call the coordinator of the transportation system and the transport is ready.

Before it was very difficult to persuade pregnant women to give a birth at the Polindes [village birthing post], but now, even if they are just about to deliver, they come to the Polindes. 100% of pregnant women delivered in the Polindes in 2008. The volunteer coordinators are very active in notifying pregnant women and disseminating family planning information.

I now realize this has happened because of the increased understanding of the people and their willingness to change to help each other. At the early stage of Desa Siaga, I had doubts that it could make a difference, but after just one year I must say: pregnant women are now treated the way they should be treated. And babies, who are our future, are born safely.

Maintaining the Desa Siaga systems

While the essence of Desa Siaga is relatively simple – be alert to pregnancy-related complications and be ready to address them when they arise – its successful implementation is not. It requires continuous care, attention, and a ‘troubleshooting’ mindset. Having gone through the painstaking process of establishing an Alert Village, what needs to be done to maintain and sustain Desa Siaga on an ongoing basis?

The main strength of Desa Siaga is also one of its limitations: it depends upon the voluntary contributions of dozens of people, from those playing a coordinating and oversight role to those providing their vehicles, their finances, and their blood for the benefit of their fellow villagers. When the commitment of any of these groups wanes, it affects the functioning of the system as a whole.
Experience has shown that the commitment of the village leadership is very important in setting the tone for the rest of the community. When the head of the village is invested in Desa Siaga, he or she provides the Village Facilitator and village midwife with the backing they need to strengthen the operations of the Alert Village. For example, the village leadership can decide that payments for the Desa Siaga financial system can be included in the list of taxes and levies that are regularly collected from households for local services such as security and garbage collection. Bundling the Desa Siaga costs into the existing system of payments increases the collection rate and makes the financial system more efficient. Moreover, in those villages where the local leadership has played an active role – for example, by regularly attending meetings – the Desa Siaga approach has remained strong and intact. In others, however, where the local leadership has not sustained its interest, the network often falters.

Systems that work well at the outset can also lose momentum, for example, if a coordinator moves to another village and a replacement is not found and trained. In some villages, the original idea of ensuring regular supplies of blood in cooperation with the local Red Cross has been undermined because villagers have realized that if they wait for an emergency and are asked to donate blood, they can benefit financially: the family requiring the blood will pay them for it, while if they donate it to the Red Cross at a blood drive they won’t receive any payment. When such dynamics arise, the Village Facilitator and the village midwife work together to identify the source of the problem and to ‘get back to basics’ by reminding villagers of the roots of Desa Siaga as a mutual assistance strategy.

These and other challenges are picked up through the monitoring activities which are carried out in each village following the establishment of the Alert Village. At the village level, the Village Facilitator, the five system coordinators, the village midwives and health centre staff meet every second month to exchange information and discuss problems which may be arising in any of the systems. The regular monitoring data gathered through these meetings – including the utilization rates of the different Desa Siaga systems – is useful to the village leadership and health staff for tracking and improving the health status of village residents.

The main strength of Desa Siaga is also one of its limitations: it depends upon the voluntary contributions of dozens of people. If the commitment of any of these groups wanes, it can affect the functioning of the system as a whole.
In addition to this, the District Health Offices are responsible for holding regular meetings to review the overall progress of Desa Siaga implementation. These meetings – which are held with varying degrees of frequency, from quarterly to annually, depending on how active the individual offices are in overseeing community activities in their districts – are attended by the Village Facilitator, village midwives and health centre facilitator. The District Health Office is also responsible for monitoring the programme’s higher-level outcomes such as antenatal attendance, the proportion of babies delivered by skilled birth attendants, rates of maternal and neonatal death, and increases in the uptake and maintenance of family planning techniques.

The implementation costs of Desa Siaga

Further information on the costs of implementing Desa Siaga is available in Desa Siaga Cost Analysis in NTB and NTT, available at www.german-practice-collection.org/en/download-centre/doc_download/936

The Desa Siaga approach which is described in this publication is a resource-intensive process to implement, requiring significant investments of time, money and personnel. In 2009 the GIZ SISKES programme undertook a detailed cost analysis of the Desa Siaga programme (Sofiarini & Goeman, 2009) based on its experience of implementing Desa Siaga in 140 villages in two different provinces over the period 2006-2009. The analysis shows that the costs involved in establishing and maintaining Alert Villages vary considerably depending on the specific implementation model which is chosen, and are influenced by variables such as the unit costs for activities in rural versus urban locations, the number of villages supported in one ‘batch,’ the number of participants trained from each participating village, and the extent to which training activities and meetings are combined to generate economies of scale.

Key findings from the costing exercise are as follows:

- The costs of establishing and operating Desa Siaga in one village for one year averaged 53,414,400 Rupiah (€4109) per village in NTB and 74,615,500 Rupiah (€5740) per village in NTT. With village populations ranging from 6,000 to 21,000 inhabitants, this represents a cost of less than €1 per capita (between €0.20 and €0.69 in NTB, depending on village size, and €0.27 and €0.96 in NTT). For purposes of comparison, the per capita expenditure for health in Bima City, NTB, in 2008 was €10.
- 80% of costs are related to establishing the Desa Siaga approach in the village, with the remaining 20% going towards activities to maintain the functioning of Desa Siaga (including M&E).
- Of the unit costs per village, 40% is spent at village level and 60% at district or provincial level, reflecting the higher costs for venues, food and lodging in larger cities.

In general, the costing exercise shows that the longer the implementation process, the greater the number of separately organized activities – particularly at district or provincial level – and the

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12 Euro figures are based on 2009 exchange rates. Given the diversity of the participating villages and their implementation contexts, there are variations in implementation costs within each province. The minimum cost of Desa Siaga implementation in NTB was 35,265,800 (€2713), and the maximum cost was 71,145,600 (€5473).

13 The minimum cost of Desa Siaga implementation in NTB was 70,356,000 (€5412), and the maximum cost was 78,875,000 (€6067).

14 Data provided by SISKES programme.
more participants involved per activity, the higher the overall costs.

The costing analysis provides detailed guidance for government institutions and external development partners interested in supporting the extension of Desa Siaga to new areas of Indonesia in the coming years. With an eye on resource-constrained settings, the document also contains suggestions for adapting the budget to contain costs, for example, by reducing the number of participants, combining certain activities and striving for economies of scale across multiple villages.

**Results: How Desa Siaga has made a difference**

Between 2006 and 2009 the Desa Siaga approach, with a focus on reducing maternal and neonatal deaths, was introduced to 90 villages in NTB province and 50 villages in NTT with support from GIZ SISKES. Although part of the national Desa Siaga strategy, the Desa Siaga experience in these 140 villages is distinctive for the strong emphasis that has been placed on the participation of villagers in the design and implementation of their own Alert Village systems.

What results has this community empowerment approach to Desa Siaga generated?

In addition to programme monitoring data and anecdotal information, two large-scale evaluations have been undertaken in recent years which have assessed Desa Siaga as a whole or in part. In 2009 an evaluation of Desa Siaga in NTB province was commissioned by GIZ SISKES and undertaken by researchers from the University of Mataram (Fachry et al., 2009); an external evaluation of the GIZ SISKES health programme undertaken in the same year (Independent Monitoring and Evaluation Team, 2009) also considered the achievements of Desa Siaga as part of a much larger review.

Through these two evaluations, as well as a series of interviews and site visits conducted for the preparation of this publication, a picture of Desa Siaga’s achievements comes into focus.

Desa Siaga has contributed to improvements in the uptake of key health services and to transform attitudes towards pregnancy in the community. The well-being of women and infants is increasingly seen as a shared responsibility. Men have a particularly important role to play.

Overall, the evidence collected is encouraging, and suggests that the Desa Siaga approach is leading to improvements in maternal and neonatal health, as well as stimulating a positive new approach to problem-solving in communities.

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15 The evaluation assessed Desa Siaga by input, output, and outcome indicators, by DAC criteria, and in relation to the Paris Declaration principles of ownership, alignment and harmonization. Seventy out of the 90 participating villages in NTB were randomly chosen to be included in the evaluation, and a total of 538 respondents were surveyed. This comprehensive evaluation provides an evidence base for Desa Siaga’s initial achievements in one of the two provinces in which its implementation was supported by GIZ SISKES. Comparable data from NTT is not available. Unless otherwise specified, the quantitative data presented in this section is drawn from the findings of this evaluation.
The authors of the 2009 external evaluation concluded that:

Where Desa Siaga has been implemented it appears to enhance confidence in the capacity of the community to respond to obstetric and other emergencies. Desa Siaga funds appeared to be well-organised, with clear accounting systems. The scheme depends on considerable effort and good will of volunteers and in both provinces consolidation activities have been well-chosen to enhance effective roll-out and sustainability (Ibid.: 10).

**Desa Siaga is known, used and trusted by villagers**

Because the Desa Siaga systems are built ‘from the ground up’ in a participatory manner, they are well-known to members of the community. In a survey of 280 mothers across 70 villages in NTB, 83% knew of the Desa Siaga system in their village and between 70% and 90% had specific knowledge about each of the five systems, with the transportation and communication component being best known.

Just over 80% of the surveyed mothers had been registered in the notification system for their latest pregnancy, 60% had benefitted from the financial support system, and the same proportion had accessed information through the family planning information post. For almost half of these women, their transportation to health facilities for delivery had been supported through the transportation and communication system. The blood donor system was used by 12% of the surveyed mothers.\(^\text{16}\)

**Desa Siaga has contributed to improved uptake of reproductive health services**

Alongside other health interventions conducted in the same geographical areas, Desa Siaga has contributed to statistically significant (P<0.05) improvements in several indicators of health service use. The evaluation of Desa Siaga conducted in 70 villages in NTB, among 280 mothers with at least two children – one born before the establishment of Desa Siaga, and one after – found:

- **An increase in antenatal care visits**: 92% of women now attend a first trimester visit (up from 87% at baseline) and 87% attend a third trimester visit (up from 84%).
- **An increase in the proportion of women assisted by a skilled birth attendant (SBA)**: Since the introduction of Desa Siaga, 88% of surveyed mothers were assisted by an SBA at their most recent delivery, compared to 75% who had delivered their previous child with an SBA.\(^\text{17}\) Births attended by Traditional Birth Attendants decreased from 23% to 10%.
- **An increase in the proportion of women giving birth at health facilities**:\(^\text{18}\) The evaluation showed an increase to 59%, up from 43% at the baseline.
- **Improved knowledge of family planning methods**: The proportion of surveyed mothers who know at least one family planning method rose from 98 to 100%, those knowing at least four methods rose from 56 to 66%, and those knowing five or more methods rose from 31 to 42%.

\(^\text{16}\) While 70% of surveyed women knew about the blood donor system, only 12% had actually used this system. ‘Use’ of the system refers to asking for blood or looking for a suitable donor.

\(^\text{17}\) A contributing factor to this change may be the introduction of more midwives into communities.

\(^\text{18}\) Health facility here is defined as a Polindes, a Posyandu, or a Pustu (Sub-Health Center) when it is equipped for deliveries (i.e. midwife and instruments). This does not include deliveries at home and/or deliveries overseen by a traditional birth attendant.
These findings are corroborated by 2008 provincial health office reports from both NTB and NTT provinces, which also show improvements in the proportion of high risk pregnant women who are identified and referred for treatment, the proportion of newborns which attend more than one postnatal visit, and the proportion of women of reproductive age using family planning services. While it is not possible to draw distinctions between the contribution of Desa Siaga and those of other health interventions running in parallel, it is highly plausible that the establishment of Alert Villages has played an important role in the improved uptake of reproductive health services which have been measured in these areas.

**Desa Siaga empowers the community to address its own problems**

The attitudinal changes brought about in villages by the community empowerment process are perhaps as important as the outcomes of the systems themselves. As one of the Desa Siaga trainers noted, when communities began to map out their own villages, analyse their problems, and list their resources:

*They were surprised that they could do this. They hadn’t thought of it. It opened their minds. Before, in the community, the idea of helping at the time of death was most important: now the idea of helping those who are still alive has become more important.*

The Desa Siaga process has encouraged many people to rethink their relationships with one another – not only in terms of the help they can offer to others in need, but also in terms of the assistance they can ask for in times of crisis. As the village head from Babusalam village, in the West Lombok District of NTB explains:

*I am not going to sacrifice the life of my child because I am too afraid of asking for some help. I am not going to put my own life at stake because I’m too shy to ask for help. My life is far too valuable for feeling shy or afraid to ask for help.*

The approach has tapped into a sense of community solidarity among villagers and activated many villagers to get involved. As one older man from the village of Tanjuna Karang, in Mataram City, NTB, declared at a community meeting:

*Because this programme is for the betterment of our community, I put myself forward to become a volunteer.*

It has also led to a broad shift in attitudes around the idea of emergency preparedness. Villagers are more realistic about the types of medical situations which could arise, but are also ready to confront them using a set of agreed-upon methods. As a midwife from Penatoi village in Bima City, NTB, explained:

*With Siap Antar Jaga the people already anticipate what could possibly happen: it’s not that people only take action in case of an emergency. Before the emergency situation we already have to prepare ourselves.*

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19 Monitoring data provided by SISKES project.
Desa Siaga transforms gender relations

Individual coordinators’ lives have been changed through their roles in Desa Siaga. Young female Village Facilitators, whose authority was sometimes initially challenged by villagers because of their age and sex, grew in confidence as the systems became operational. Their husbands supported them, accompanying them to meetings. They formed networks, coming to each others’ community meetings, both to support one another and to prepare themselves to manage similar situations. Their confidence in public speaking grew, as a family planning volunteer from Penanae explained:

*At first I didn’t know how to speak in the community. I was afraid to talk to people. There were obstacles, but we had support, and after my training I can talk. Even with foreign guests, I am not afraid.*

The District Health Officer from Kota Bima agreed that the programme has strengthened the abilities of the volunteers:

*The volunteers are well trained. Desa Siaga has really improved their skills in information, education and communication. They are much better at communicating now and the refresher courses keep up their skills.*

Some women were transformed through the process to such an extent that they ran for seats in the district parliament – in two cases, successfully. Gender relationships have also been changed. The implementers of Desa Siaga have deliberately encouraged women’s participation in the programme, supporting the selection of female facilitators and coordinators and promoting opportunities for women to express their opinions in community meetings. As one of the Desa Siaga advisors commented, ‘If they still feel they cannot do this, we work out who can help them.’

Among expectant couples, where husbands have previously retreated in the face of ‘women’s business’, the men increasingly understand and accept that they must ensure that their wives have the support that they need. Among the 280 surveyed mothers in NTB, 49% reported that their husbands accompanied them to antenatal care visits, up from 17% prior to the introduction of Desa Siaga. Among this same group, 78% of husbands attended the delivery of the baby, up from 62% before Desa Siaga. Midwives work to ensure that their presence is not just passive, asking them to comfort and encourage their wives during labor.

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20 In Muslim culture it is believed that the first thing a child should hear is the call to prayer, which is whispered into its ears by its father or another male relative. For this reason, a relatively high proportion of fathers are typically present at childbirth.
Desa Siaga brings together medical and non-medical support for pregnant women

The creation of community-based alert systems is an effort to stimulate greater demand for antenatal, childbirth and post-partum care for women of reproductive age. As effective as the Desa Siaga system may be in generating this result, it alone cannot reduce maternal and neonatal deaths in the absence of effective and accessible medical care in health facilities. In other words, the Desa Siaga approach is premised on the complementarity of non-medical and medical actions which, together, can bring about important changes in women’s and newborn babies’ health outcomes.

The evaluation in NTB found evidence of an increase in mothers’ satisfaction with the maternal and neonatal health services they received at the Polindes after the introduction of Desa Siaga, compared to their experience during their previous pregnancy and delivery. Women reported greater satisfaction across a range of areas, from the skills of the personnel who cared for them to the cleanliness of the facilities, the waiting times for services, and the ease of access.

Importantly, the Desa Siaga villages were located in districts where there was a simultaneous investment, by GIZ SISKES, in strengthening district health systems, and this suggests that there has been a positive synergy between the efforts on the community side to strengthen non-medical responses to pregnancy-related emergencies and investments in improving facility-based service delivery. In other areas of the country the health system takes a similar approach, investing in both improved service delivery and community empowerment. Desa Siaga will be most effective in cases where these demand and supply side efforts are linked.

Desa Siaga appears to be sustainable over time

Village facilitation teams successfully established Desa Siaga systems in all 140 villages in NTT and NTB which were designated for support by the Provincial and District Health Offices, with assistance from GIZ SISKES. All of the Village Facilitators trained through the community empowerment process remained part of the Desa Siaga process at least through the establishment of the alert systems. According to 2009 monitoring reports, more than two-thirds of Village Facilitators (69% in NTT and 87% in NTB) reported that they continued to liaise actively with local health facilities on Desa Siaga activities.

Following the establishment of the systems, Desa Siaga becomes the responsibility of the community at large to maintain – and the responsibility of District Health Offices to oversee. The Desa Siaga approach has proved itself to be sustainable over time, although to varying degrees across villages. Where local leadership is committed to the programme the systems have continued to function actively, while in places with little interest or real leadership, Desa Siaga has gradually become inactive. In other communities, aspects of the original approach have been changed to reflect the priorities and choices of the villagers.

The external evaluation conducted in 2009 found that there is considerable commitment on the

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21 For example, through health center management training and the placement of trained midwives in each village.
22 Monitoring information provided by GIZ SISKES.
part of Provincial and District Health offices to further develop and roll out the Desa Siaga concept. Moreover, the evaluators concluded that the deliberate decision which was taken in the SISKES-supported programme to establish a ‘critical mass’ of Desa Siaga sites in each of the provinces should enhance Desa Siaga’s overall sustainability in these areas by making it easier to recruit new villages (Ibid.: 52). According to the evaluation, momentum is likely to be maintained in those areas where ‘an able and dedicated Desa Siaga coordinator [is] supported by an enthusiastic head of the District Health Office,’ particularly in NTT province where the District Health Office plays a central role in all aspects of Desa Siaga implementation.

The main threat to the longer-term sustainability of Desa Siaga is its reliance upon the ‘enthusiasm of individuals’ and excessive dependence on the ‘good will of volunteers’ (Ibid.). Turnover among village leadership, district and provincial health officials, or Village Facilitators can destabilize the functioning of the entire system. And although most Village Facilitators have demonstrated their commitment to Desa Siaga by volunteering their services in this role over time, the work is time consuming and certain aspects, such as the collection of funds for the financial support system, have proven to be challenging in many villages. It remains to be seen whether a purely voluntary model can endure in the longer term, or whether attrition rates will gradually rise in the absence of tangible incentives for those playing key roles.
Lessons Learned

The introduction of Desa Siaga into 140 villages in Nusa Tenggara Barat and Nusa Tenggara Timur over the period 2006 to 2009 was an effort to develop a community empowerment approach to reducing maternal and neonatal deaths, to demonstrate its results, and to carefully document all aspects of the process so that it could be extended to other areas.

As the Desa Siaga approach is rolled out to more villages – in line with the national government target that 80% of Indonesia’s villages become active by 2015 – there is a wealth of knowledge and resources which can be drawn upon from the experience of villages in NTB and NTT.

Some of the key lessons learned are as follows:

- **The Desa Siaga approach works best when it is applied flexibly and in response to local circumstances.** Although there are certain principles and core elements of Desa Siaga which extend across all participating communities, the details of the system’s functioning are best decided locally, not in a top-down manner. When the community itself determines the systems’ rules, it is more likely to support and enforce those rules, leading to a more effective and sustainable programme.

- **Investing in a community empowerment process increases the chances that Desa Siaga will be implemented effectively and sustainably.** According to officials with the Provincial Health Office in NTB, there is a noticeable difference between the performance of Desa Siaga in villages where an empowerment approach has been used, and those where it has not been used. In order for the community to feel ownership of their community-based alert system, its residents need to be engaged in each step of the process, from analysing community challenges to agreeing the operational mechanisms of the five systems.

- **The challenge of coordinating a large number of stakeholders in a complex process should not be underestimated.** Community empowerment initiatives are long-term and sometimes slow-moving processes. In a model such as the one described here, a strong coordinating structure is needed to oversee the contributions of a range of institutions and individuals working at multiple levels. Oversight of budgets and financial flows is particularly important if activities are to take place on time and in their intended sequence.

- **Changes in the policy environment can affect people’s incentives to support Desa Siaga.** Since the launch of Desa Siaga, the government of Indonesia has declared that all facility-based deliveries should be free. This has posed challenges for the financial support system: questions are increasingly raised about why funds should be collected in the community for a service which is now free. However, in reality, many families – if they do not have ‘cash in hand’ – still hesitate to deliver in health facilities, despite the policy change, because of a fear of ancillary costs such as transportation.
food, and medicines. The need for the financial support system still exists, but the way it is introduced needs to be adapted in light of the new policy.

- **Support for Desa Siaga at village level should go hand-in-hand with efforts to strengthen health systems.** Desa Siaga cannot flourish in isolation – for each village which is alert to the needs of its pregnant women and ensures early referral where there is any sign of complications, there needs to be an effective referral facility, prepared to receive and treat the referred women. The strategy of introducing Desa Siaga into districts where there was a parallel government initiative called ‘Making Pregnancy Safer’ ensured a balance between the ‘demand’ side and the ‘supply’ side of the equation.

- **Desa Siaga’s success depends on the sustained involvement of committed people at district and village level.** Once established, the Desa Siaga systems become the responsibility of the community to use and maintain, and of the District Health Office to oversee and support. Sustainability is likely to be greatest in areas where there is leadership within the community, complemented by external encouragement and motivation in the form of refresher trainings and other technical support. Desa Siaga is heavily dependent upon the efforts of volunteers and enthusiastic champions – District Health Officers, Village Facilitators, midwives, system coordinators and village leadership – and can face the challenge of supporting and incentivizing individuals who are not paid for their contributions. However, where the Desa Siaga process is a positive one, and people see the results of the approach, many are happy to be associated with it.
The Future Outlook for Desa Siaga: Growing and Changing

Scaling Up: Possibilities and Limitations

With support from the German and British governments, the GIZ SISKES programme has demonstrated the potentials of the Desa Siaga approach to improve the uptake of reproductive health services, transform gender relations and catalyse a community empowerment process in support of better maternal and neonatal health. The implementation of this process has required significant inputs of time, money and human resources on the part of a range of different stakeholders, and the effective coordination of all of these elements has proven to be a significant undertaking.

On the basis of this experience, what are the prospects for rolling out Desa Siaga to other villages and regions of the country, using a similar community empowerment approach?

In the absence of financial support from external agencies, it is possible to fund the Desa Siaga process with funds available through the Indonesian government. This has already been proven in NTT, where the model has been extended to villages in Belu district using locally available resources. Elements of the national, provincial and district development budgets can be drawn upon to support Desa Siaga activities, and villages can also apply to access funding through the Decentralisation Health System Support which is channeled through District Health Offices. In addition, a national budget fund provides support for programmes in remote areas, and this can be used to cover Desa Siaga training and implementation costs through Development Planning Boards and District Health Offices. Particularly where efforts are made to adapt the programme model to reduce expenses, sufficient funding is available to cover the implementation of Desa Siaga.

More difficult than identifying funding sources is setting up viable coordination arrangements. Particular attention must be paid to establishing strong coordination structures capable of overseeing a complex patchwork of financing and ensuring that budgets are planned, approved and made available on time to allow for activities to be implemented in the intended chronological order. SISKES’ experience in implementing Desa Siaga in 140 villages has shown that the District Health Office is the most appropriate structure within the health system to play this coordination role, and the Development Planning Board the most suitable one outside the health system.

Given the investments already made in NTB and NTT, rolling out Desa Siaga to new villages in these provinces can be undertaken more easily, and at a lower cost, than introducing it into new provinces (where the full sequence of steps and activities will be required). This is because orientation meetings have already been held at provincial level (and in many districts) in NTB and NTT, training materials are prepared and ready for use, and there are resource persons available with direct experience of the programme. Expanding the Desa Siaga concept in these areas by adding, for example, a disaster preparedness element into the existing framework, can also be facilitated relatively easily.
A Concept in Transition

Desa Siaga is a concept in transition. There is high-level political commitment to rolling out Desa Siaga across Indonesia, but also an interest in using the approach to address a range of issues beyond just maternal and neonatal health.

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For the national Desa Siaga programme, the notification system holds the key to Desa Siaga’s further development, raising the possibility of monitoring malnutrition, epidemic outbreaks, control of communicable diseases, healthy lifestyles, disaster preparedness, and improved sanitation. In the same way that the notification system has been used to record and track the status of pregnant women, it could easily be extended to other issues of concern to communities. As the Provincial Health Officer in Mataram explained:

*We want to reduce the maternal deaths in villages to zero. We want all villages to be Desa Siaga, to protect their women in pregnancy, but also to use the notification system for disease surveillance, warning us at the first possibility of Bird Flu or other diseases.*

Responsibility for the national Desa Siaga programme has moved from the Directorate of Maternal Health to the Health Promotion Centre within the Ministry of Health, with new staff taking up responsibility for this challenging project. As a result of these changes, it is likely that the focus on maternal and neonatal health may become less pronounced – or at least, less exclusive – in the coming years.

As Desa Siaga is scaled up, there is a risk that pressure to achieve national targets will mean an accelerated implementation of the programme, without the investment in the process of community empowerment. This would be unfortunate, as the community empowerment approach described in this publication has been critical to the success of Desa Siaga in the villages in NTB and NTT. Efforts are currently underway to share the experiences in these two provinces with a wide range of stakeholders, including at national level, and to popularize the rich set of resource materials – including a toolkit with training manuals, handouts, costing information and video – which were created during the project cycle. The incorporation of these lessons and insights into the implementation plans of provincial and district authorities in other parts of Indonesia would help to strengthen the Desa Siaga approach overall and contribute to its continued success.

The Desa Siaga approach can be applied to a range of local issues, from health challenges to disaster preparedness. Here community members take part in a simulation exercise to assess their emergency preparedness.
Peer Review

The German Health Practice Collection has established criteria that programmes and projects must meet to qualify for publication as part of this series.

The two expert reviewers of this report have concluded that the Desa Siaga programme, as supported by GIZ SISKES and described in this publication, represents a ‘promising practice’ which deserves to be widely publicized and whose lessons can benefit policymakers and practitioners engaged in maternal and child health issues both in Indonesia and beyond.

Both reviewers agreed that Desa Siaga stands out for its innovation, its gender awareness, and its participatory and empowering approach. One reviewer noted that, with German support, it became possible to implement an important government initiative systematically in some of the poorest areas of the country and, in doing so, to demonstrate its potentials in resource-constrained settings. This in itself can be considered innovative.

Both reviewers wondered about the challenges to and inherent limitations of an approach that is heavily reliant on community volunteers and district-level health officials who do not receive any payments or incentives for their considerable efforts. Linked to this, they raised questions about the sustainability of alert systems following the end of external support, both financial and technical.

At the same time, however, one reviewer – who had been part of the evaluation team looking at the GIZ SISKES programme in 2009 – noted that she had been struck by ‘the commitment of Indonesian government personnel and health workers to the Desa Siaga approach.’ She had observed, first hand, how Desa Siaga had been successfully installed as part of the routine health system and pointed to this as a positive indication of its future prospects. In her view, it would be valuable to conduct a follow-on appraisal two years after the end of German support to assess Desa Siaga’s longer-term sustainability.

The peer reviewers offered the following reflections on the specific criteria used by GHPC to identify a ‘promising practice’:

**Effectiveness**

The Desa Siaga approach has contributed to an increased uptake of reproductive health services in the districts in which it has been implemented. German support has allowed for the Ministry of Health’s Desa Siaga model to be implemented systematically, and in a participatory manner, thereby enhancing its effectiveness.

**Transferability**

Desa Siaga is a concept which can be applied flexibly, in response to local needs and priorities. This makes it possible to replicate the approach in a variety of settings, allowing for adaptations depending on available resources. While one reviewer felt that the approach is clearly transferable, the other was less certain and wondered about its scalability, given the ‘high inputs’ that are required to implement the approach as described.

**Participation and Empowerment**

One of the main contributions made by GIZ SISKES was the development of a community empowerment approach for implementing Desa Siaga. This model has strengthened villagers’ abilities to identify and solve local health challenges. Community ownership of the alert systems is also enhanced through villagers’ participation in all stages of the implementation process.
Gender awareness

The approach to Desa Siaga described here demonstrates high levels of gender awareness, not only in terms of its aims and direct beneficiaries, but also in its implementation methods. The programme has encouraged the involvement of women at all stages and has contributed to the transformation of gender relations in the community.

Monitoring and Evaluation

Monitoring and evaluation (M&E) is a central aspect of German-supported development projects. The implementation of Desa Siaga has been monitored systematically and two evaluations have been conducted. One reviewer expressed that the programme has a strong grounding in M&E, while the other felt that the role of M&E in guiding the programme could be better described.

Innovation

The Desa Siaga programme is innovative in its use of a community mobilization approach to reduce maternal and infant mortality, as well as in its attempts to build upon and strengthen existing traditions of mutual support in rural communities.

Cost-effectiveness

The reviewers found it difficult to comment on issues of cost effectiveness. Despite the availability of a detailed cost analysis of the German-supported programme model, there are not similar data available on other approaches which aim to reach the same objectives. A comparison is therefore not possible.

Sustainability

Alert systems were established in all 140 villages which participated in this phase of the Desa Siaga programme. The external evaluation of the GIZ SISKES programme noted the strong commitment to Desa Siaga on the part of health officials at provincial and district level, who expressed confidence that the programme would be rolled out further.
References


Makowiecka K et al. (2008). Midwifery provision in two districts in Indonesia: how well are rural areas served? Health Policy and Planning, 23:67-75.


Resources


www.ighealth.org/en/product/downloadfile/92/MNH-Community-Empowerment-Toolkit

The film ‘SIAP ANTAR JAGA’ presents background on Desa Siaga and describes the experience of implementing the approach, using interviews with involved stakeholders. Made by Karsten van der Oord and Abdul Haris, 2007.


Desa Siaga Cost Analysis in NTB and NTT: A study which provides information for decision makers on the implementation and sustainable roll-out of Desa Siaga from a financial perspective. It offers a tool for planning, appropriate budget allocation and analysis of expenditure. Prepared by Rahmi Sofiarini and Lieve Goeman, 2009.
