

GILI AIR®



A mutual project of the
European Asian Federation
and the
German - Indonesian Federation to promote economy, science, tourism and cultural exchange e.V.

PROJECT NR. 5

„GILI AIR“
(an island in front of Lombok / Indonesia)

**CREATION AND SUSTAINING OF HUMANITARIAN /
ECONOMIC / INTERCULTURAL INFRASTRUCTURE**

IN

GILI AIR

Table of Contents Project Nr. 5 Gili Air

		page
Indonesia	GA	6
Lombok	GA	7
Satellite photos of Gili Air, Gili Meno, Gili Trawangan	GA	8
Lombok`s rain forest	GA	9
Gili Air	GA	10
Typical views of Gili Air	GA	11
Underwater pictures of views surrounding Gili Air	GA	13
Lumbung Kampung Damai Indah Jaya Gili Air (L.K.G.A.)	GA	14
Memorandum L.K.G.A.	GA	16
Structure L.K.G.A.	GA	22
Gili Air`s problems and L.K.G.A.`s solution suggestions	GA	23
Tourists arriving in Bangsal and Gili Air	GA 1	24
Boats	GA 2	25
Cultural information	GA 3	26
Protection of nature – fauna - flora in Gili Air	GA 4	27
Vegetation	GA 4.a	27
Birds and butterflies	GA 4.b	28
Corals and fishes	GA 4.c	28
Protection of beaches	GA 4.d	29
Freshwater on Gili Air	GA 4.e	30
Problems with free moving cows and horses	GA 4.f	31
Fishing with dynamite	GA 4.g	32
Poison	GA 4.h	32

Table of Contents Project Nr. 5 Gili Air

Danger trough boats	GA	4.i	33
Corals and souvenirs	GA	4.j	33
Snorkeling	GA	4.k	34
Problems caused by harpoons	GA	4.l	34
Health for Gili Air – today and tomorrow	GA	5	35
Hospital	GA	5.a	35
Hospital equipment	GA	5.b	37
Necessary personal	GA	5.c	37
Hospital - education program for inhabitants	GA	6	38
Fountain	GA	6.a	38
Sterilized water	GA	6.b	38
Septic tank	GA	6.c	39
Dust	GA	6.d	40
Kitchen and rooms used for food production	GA	6.e	40
Local food	GA	6.f	41
Dental hygiene - education	GA	6.g	42
Children and injuring	GA	6.h	42
Information about Malaria	GA	6.i	43
School for Gili Air / adults' further education program	GA	7	44
Adult education program / pupils	GA	7.a	44
Telelearning	GA	7.b	45
Tourism on Gili Air	GA	8	46
Street and beach sellers	GA	8.a	46
Waste disposal problems	GA	8.b	48

Table of Contents Project Nr. 5 Gili Air

Pollution trough plastic bottles	GA	8.c	50
Pollution trough batteries	GA	8.d	52
Pollution trough one-day-tourists	GA	8.e	53
Problems of horse carts	GA	8.f	54
Pollution trough ship's oil	GA	8.g	55
Pollution trough waste in water	GA	8.h	55
Problem of high speed boats	GA	8.i	56
Problems of helicopters	GA	8.j	57
Disturbances trough motorbikes	GA	8.k	57
Lodging price war	GA	8.l	58
Police and security service	GA	9	59
Other points to mention for Gili Air	GA	10	60

INDONESIA

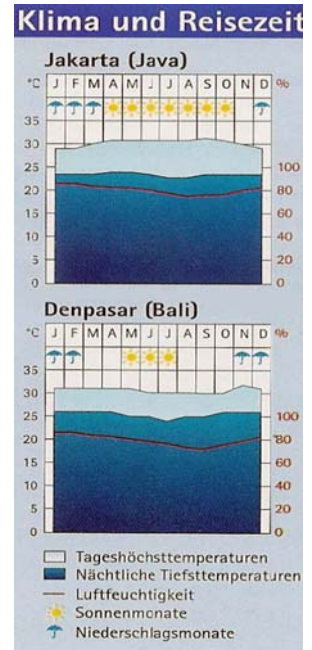
Around 13 000 islands, snuggled like pearls around the equator was a favorite immigration country throughout the centuries.

The emigrants from southern China followed by the Indians, Portuguese and the Dutch. They all brought their cultures, languages and religions, left monuments and thoughts which melted together and emerged into a unique culture besides its diverse landscapes this is the essence of the island republic.

Since its independence the government tries to unite hundreds of ethnic groups, languages and religions.

The wisely chosen national slogan says:
„Bhinneka Tunggal Ika“ - „Unity in its diversity“

Indonesia is a country in change, on the verge to be industrialised and simultaneously a country with ancient traditions, holy places, interesting ancient cultures and fascinating landscapes.



Map of Indonesia



LOMBOK (NTB)

Province Nusa Tenggara Barat (NTB), also known as Small Sunda Islands, includes Bali and eastern islands till Timor.

The two main islands of this province are Lombok and Sumbawa. In Lombok difference between western and eastern Indonesian flora and fauna starts. The northern part of this island is mountainous and green - high trees cover the beautiful land.

The southern part is dry and covered with savanna. Huge Asian animals are missing. The more you go eastern, the more you can recognize this change. Dry periods are harder and longer. Therefore corn and sago instead of rice are main source of food.

Island of Lombok has white, unspoiled beaches, an old culture and is only divided from Bali through small sea passage. Lombok is currently discovered as a beautiful tourist island with personality and individual charm.

The motto is: "Here you can see Bali in Lombok, but not vice versa".

Despite of strong Bali influences historically Lombok has remained its very own culture. As in 16th century Islam came onto this island, four Hindu kingdoms were ruling in peaceful co-existence on these islands, known today as Nusa Tenggara Barat.

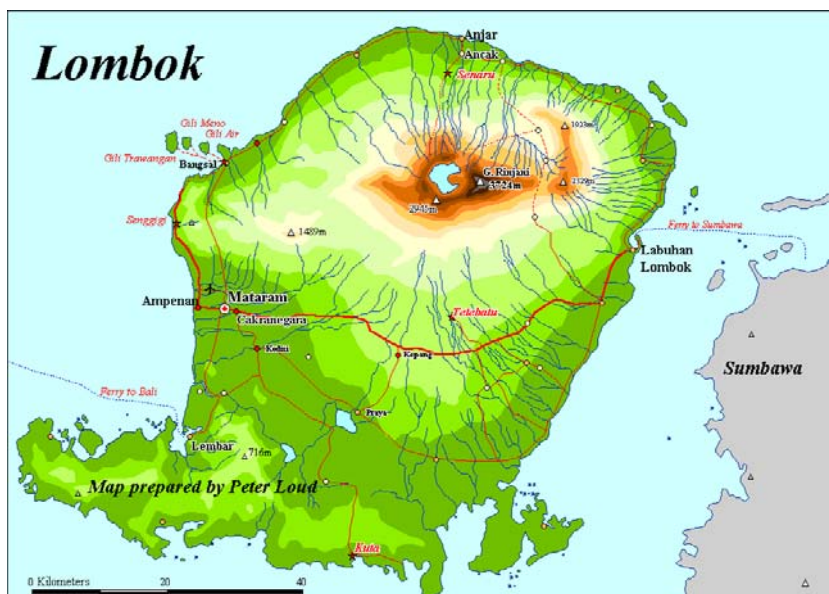
Currently Hindu oriented Bali people are main group of western Lombok inhabitants. The native inhabitants, called Sasaks, are mainly Muslim oriented, as also inhabitants of neighbouring island Sumbawa.

Cultural appearance of these islands are built by four main groups of people.

Bali, Sumbawa people, Bima people and the Dompu.

The region is well known for its Ikat-weaving.

Cows and horses are main export goods of these islands.



Site 7 of 60

European Asian Federation

Artur-Kutscher-Platz 4 ■ D-80802 Munich ■ phone: +49-89-388 799 96 ■ fax: +49-89-388 799 08

bank: Stadtparkasse München ■ BLZ: 701 500 00 ■ account: 902 117 977

BIC: SSKMDEMM ■ IBAN: DE13701500000902117977

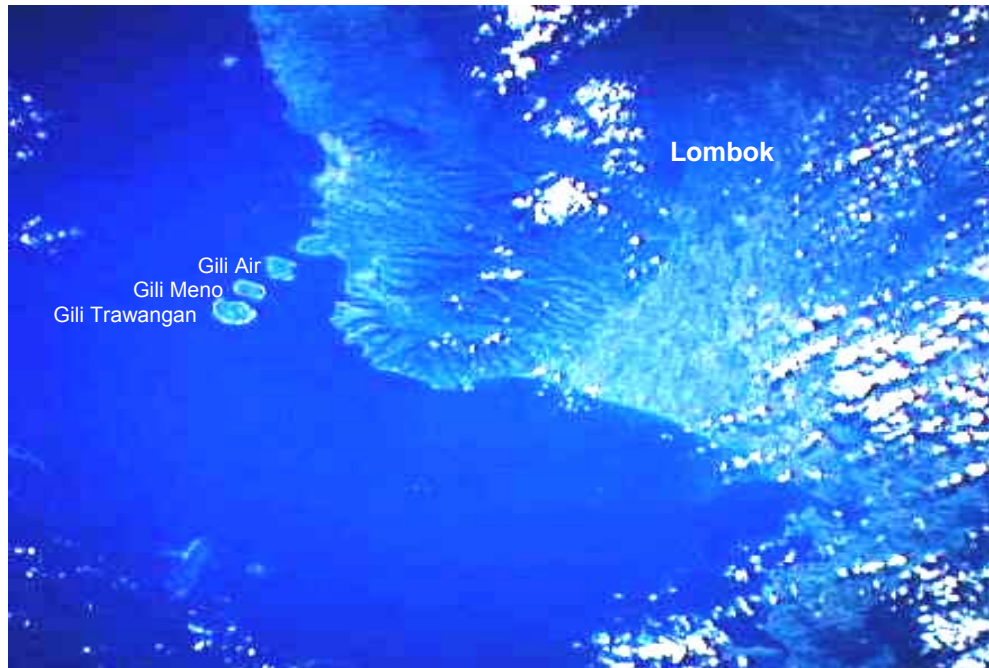
president: Stefan Miller ■ vice president: Ursula Buchner ■ vice president finance: Joerg Praetorius

registered association at local court Munich: VR 18378

© concept: Stefan Miller 01.08.2004

VIEW FROM SPACE

Satellite photo of Gili Air, Gili Meno, Gili Trawangan



Gili Air is directly in front of Lombok and the first of the three Gilis (view from Lombok) on these photos. Because of beautiful diving areas these islands are worldwide known for diving.

From Mataram (capital of Lombok) you drive for little more than half an hour through unique tropical rain forests to Bangsal, harbour for departing traditional boats to three Gili islands.

On this road to Bangsal, you can find many wild living monkeys

Airport Mataram



Monkeys in rain forest



LOMBOK'S RAIN FOREST



View from Lombok's rain forest to Gili Air



Having reached Bangsal, you can passage over to Gili Air (15 minutes travelling time), Gili Meno (30 minutes) or Gili Trawangan (40 minutes).



GILI AIR

Views from Bangsal harbour to Gili Air



Gili Air is a 173 hectare island, has 1150 grown up inhabitants and 250 children.

Inhabitants are from Sulawesi originally and are called "Orang Bugis" in own language.

You can circle round Gili Air in approximately ninety minutes by feet.



Every year 40 000 overnight stays are sold to tourists. Hotels range is from cheap Losman, (cheap possibility to sleep) until small traditional hotels.

Because of special underwater environment the number of visitors is increasing constantly.



TYPICAL VIEWS OF GILI AIR



Dawn image with view to Lombok's extinct volcano Rinjani.

View from Gili Air to Lombok



Beach views



Vegetation



TYPICAL VIEWS OF GILI AIR

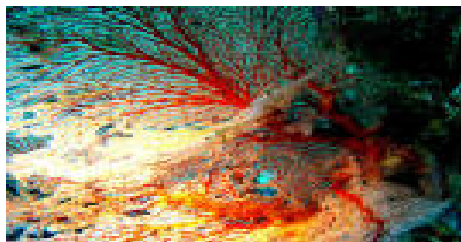
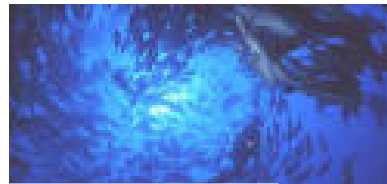
Guest House



Traditional palm wine dispenser



UNDERWATER PICTURES OF GILI AIR



THE PROJECT

LUMBUNG KAMPUNG DAMAI INDAH JAYA GILI AIR

„These things must be nipped in the bud“

Gili Air is a small island with a magical beauty, traditions and peaceful, hard working (diligent) and very friendly inhabitants today.

But how will it look like tomorrow?

Taking European beaches as an example, many of historically beautiful beaches have been covered with garbage, tourist's ignorance and beach sellers disturbing the guests. Dream holidays turn into nightmares.

Garbage at European beaches



Based on pure size of mother earth, differences of regions, and curiosity of mankind, tourists are always seeking for new, exotic, clean and unknown future holiday areas. When such an island is discovered, not many, if any at all, information pieces are available to tourists to build their own picture about this area and local nature.

This lack of information results in lack of respect for local inhabitants, local nature and virginity and cleanness of nature.

Beach almost anywhere in Europe



The beautiful world of tourism is a large and ever growing industry. Gili Air is a relatively new player in this game. Without planned measures Gili Air would turn from an island of magnificent beauty into a large garbage site.

Because many tourists have neither insights nor understanding for problems they are causing. Because of these experiences adequate precautions are absolutely necessary.

This has been the main reason of establishing the **L.K.G.A.**



(L.K.G.A.) LUMBUNG KAMPUNG DAMAI INDAH JAYA GILI AIR is a concept of **DIV e.V.**

German- Indonesian Federation for inhabitants of Gili Air to tackle current and future problems of this tourist region.

Through establishment of **L.K.G.A.** the inhabitants of Gili Air can on their own, under supervision of relevant state authorities, detect and solve problems caused by tourists and tourism industry.

L.K.G.A. is a not for profit organization to help inhabitants coping with tourism and protect their individuality.

For some inhabitants of Gili Air, new working spaces are created, which are also relevant for next generation.

MEMORANDUM OF LUMBUNG KAMPUNG DAMAI INDAH JAYA GILI AIR
(L.K.G.A.)

§ 1 name and headquarters/place of business

Headquarters of the association is Gili Air, Indonesia. Name of the association is

**LUMBUNG KAMPUNG DAMAI INDAH JAYA GILI AIR
(L.K.G.A.)**

It will be applied with the registry of associations at the local court in Mataram (NTB).

§ 2 purpose of association

The **LUMBUNG KAMPUNG DAMAI INDAH JAYA GILI AIR** is religiously and politically independent. It is a not for profit association. With its seat in Gili Air exclusively and directly pursues aims in the true sense of the following:

- a. Development of economic and ecological infrastructure enabling inhabitants of Gili Air to pay for their own costs of living.
- b. Building foundation, constructing and maintenance of a hospital on Gili Air including all relevant matters, personnel, infrastructure and maintenance.
- c. Further-Construction of school with all necessary technologies for learning, including telelearning enabling pupils and students to reach international standards.
- d. Building of fund for people in need and during illness.
- e. Building of court of arbitration for problems of Gili Air's inhabitants.
- f. Development and undertaking of island fund for public tasks.
- g. Support of traditional dances and events.
- h. Development and undertaking of actions for the protection of corals, beaches, and vegetation.
- i. Furthering of planting and growing, marketing and sales of local medical plants.
- j. Protection of animals living on Gili Air.
- k. Development of information brochures for tourists.
- l. Assistance of preventative measures against damages to the environment.
- m. Representing Gili Air's specific interests at government.
- n. Setting up a foreign people's council to represent foreigners living on Gili Air.

§ 3 financial year

The financial year shall be the calendar year.

§ 4 organs of the association

Organs of the association are:

- a. the board
- b. the general meeting plus, if established:
- c. the advisory board
- d. board of trustees

To look after private and corporate interests who financially or intellectually support **L.K.G.A.** a board of trustees and / or an advisory board can be established through the general meeting procedures.

This board of trustees advises and supports the organs of **L.K.G.A.** in its work.

§ 5 membership categories

The association has

- a. full members
- b. supporting members
- c. honorary members

Full members have all legal powers and duties of an association member.

Supporting members assist the activities of the association through advice and payment of membership fees / donations, without all legal powers and duties of a full association member.

Honorary members support the association through their expertise, without all legal powers and duties of an association member.

§ 6 membership process

Any person living on Gili Air can become a full member. New full members shall be approved in a general meeting with approval of single majority (number of votes in favour are larger than number of votes against) of all full members present at general meeting. There is no right to become a member. Membership begins upon approval.

Any person or legal company can become a supportive member. A single majority in a general meeting decides approval of new supportive members.

Admission to the association depends upon payment of membership fee, which minimum amount is set by the general meeting.

Honorary members are selected by a board's decision with single majority.

§ 7 exemption rule

DIV e.v. (German - Indonesian Federation for the advancement of economy, science, tourism and cultural exchange e.v.)
registered at local court Munich, Germany: VR 17954

PERSATUAN JERMAN-INDONESIA UNTUK PENINGKATAN BIDANG EKONOMI, ILMU
PENGETAHUAN DAN PERTUKARAN KEBUDAYAAN e.v.
berkedudukan di Muenchen/Jerman: VR 17954

is part of **L.K.G.A.** board with one person as first vice chairman. This person is chosen about from board of **DIV e.v.** as being full member of **L.K.G.A.** with all statutory rights and obligations.

This paragraph (§ 7) of this articles of association may only be changed in accordance with board of **DIV e.v.**.

Financial investments and expenditures of **L.K.G.A.** are only allowed in accordance (acceptance necessary in advance) with this first vice chairman (**DIV e.v.** chosen person – or person authorized in writing by **DIV e.v.**) of **L.K.G.A.**. **L.K.G.A.** reserves the right to delegate these decisions to another person in writing.

§ 8 membership fees

Membership fees and due dates are set by the general meeting.

§ 9 termination of membership

Membership ceases through resignation becoming effective, dissolution of the association, death, or expulsion.

Resignation proceeds in writing to the board.

Resignation is only possible at the end of each calendar year with six month notice period.

In case of important reasons termination of a membership of full member from **L.K.G.A.** can be decided by the board in a general meeting. This is not valid for person according to § 7 of these articles of association. For decision about expulsion of membership of full member - decision at $\frac{3}{4}$ at least of all present votes are needed as minimum.

In case of important reasons termination of a membership of sponsoring member or honorary member from **L.K.G.A.** can be decided by the board in secret voting. For decision about expulsion of membership of sponsoring member or honorary member decision of $\frac{2}{3}$ of all board members votes are needed as minimum.

§ 10 the board

1. The board consists of three members, the chairman, his vice chairman (being part of board of **DIV e.v.**) and one further member. All full members are entitled to vote. The period for which a person is elected is three years. Re election of full board members are possible. The association is represented by two board members together. Vice chairman has veto-right.
2. The board is responsible for all affairs of the association, unless those affairs are not transferred through the articles to another body of the association.

mostly its duties are:

- a. execution of decisions made at the general meeting.
 - b. preparation of financial budgets, yearly report and yearly closing of accounts.
 - c. preparations of general meetings.
 - d. convening and chairing of ordinary and extra ordinary meetings; posting of meeting agendas.
 - e. administration and financial management of the association's assets.
 - f. convening of board of trustee meetings and advisory board meetings.
3. The board has the right to participate in meetings of the board of trustees and advisory board meetings.

§ 11 ordinary general meeting

1. Annually after completion of the yearly report for the previous year an ordinary general meeting must be held. This meeting must be held during first six months of following year.
2. Ordinary general meetings must be called in by board in writing or through media or notice boards generally used within Gili Air, with agenda minimum of four weeks prior to meeting. Agenda items must be submitted to the board in writing minimum two weeks prior to meetings.
3. Single members suggestions for agenda items must be submitted to the board in writing with small explanation minimum two weeks prior to meetings.
4. Entitled to vote are only full members, supportive members having the right of speech and the right of filing an application. Every full member has one vote. Right to vote can be transferred in writing to other full members.

§ 12 areas of responsibility of general meetings:

1. General meetings have following tasks:
 - a. Receipt, approval and discharge of the board's annual written report and closing of yearly accounts. Approval of boards' members.
 - b. Decision on financial budgets
 - c. Calling of members to the board according to § 10 Point 1
 - d. Board members discharges
 - e. Assignment of board of trustee members
 - f. Pricing of admission and membership fees for full members and supporting members.
 - g. Decision of full member admissions and expulsions
 - h. Decision of changes to the articles of association and the voluntary dissolution of the association
 - i. Signing of rental agreements or leasing agreements
 - j. Hiring and firing of employees
2. The general meeting is a quorum when more than half of its full members are present. If there is no quorum at a general meeting the board is responsible to call in a new meeting with the same agenda within four weeks. At this general meeting decisions can be made with a single majority of present full members; this needs to be informed in the invitation to the general meeting.
Above is not applicable for changes to the articles of association.
3. The passing of a resolution is made, unless otherwise stipulated in its articles or the law, with the single majority of present full members. In equality of votes the resolution will not pass. Hiring and firing of employees, signing of rental agreements and investments exceeding the capital of the association need a three quarter majority of present full members.
4. Negotiations and decisions need be recorded in the minute, which needs to be signed by the chairman. In case of his absence the vice-chairman must sign. In case of his absence the third board member must sign. The secretary is requested to sign additionally.
5. General meetings are in principal chaired by the chairperson. In case of absence by the vice-chairman, respectively his representative. In case of absence of all the above the treasurer shall chair the meeting.
6. Passing of decisions are made by a show of hands.
7. A motion of three present members needs to be voted in confidentially and in writing.

§ 13 extraordinary general meetings

1. The board can call for an extraordinary general meeting if deemed as necessary by the board or when at least 49% of full members request so in writing with reasons and a requested meeting agenda.
2. All regulations applicable to standard general meetings apply to extraordinary general meetings.

§ 14 management of the association

Unless otherwise indicated in § 12, the chair is responsible for the complete management of the association.

§ 15 liability

The liability of all organs and members of the association is limited to its assets.

§ 16 profit

1. The association derives no profits. In particular no one must benefit from non related expenses or unreasonable high allowances.
2. The funds of the association, including donations, school fees, seminar fees, proceeds from association businesses can only be used as stipulated in the articles of the association.

§ 17 services of **L.K.G.A.**

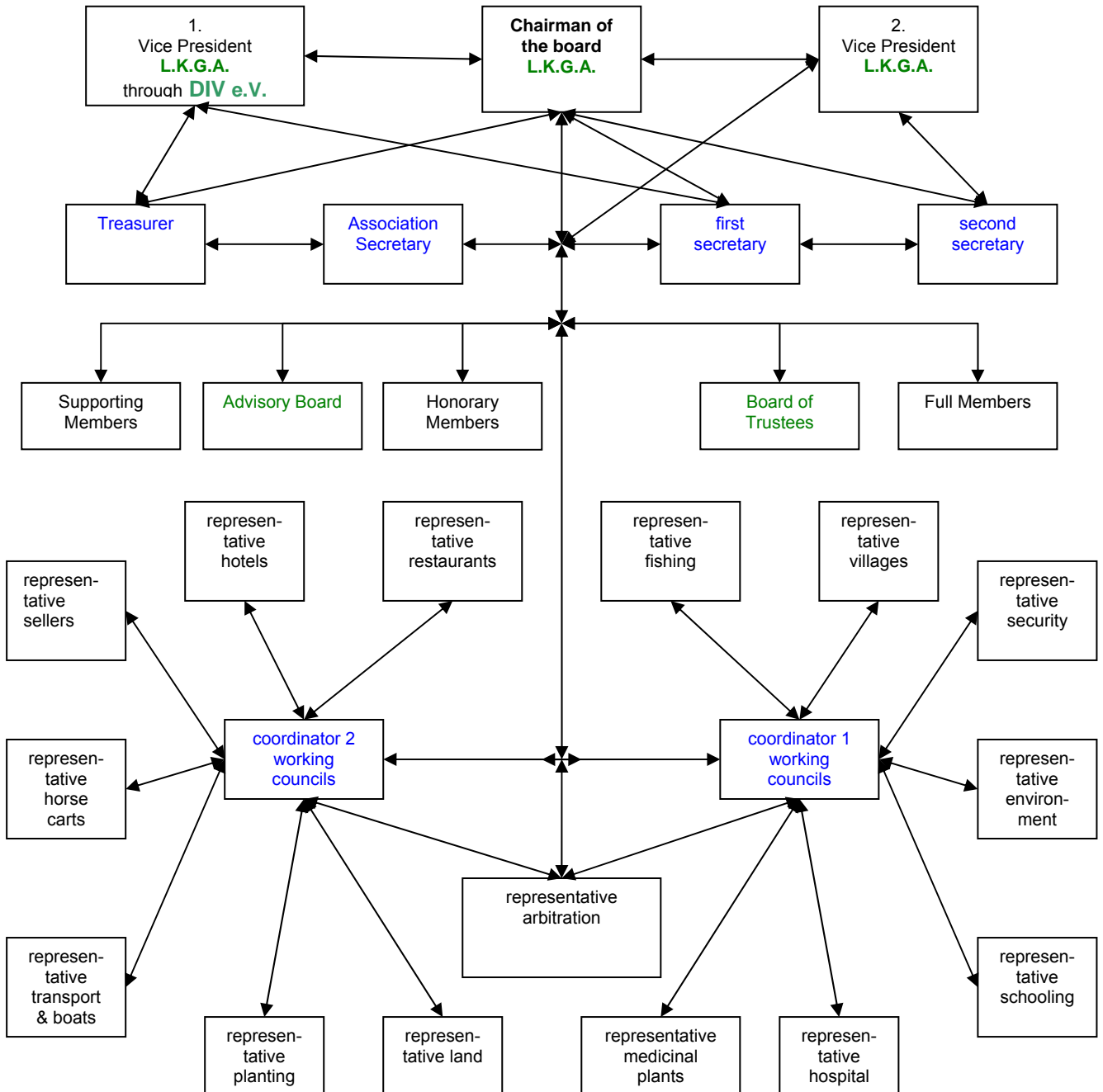
All services (social / financial) are only available for members of **L.K.G.A.** according to financial power of **L.K.G.A.** at time of decision about individual request. There is no legal entitlement for any services.

§ 18 dissolution of the association

1. In case of dissolution of the association, its funds shall be transferred to community of Gili Air.
2. The chair liquidates the association.

All donations / membership fees for **L.K.G.A. and returns of **L.K.G.A.** are solely used for social purposes on Gili Air.**

STRUKTURE OF LUMBUNG KAMPUNG DAMAI GILI AIR INDAH JAYA



GILI AIR'S PROBLEMS AND LUMBUNG KAMPUNG DAMAI INDAH GILI AIR JAYA SOLUTION SUGGESTIONS

L.K.G.A. CAN SOLVE ALL PROBLEMS DESCRIBED HEREAFTER ONLY WITH BENEVOLENCE AND UNDERSTANDING, ALSO COOPERATION AND APPROVALS OF FORWARD LOOKING CHANGES OF RELEVANT STATE OFFICIAL ORGANIZATIONS IN LOMBOK.

There are many problems caused by tourism and **L.K.G.A.** has to deal with appropriate actions.

These problems will be described on the following pages as well as sample solutions through assistance of **L.K.G.A.** in co-operation with **DIV e.v.**.

1. TOURISTS ARRIVING IN BANGSAL AND GILI AIR

When a tourist flies one way from Bali to Lombok (Mataram) costs are 230.000 IDR (equalling 23 Euros) in May 2004. Taxi from Mataram to Bangsal costs 60.000 IDR (6 Euros). Boat from Bangsal to Gili Air is additionally 150.000 IDR (15 Euros).

In relation to flight and taxi this price relation for ferrying across is relatively expensive. When tourists need public transport and public boats, this is less expensive but waiting long hours is necessary often. Public boats departing in Bangsal have no fixed schedule and only depart when boats are fully occupied with approximately twenty people.

Approximately 90 percent of tourists, who arrive in Bangsal (harbour in Lombok) and then arrive in Gili islands, are disappointed because they encounter the same problems they already have found at other tourist places (disturbing beach sellers and luggage carriers asking penetratingly for large sums of money).

Additionally there are people selling themselves as guides. They distribute bungalow names on business cards, Sarongs and T-shirts, they wave before tourists faces. All tourists after arrival want to relax and find a boat to Gili Air.



This full stress arrival does not help name of Gili Air and other Gili islands. Luckily most tourists stay and discover that Gili Air is still paradise island and still value the name of Gili Air.

possible solution for Gili Air / Bangsal

Establishing a souvenir market and an information office at the harbour in Bangsal.

When tourists arrive and no large crowd of sellers or guides are "greeting them" but one to two friendly hosts showing them the way to the information office, every tourist can make up his individual mind.

This office will be equipped with maps and island papers with the location of every bungalow. Despite location information, price and equipment of these bungalows can also be enclosed. Then every tourist can find bungalow suitable to its individual wants, money he or she wants to spend.

Additionally this office can hand out price overview charts showing standard prices for ferrying over and Cidomos (horse carts) for different Gili islands, depending on routes, tourists want to be driven to.

2. BOATS

When tourists charter a boat or take a public boat, customers are expecting good service. Many times, motors break down during travel or other important parts and therefore out of a half an hour journey a many hours nightmare arise. Especially with bad weather this might be not save.

possible solution for Gili Air

L.K.G.A. works together with "Koperasi Karya Bahari" a local association of boat- owners and captains & skippers to guarantee regular maintenance of boats and its engines - via supervised checklist. In case of problems, affected boats are no longer allowed to be used for people transport.

At the same time, a sample solution will be worked on to install a fix public boat schedule. Suggestion: 8am, 11am, 3pm departure time to then travel to all three Gili islands one after the other and simultaneously take on board waiting passengers. This secures fix schedule and tourists can rely on these travel possibilities.



3. CULTURAL INFORMATION

Every tourist, who lives a longer time in a foreign unknown country, is happy, when he can find the art of this culture and can have an individual look with this culture. Many tourists inform themselves with books or over the internet about his travel destination before they start traveling. But it is always better to experience culture locally at first hand.

L.K.G.A. will develop and publish an information brochure for tourists in which cultural information about the culture of "Orang Bugis" and Gili Air is included. This brochure will be distributed at the harbour information office.

Samples of the cultural offerings of Gili Air are:

1. Local music and traditional dances from Gili Air and Lombok. Traditional dances for tourists will be danced by children of Gili Air. Weekly performances could give tourists some insights about local traditions. A small donation, collected after the show would help financing this performance.
2. Islamic religions are very interesting, if read about them and understood. **L.K.G.A.** will print information brochure to be handed over to tourists at information office.
3. Videos are a good possibility to transfer knowledge. **L.K.G.A.** will tape professional video tapes about Gili Air, its environment, its inhabitants, local culture, the arts and crafts, religion, traditions and underwater world. These movies can be showed every week to tourists. A small fee would help finance the shows. Additionally these videos will be sold at information office and local hotels. Profit will be used to finance other **L.K.G.A.** projects.
4. **L.K.G.A.** will support local arts and crafts so that they can produce with their own hands crafts products, works of art, clothing (woven articles, batiks), paintings, furniture, potteries, ceramics, etc. These local products will be labelled "Made in Gili Air". Local production will be controlled and give work to local people. Additionally from coconuts cosmetics can be produced.

4. PROTECTION OF NATURE – FAUNA – FLORA IN GILI AIR

Gili Air is part of paradise environment with many natural attractions sought and found by travelling tourists. If we try to manage that tourists come back often, we have to market peace and beautifulness worldwide without disturbing natural equilibrium. We have to start immediately saving, protecting and sustaining natural beauty above and below water line.

a. VEGETATION

Through private initiative Gili Air's biosphere has increased significantly over last fifteen years.

Because of this vegetation many tourists already say that Gili Air is most beautiful island within all three Gili islands.

Historically Gili Air's nature consisted of coconut trees, Tapiocas and some Gimbara trees only.

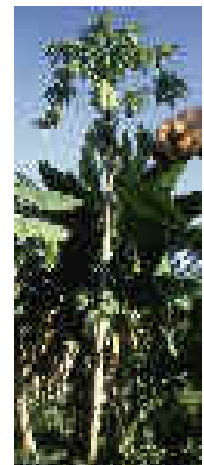
Today there are many different types of trees, bushes and flowers, covering the island. This in total brings a lot of colours, shapes, and smells to this island, bringing charm to this island. Additionally trees bring cooling shadows, without overheating the soil and flowers can grow without problems.



A study of local agricultural ministry shows that specific trees and flowers who grow together in specific form can survive higher and dryer temperatures. Trees, who need only some water and who do not loose their leaves have better chances of surviving.

People, being interested in agricultural care, can talk to **L.K.G.A.** about details, when to plant flowers, which kinds of trees and flowers and how to plant. Here are some names of trees and flowers growing on Gili Air:

Cemara angin
Camplung
Cali anda
Kroton
Bogenvil
Beringin
Kamboja
Papaya



and much more

b. BIRDS AND BUTTERFLIES

Fifteen years ago there have been only some birds, not to mention butterflies on Gili Air. Through a private initiative and a change in biosphere there are many colourful birds and butterflies today. There are also birds flying over from Lombok and resting on Gili Air. It is a wonderful view seeing birds and butterflies possessing this beautiful island.



Every morning at dawn and every evening at dusk birds sing and revive the nature.

There are inhabitants and children shooting with catapults at flying birds.

possible solution for Gili Air

L.K.G.A. will talk to inhabitants that it is strictly forbidden to kill or injure birds. People not following this rule, will be prosecuted and have to pay a severe fine.

c. CORALS AND FISHES

Knowing that corals take a very long time to grow and clean water for living, we have to draw attention to:

Tourists see beautiful and colourful coral reefs together with different types and colours of fishes swimming in front of these reefs as most important attraction during their holidays.

Not only because of this but also from ecological reasons we should take care of problems caused by tourism as soon as possible and solve them.



d. PROTECTION OF BEACHES

Today one of the main reasons to protect the beaches is erosion, which occurs through weather, tide, and other environmental factors.

Sea level is rising every year. Especially during rainy season, water level is very high. Large waves and heavy rains erode a large amount of land, vanishing into the sea and therefore gone forever. Some areas already disappeared up to island circling street in Gili Air completely.

possible solution for Gili Air

L.K.G.A. suggests a project that most affected areas are protected with special precautions. Digging in concrete walls and also above the ground at the sea, land can be protected against the sea.

L.K.G.A. will set up a multi step financing system for this protective system. Any owner of beach land pays yearly in advance a specific fee (according to length of protective system).



If owners of beach land sell their land, which is NOT protected by this system, they have to pay a percentage of total selling price, they receive, to **L.K.G.A.** for setting up this protective system. This fee improves value for buyer as land is secured for a long time. Additional value of land is much higher than fee for **L.K.G.A.**

This fortifying a horizontal beach can be created. This is an advantage that without tide changing water level you can walk through, or sunbath directly at the sea. Additionally directly at the sea level "Brugas", small traditional covered relaxing spaces can be built.



e. FRESHWATER ON GILI AIR

This island has, taking a superficial view, only a small reservoir of freshwater. During rainy season, the well in five meter (sixteen feet) depth supplies freshwater. During dry season, with lower water level, it supplies mixed water (60% fresh, 40% salt water).

Because of geological situation, part of island which is nearer to Lombok, between fifteen meters (fifty feet) and twenty meters (sixty five feet) depth there is a geological layer onto which lows pure freshwater. This water runs directly from Rinjani (extinct volcano) directly towards Gili Air.

Nevertheless an additional possibility is collecting and saving freshwater during rainy season.

possible solution for Gili Air

1. To collect rain water and save it in a system of terraced areas. These terraces hold water back, not to let it disappear into sea immediately and therefore taking nutrients, flowers and bushes with them.

Not to have water puddles or ponds as preferred places for mosquito's and to be used by them for breeding, they should be covered with sand. Rain water can therefore dig into the earth but not disappear into the sea. Mosquito's are then without suitable places for breeding.



2. This example shows that there are not huge quantities of water necessary so that the nature can look bright. Also this system is not expensive in preparation, there is no need for external material to be bought and transported. It is only a question of manpower and moving earth.
3. A special drilling system can and has to be used to reach this freshwater reservoir and secure it against mixed water reservoir above. Gili Air translated means water island. Tests have shown that fresh water quality of freshwater of this layer has very good quality.

f. PROBLEMS WITH FREE RUNNING COWS AND HORSES

There are many coconut trees on Gili Air. Coconuts are main source of income for many Gili Air's inhabitants. There are many cows and horses eating, young coconut plants and therefore destroy these young plants. Without these plants, no more income can be achieved. Cows and horses destroy and eat away many trees, flowers and plants - also to be used as natural fences.

During dry season there is no grass to feed cows and horses. Therefore they have to eat away hay. Therefore these animals eat everything they find.

Many owners of animals have no own land they can use to feed their animals. They bring their animals to foreign land to let them eat away everything what's green.

Cows and horses do not only eat grass but also plants, young flowers, small trees, bushes, and seedlings. Through a large number of cows and horses vegetation is destroyed completely and makes it impossible for further development.



possible solution for Gili Air

1. First step of solution for Gili Air would be to count all cows and horses, living on Gili Air. Additionally **L.K.G.A.** has to define a maximum number of cows and horses. This limit must not be crossed. For all cows and horses, official approval is needed.
2. Every time, a person wants to bring a cow or horse onto Gili Air or a young cow or young horse is born, this information has to be given to **L.K.G.A.**. When limit set reached, no new license will be issued and young animal born has to leave Gili Air after appropriate time to grow.
3. Every owner of animal has to get approval of land owners, where cows and horses are held, if it is not own land.
4. Owners of animals have to make sure that they have sufficient funds to pay for hay during dry season.
5. Animals have to be tied up or hold in within gates. So they can not move freely and neither destroy land and environment nor destroy other people's properties.

g. FISHING WITH DYNAMITE

It is obvious why some local fishermen use dynamite for fishing despite state ban. With dynamite fishermen can bring in more fish than with conventional nets. But when fishermen continue to using dynamite there will be no more fishes to catch soon, because dynamite:



- kills corals and micro organisms
- destroys reefs surrounding Gili Air. These reefs are natural protection for this island.
- Every year more and more of this protective cover is destroyed.
- Dynamite and many unorganised sporting divers kill pare animals.
- Parts of these animals are endangered species, like turtles or dolphins.
- Dynamite kills baby fish and fish eggs before they hatch out.
- Then the next generation disappears and months thereafter there will be no more fish to be trawled.
- The traditional breeding places are left by the fish to breed elsewhere.

Additionally when using dynamite, the lives of the fishermen - and of tourist divers are in danger. In the last years, quite some times dynamite underwater shock waves have hit diving tourists. Some divers have lost their masks and snorkels.

h. POISON

Some fishermen use a poison (Zyanid) to fish specific, smaller size fish types. This form of fishing does not only kill fishes wanted but also, as with dynamite, coral reefs and micro organisms which are very important for live of under water ecological system.



Also tourists and inhabitants are in danger, because fish having eaten part of this poison are later eaten as food by mankind cause allergies to the skin. Eye problems and losing hair are other symptoms which can occur after swimming in this poisoned water.

possible solution for Gili Air

Using poison has be strictly and immediately forbidden.

i. DANGER TROUGH BOATS

Because Gili Air is surrounded by reefs, every time an anchor is let down or thrown over the ship's wall, weight, power and movements of anchor destroys corals - with exception to the harbour area.

possible solution for Gili Air



L.K.G.A. will install buoys for ships to anchor at specific places. Directly near beach only at buoys ships are allowed to moor with. Outside of places shown by **L.K.G.A.** it is not allowed for ships to anchor (at reefs). This also applies for boats and ships from other islands, like Lombok.

j. CORALS AND SOUVENIRS

When a tourist discovers beautiful blue corals in the sea, he thinks, that they would keep this lovely colour in his private home - WRONG!

All corals, regardless of their colour, loose their colour within 24 hours when cut.

possible solution for Gili Air

All tourists and hobby divers have to be informed through relevant travel operators and **L.K.G.A.** that it is absolutely forbidden to take with them living corals. Any person doing so has to be punished severely and financially. In Europe and Australia corals are already protected by law.



k. SNORKELING



Tourists from all over the world come to Gili Air to see and admire its beautiful corals and fishes. But especially unorganized holiday divers behave like a bull in a china shop at the reefs. Divers stamp on corals with their flippers and harpoon fish.

But a positive exemption are members of diving associations who are informed in advance by association leaders.

possible solution for Gili Air

To protect living corals and also satisfy tourists' needs, specific zones for snorkeling will be organized, in talks with **L.K.G.A.** and local diving associations. These are surrounded by mooring buoys.

Therefore the corals cannot be destroyed by anchors of all types of tourists' boats (including glass bottom boats) any longer. Diving tourism will be focused into special areas. Other zones remain untouched.

Tourists can, through this regulation, detect some of the most beautiful snorkel areas in total Asia.

l. PROBLEMS CAUSED BY HARPOONS

Harpoons are a dangerous weapon, when used by holiday divers, especially when many people are using them. Otherwise all local coral reefs will turn into hunting areas till all fishes are killed.

As a tourist hobby harpoons can not only damage fish population but also complete tourism industry.

Additionally accidents can occur, especially when many divers are using harpoons in snorkelling zones.



possible solution for Gili Air

L.K.G.A. will work on regulation that it will be absolutely forbidden for tourists, using harpoons. Only local inhabitants are allowed to use harpoons when fishing for their own living.

5. HEALTH FOR GILI AIR - TODAY AND TOMORROW

No population of a country all over the world can survive when not healthy. There are a lot of simple rules to be followed. Information about personal hygiene has to be distributed to inhabitants through **L.K.G.A.** to make personal hygiene part of individuals' daily live.

Sometimes people die because of an illness, which could have been avoided easily. Without understanding about importance of hygiene out of simple infection a deadly illness can occur - patient dies for nothing.

A working hospital of smaller size is absolutely important for Gili Air. With this establishment local inhabitants and tourists can be helped and adequate first hand care is secured.

The hospital in Lombok (Mataram) is too far away, not only for emergencies in areas of Bangsal and all three Gili islands. Catchments area of this clinic is fifteen thousand people (living locally), additionally many tourists. In total catchments area there are one hundred thousand overnight stays annually.

A hospital helps saving lives and influences name of Gili Air positively. It is a good feeling for inhabitants and tourists to know that not only in case of emergencies immediately and on the spot have medical treatment available. With rising tourists' figures this is also a necessity.

possible solution for Gili Air

a. HOSPITAL

L.K.G.A. will develop co-operation with German - Indonesian Federation (**DIV e.v.**) to realize hospital with all possible combined efforts.

L.K.G.A. will work on all necessary approvals and licenses, especially with health ministry and local government.

DIV e.v. collects donations from third parties, no matter whether from tourists, sponsors or other countries' state authorities.

DIV e.v. at the same time, is assisting with all know how and network to support this project.

L.K.G.A. talks and discusses with local authorities, health department and all other relevant organizations but also immigration department to receive approval for the following model.

It would be a great help, when under supervision of Indonesian physicians, foreign medical personnel, e.g. physicians, doctors beginning their work (medical internship) or medical students, work for a specific period of time free of charge. In return they could live locally for free some additional time and enjoy their time. Foreign doctors and students could learn about unknown inhabitants' illnesses and get practical experiences. Additionally this would be good advertisement for Gili Air.

Local inhabitants could receive medical treatment for free where as tourists and other foreigners would have to pay some fee.

Money received through this treatments would be used to finance running expenses and extend services in the long run.

L.K.G.A. will make sure that all possible machinery and material is bought locally. Additionally it is absolutely necessary that all imported medical machinery, equipment and parts are duty free to avoid additional costs.

The hospital management working together with **L.K.G.A.** and **DIV e.v.** that a special program for education and training purposes will be produced. This program will include meetings, practical examples and videos to show, how to clean and how to prevent infections. This training program could be applied everywhere, at council meetings, in the school and at special events.

Hospital will be in charge to check whether teachers are following the guidelines set. So children can be informed weekly in school and learn, how to live hygienically and stay healthy.

The hospital will organize a continuous education program quarterly where all inhabitants of Gili Air will take part to see whether every person is following guidelines of further education program and to show new health concepts.

Additionally Indonesian medical students will receive a possibility to practice, to watch and to work under supervision of full educated doctors from Indonesia and abroad. This internship students will not be paid for.

b. HOSPITAL EQUIPMENT

The absolutely necessary minimum equipment of hospital to have fully operational capacity is a building with following rooms:

- reception
- secretarial room
- three patients rooms, double occupancy
- three patience single rooms, single occupancy
totaling nine beds
- a small surgery room
- special X-ray room
- one room for gynaecological examinations
- dentist room
- four apartments for doctors & personnel
- one laboratory
- a kitchen
- a washing room
- one storage room for medical products
- one break room for personnel
- some toilets
- technical equipment room (IT, communication, power supply)
- bathroom for patients
- a garbage room

c. NECESSARY PERSONAL

In this hospital you need the following people to be fully operational:

- one doctor for general medicine who is able to do surgery work
- one doctor with gynaecological experience
- temporarily a dentist
total three doctors
- two doctor's assistance worker assisting with medical work in laboratory
- one doctor's assistant to help with secretarial work
total three assistance workers
- two external cleaners - contract work

L.K.G.A. will, together with **DIV e.v.** take over the presidency for this hospital in financial matters. When enough sponsors will have been found, hospital can be expanded as equipment described above is only minimum equipment.

6. HOSPITAL EDUCATION PROGRAM FOR INHABITANTS

a. FOUNTAIN

Nobody can live without water. Fountains are a necessity for local inhabitants and tourists. Fountains are the main source of drinking water. But they are also main source for infections and illnesses of local inhabitants.

To avoid illnesses caused by infected water, the following actions and precautions are necessary:

- a. The fountains have to be covered, when not in use. This prevents malicious bacteria who multiply by sunlight to grow.
- b. It has to be strictly forbidden that people wash themselves, their hair or anything else in or at fountain or -even worse- use washing powder. For all of these activities a minimum radius of ten metres (thirty three feet).
- c. It must be strictly forbidden to throw anything into the fountain. Any breach of this rule will be prosecuted with severe financial fine.
- d. When children are playing, the fountain must be secured totally. "secured totally" means child proof.
- e. It is very important that all septic tanks and toilets have a minimum distance to thirty metres (one hundred feet) to the fountain.
- f. Freshwater is a high valued good for Gili Air. Only salt water swimming pools should be allowed. Saltwater pools avoid mosquito problems and are cheaper. Any person wanting to build a swimming pool has to build a foundation with a thick plastic surrounding this basis. In case of minor or major earthquake saltwater cannot flow into freshwater reservoir. If swimming pool breaks down, owner is responsible to hold damage down and immediate repair of defect.



b. STERILIZED WATER

It is scientifically prove that water is not free of bacteria and viruses if it is has not been boiled for at least some time. If boiled at 100 degrees Celsius, minimum boiling time is ten minutes (sea level). Therewith illnesses can be avoided which occur by drinking unboiled water.

possible solution for Gili Air

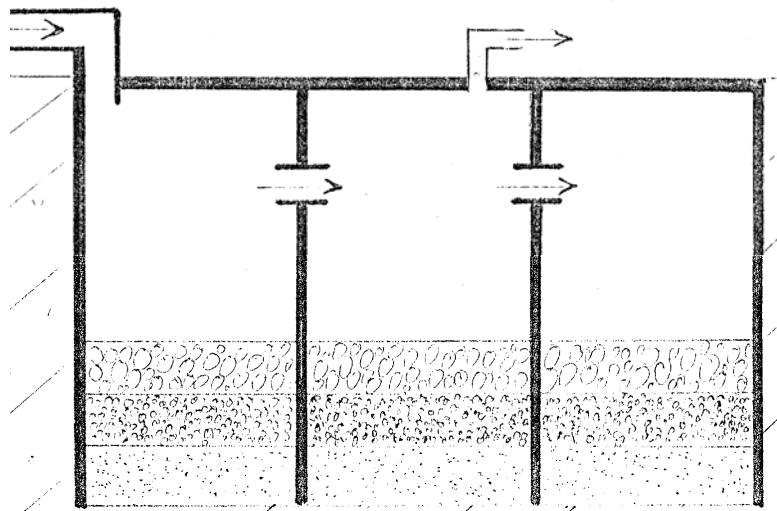
L.K.G.A. suggests additional project to erect water tower. Water filters will be installed within clean water locally and sterilize it. This water can be sold to hotels and bungalows additionally. With seal and own logo of **L.K.G.A.** showing guaranteed quality, favoured by health department, water bottles could be sold outside of Gili Air. Profit would be reinvested by **L.K.G.A.**.

c. SEPTIC TANK

A septic tank must be obligatory for every tourist bungalow and local household. It is important that freshwater and saltwater are free from harmful bacteria. It is scientifically proven, that human excrements contain different types of bacteria, such as hepatitis, cholera und typhoid. To avoid diseases caused by these bacteria, septic tanks must be built. Then no contaminated water will be discharged into the sea and fresh water will be relatively clean. Many illnesses caused by contaminated water will be history.

possible solution for Gili Air

For inhabitants of Gili Air, a septic tank with three separate areas should be built (three chamber systems). This system provides a simple solution locally and is relatively cheap to build. Inside this system, natural filters, consisting of large stones, small stones and sand, help filtering the water.



d. DUST

During dry season the top soil of earth becomes dust (because of its consistency). This dust is dangerous because it can cause asthma attacks later turning into bronchitis or eye infections and it prolongs open infections healing process.

Dust in the air derives mainly from top soil. This top soil is blown into the air by horse carts, people and animals going onto this dry soil. Mainly this dust is blown into the air at circle street. Inhabitants have tried to water this top soil on street, which is needed between five and ten times a day. Success is very limited but the amount of water needed is high - based on dryness and heat.

possible solution for Gili Air

To avoid dust on circle street, covering everything at island, **L.K.G.A.** will work together with land owners. **L.K.G.A.** will ask horse cart owners to cover street with sand from local beaches. Result will be that circle street does not dust any longer. This is easiest and cheapest solution.

e. KITCHEN AND ROOMS USED FOR FOOD PRODUCTION

Many tourists coming to Indonesia take a souvenir home, stomach illness or diarrhoea. The reason for this is many times unhygienic food storage and preparation in kitchen or food storage room.

possible solution for Gili Air

L.K.G.A. will inform bungalow owners, hotel owners and others with further education program how to store food products hygienically and how to keep kitchen clean.

Additionally the kitchen will be controlled through a representative of local hospital, to watch whether these rules are followed.

When minimum standards are not met, **L.K.G.A.** will close down relevant rooms.

THE MINIMUM STANDARDS ARE:

1. storage of food; save from mice and other animals carrying bacteria
2. ice boxes / refrigerator / freezer with emergency power supply
3. running water
4. regular change of cooking oils
5. kitchen needs to be clean, air ventilated and with clean floor with no food standing on it.
6. kitchen needs to be disinfected regularly
7. dishes and glasses have to be cleaned with hot water not to carry illnesses like herpes, typhoid, hepatitis, cholera, etc.

f. LOKAL FOOD

Every country in this world has its own culture and traditions. Food is an important part of these different cultures and traditions.

Inhabitants of Lombok and Gilis eat huge amounts of spicy and fried foods. Spicy food has some advantages but also consumed in large quantities, they can cause pain and to some extend serious illnesses.

Indonesian liquors (Arak, Anggur, banana wine) if drunk in large quantities, can cause the same illnesses as spicy and fried food.

Because of strength of these alcohols, stomach problems are much stronger than if caused by spicy and fried food alone.

For example are the most usual illnesses in this region, caused by fried and spicy food but also from drinking local alcoholic drinks:

- Pankreatitis
- Stomach Ulcers
- Heart Burn

to name just a few.

Not seldomly a not detected pankreatitis ends in a fatal death.

possible solution for Gili Air

L.K.G.A. informs local inhabitants about these problems at local events.

g. DENTAL HYGIENE - EDUCATION

Teeth are a very important part of the human body. Without them living can become a problem.

Dental hygiene is often neglected in this region.

Many dental problems can be avoided when inhabitants are shown to protect their teeth and how to protect them.

Starting at certain age, many inhabitants start to chew Betel. The result after some time is horrible. Teeth turn black, fall out and cause worst possible tooth problems of many kinds.



possible solution for Gili Air

L.K.G.A. will, together with hospital and teachers of local school develop a dental care program. Preventative measures are the first step to avoid future problems.

Teacher in a school are responsible for that every child is cleaning its teeth in the school regularly.

Toothbrushes and toothpaste will be handed over from **L.K.G.A.** to school and forwarded by teachers to children.

Additionally dental care will be looked after by hospital person representative.

Through integration of dental doctor in hospital project regular preventative dental care and treatment is guaranteed.

h. CHILDREN AND INJURING

All over the world there are bacteria. Especially in hot rainy areas, e.g. the rain forests are bacteria fast moving and growing in open wounds and can cause deadly diseases.

When children are injured or are injuring themselves the teacher should be responsible that the child is brought into hospital. Even with smaller injuries only you have to watch this rule carefully.

Hospital is supplying first aid material and undertakes training how to use material properly to undertake first aid for smaller wounds locally.

i. INFORMATION ABOUT MALARIA

Since tourism has started to grow, there is wrong and inconsistent information about Malaria and other diseases spreading around. There are misunderstandings, who are able to ruin the tourists' industry in Lombok in a short period of time.

There are three types of Malaria pathogens:

- Tropical Malaria
- Cerebral Malaria
- Malaria Fever.

The last one, Malaria Fever is the one and only type of Malaria which can be found on Lombok and Gili islands. The illness, this fever is like a strong flu and lasts only a few days. It is not dangerous and not recurrent.

If a person in this region has Fever, the word of inhabitants for this is Malaria; it has nothing to do with Malaria Tropica which is transmitted through Anopheles mosquito.

Almost all tourists are afraid at getting Malaria but do not know difference between different types of Malaria. Many tourists have therefore cancelled their trips to Lombok. Others take in advance strong and sharp medicine, which damages their liver irreparably. It is a fact that Lombok is losing many tourists every year due to wrong and missing information about Malaria.

possible solution for Gili Air

Tourists' department and health department should do everything they can to inform health departments and other countries' health organizations with information packages. Additionally travel agencies should be included as they put together information packages to clear up this misinformation.

Additional signs should be erected to inform correctly about Malaria. These should be put at main transport passages to Lombok, e.g. Lembar, Bangsal, Bandara and Udara.

Local inhabitants of Gili Air and other islands should be informed about how to cope correctly with wording Malaria. The kids can learn it additionally at school.

L.K.G.A. develops and prints information brochure which will be distributed at harbour.

7. SCHOOL FOR GILI AIR/ADULTS' FURTHER EDUCATION PROGRAM

On Gili Air there are currently 150 pupils with six teachers. Number of pupils currently increasing steadily. Currently this school is exclusively a S.D. elementary school. In Gili Air there is currently no possibility for further education. Next secondary school is located in Lombok. Because of financial situation of parents it is impossible for many inhabitants to put their kids in Lombok's secondary school.

To increase future possibilities of children in not only steadily growing tourism industry, a possibility for further education has to be built locally.



End of March 2004 the number of adults (eighteen years or older) on Gili Air is onethousand. Only around 1/4 of all adults speak at least some single words of English - or more. This is not enough in a steadily growing local tourism industry.

possible solution for Gili Air

L.K.G.A. will, in cooperation with school authorities, try to set up a pilot project for school system which is directed into the future. Costs for this project will be covered by **L.K.G.A.**

a. ADULT EDUCATION PROGRAM

In this project a separate course in English language for adults should be integrated.

PUPILS

Parallel to normal Indonesian school program for elementary school a class "English" should be introduced at secondary school level. In "next step" towards a higher Indonesian and international school English is one of most important prerequisites.

Because of worldwide progress in area of telecommunications, not only for Gili Air, project we couldn't help thinking about telelearning.

Pupils are making experiences and learning far away from teacher or teaching institution with assistance of telecommunications' matters.

Requirements, which would be fulfilled by **L.K.G.A.** together with **DIV e.v.** is computer hardware locally, additionally coordination with Indonesian and western Universities and coordination of curriculum with Indonesian state officials.

After completion of high school a telelearning-university could be established. Main advantage of this establishment is that it works regardless of specific number of students. Theoretically one pupil per class would be sufficient to work with. To show details of telelearning a short description follows:

b. TELELEARNING



For interactive telelearning, a teaching presentation will be shown by, e.g. from a TV-studio or via the internet and received at specific learning stations (or individual PCs). Every TV-&PC-station is equipped with a video camera and microphone, every student / every class can interactively influence the program.

In television studio of central station all pictures from receiving stations are mixed and distributed back to all students' stations.

This video-teleconference enables that students sitting far away from each other can see each other and hear - a virtual classroom is born.

For this tele-studio / school / courses / university the creation of hypermedia assisted teaching material is necessary. Server storage of this material allows continuous updates of material according to latest scientific developments.

Multiple users for these services require infrastructure which mainly relies on high band width communication (which exists in Indonesia) - over distributed data highway and multilocation-multimedia-databases.

Telelearning could be, after approval of curriculum, shared in whole Indonesia and give successful participants a certificate helping them finding a better job after finishing this long distance-school & -university.



With this system, it is absolutely irrelevant where the teacher is physically located. There is no difference between Jakarta, Helsinki or Munich.

As a pilot region around Gili Air which includes Gili Meno, Gili Trawangan, Sira, Bangsal, Tanjung and Senggigi would be suitable with 1300 pupils. This pilot area can be overlooked and success can be measured together with local universities and other higher education institutes to be a basis for expansion of this project into Indonesia.

8. TOURISM ON GILI AIR

a. STREET AND BEACH SELLERS

A tourist cannot learn everything to be learned about Indonesia during a two week holiday trip. Additionally an Indonesian inhabitant cannot learn everything about a two-week-holiday-tourist.

An important piece of information for beach seller is that a tourist has to work hard eleven months a year to pay for this two-week-stay.

Additionally a tourist has thousands of choices to decide where he wants to stay. Even when the choice is Indonesia, the reasons for this are not only the paradise beaches to relax and enjoy but also friendly inhabitants.

But this peace is disturbed in Bali, in Lombok and other areas through sellers trying to sell single souvenirs, clothing, handicraft or shells.

So the tourist will not return to Indonesia again.



What is more important, a one time tourist or a returning tourist and customer?

Government has to find a solution taking care of interests of all parties.

Number of beach sellers is increasing constantly, at the beach, at religious places and everywhere.

Naturally Indonesia has many interesting and unique attractions and things which tourists like and love. It is only a question where and how to sell.

possible solution for Gili Air

To tourism ministry belong three hectare of land where three empty and unused broken houses are standing.

When tourist ministry would allow **L.K.G.A.** to use these buildings, **L.K.G.A.** could repair these buildings and develop a marketplace. At this marketplace souvenirs, clothing, etc. could be sold.

Inhabitants might want to sell their own products and no longer beach sellers disturb relaxing tourists at local beaches.



This would bring continuous employment for some inhabitants of Gili Air. Employment right would prefer local inhabitants.



If these inhabitants choose not to sell their products there (despite preference) inhabitants of Lombok might want to sell themselves and pay rent to **L.K.G.A.** through this system both sides would profit.

At harbour a large sign showing that it is forbidden to sell handicraft products, clothing etc. at the beach around the island. Sales are limited to the marketplace and other specific places.

b. WASTE DISPOSAL PROBLEMS

Today, one of the most pressuring problems - all over the world and especially in industrialized nations - is pollution.

Globalization and intercultural tourists' exchange cause some problems. Pollution is one of the most pressuring dark sides. Many tourists, far away from home, do not pay much attention getting rid of their waste. Additionally there is quite some waste, which is disposed in agricultural sites. At least these "disposal tourists" are an example for inhabitants of these areas.

Because of a huge number of tourists in Indonesia, in combination with inhabitants not having well developed environmental awareness, an ecological worst case scenario can become reality. This would result in heavily reduced number of tourists, which in consequence would ruin complete affected industries.



In many regions in Europe this downturn can already be seen. At the final end there is no money left for restoration of areas back to their natural states and for the next generation there is no potential income left.

When every politician / mayor / village elder in his personal area of power would introduce such an initiative much more for local inhabitants could be reached.

possible solution for Gili Air

- I. Because Gili Air is such a small island, island-wide pollution danger is high, if we do not know how to dispose waste properly. Even when tourists want to leave island clean, they cannot do this, as they do not know where to place their waste properly. **L.K.G.A.** will put up at circle street fifty dustbins. Then nobody has an excuse any longer to throw away litter any more. "Keep Gili Air clean" will be printed onto these bins. Every day, or on a regularly basis (as often as needed) they will be emptied by **L.K.G.A.** personnel.
- II. **L.K.G.A.** will introduce an island cleaning day once a month. This means that during this day every month inhabitants will look for litter on island to collect it and bring it to central collection station.

- III. Disposal of every kind of waste (including electronics' waste) will be collected at central collection station on Gili Air to be transported to Lombok. Talks with Governor of Lombok already have been undertaken (and will be again) to buy specific recycling machinery. **L.K.G.A.** will assist in this process with its knowledge and possibilities.
- IV. When a tourist detects a litter free island, he will feel better, participate and come back, respectively leave more money on this clean island.
- V. According to structure of **L.K.G.A.** every landlord of tourists' bungalows will be responsible for cleaning relevant part of beach and circle street.
- VI. In the consequence this work will turn out to bring additional turnover. Tourists will come back and enjoy coming back.
- VII. To secure cleaning parts of beaches and circle street where respective owners do not live on Gili Air, owners have to pay some fee to **L.K.G.A.** This fee (amount to be decided from **L.K.G.A.**) would be paid yearly in advance.



c. POLLUTION TROUGH PLASTIC BOTTLES

Because of missing infrastructure of industrial drinking water supply through pipes in many southern European countries, in most countries water is boiled before drinking or from plastic bottles. Water dispensers normally contain ten liters and are collected when empty and filled again.

Disposable water bottles and plastic bottles for drinks are often (from inhabitants and tourists) thrown away thoughtlessly. Finally this is a huge, unthinkable amount of plastic waste polluting the environment. According to different times of the year and ocean currents a steadily increasing amount of plastic waste is silting up the paradise beaches of Indonesia. Normally parts of this waste are collected from some people working at beaches (because of government regulations) but instead of disposing this waste properly this plastic waste is buried or burnt.

When burnt, this special material (mainly PET bottles) turns into toxic and smoke which is blown into the air and which damages human health. Because this material is not biodegradable when buried, long-term ecological damages are created.



possible solution for Gili Air

- I. **L.K.G.A.** will create a central collection station (for a relevant area (to be defined later), e.g. Gili Trawangan, Gili Meno, Gili Air, Bangsal) for plastic bottles and other plastic waste. **L.K.G.A.** will supply equipment to recycle this waste. Plastic waste will be sorted (according to specific criteria), shredded and granulated. Granules will be sold to plastic processing company for re-use. Profit will be used by **L.K.G.A.**
- II. When plastic bottles and plastic waste are disposed at central collection station, a specific amount of money will be paid for this waste. Amount has to be decided upon separately - per kilogram or per bottle of plastic waste. Through this system, environment will be kept clean and some places to work will be created and additionally tourist areas will be kept clean and good looking.
- III. At local schools a course will be introduced to create consciousness for keeping the environment clean to sensitize pupils (in Gili Air are currently around twohundredfifty pupils) at early age for environmental problems.
- IV. Once every four weeks pupils could together enjoy a "Keep Gili Air Clean" day where they - together with their teachers - clean up this beautiful island

Profit out of this collection will be donated to school and a part to the pupils.

d. **POLLUTION TROUGH PLASTIC BATTERIES**

Current tourism brings tourists with many electronic technology devices. Video-cameras, walkmans, discmans, radios, photo cameras, handies, laptops, torches and more. All these devices have one thing in common. They need batteries. Advantage is mobility through these devices, also with disposal. Who has not yet caught himself throwing empty batteries thoughtlessly into dustbin or into nature.

When empty batteries are thrown onto the earth and forgotten or thrown into the dustbin, metal surrounding rusts and toxic, corrode battery fluid and cadmium flows into the earth and into ground water. Also here, amount of batteries thrown away turns into huge uncountable amount. If we take two batteries thrown away per day, this turns to almost eleven thousand of batteries over fifteen years. On an island with 173 hectare size this is already an environmental disaster turning into irreparably damages for human kind and nature - if not stopped immediately. Cadmium got into the nature once, because of missing decomposition damages biosphere forever.

possible solution for Gili Air

Till a sustaining and long-term recycling solution for empty batteries will have been found, **L.K.G.A.** will put up deposit boxes in every overnight stay possibility for empty batteries. Regularly (as often as needed) these boxes will be emptied and batteries brought to collection station.

There they are stored in safe boxes. When a recycling system in Lombok will have been built, they will be transported to this collection station.



e. POLLUTION THROUGH ONE-DAY-TOURISTS

Earlier and still today, hotels, travel agencies and cruise ships give tourists entering Gili Air disposable lunch boxes with drinks to them for this one-day-trip to Gili Air.

Historically Gili Air had almost no restaurants and it was necessary for tourists to bring their own food and drinks. But today Gili Air has sufficient number of restaurants.

Many one-day-tourists relax with their lunch boxes on Gili Air. The consequences are that waste of this boxes (paper, plastic, empty bottles, etc.) are left anywhere on Gili Air.



possible solution for Gili Air

There should begin a sincere discussion based on facts between travel operators (hotels, local travel agencies, shipping companies) and **L.K.G.A.** started to work out an overall solution. **L.K.G.A.** suggests three possible solutions:

- I. Hotels and tour operators stop giving out lunch boxes. Tourists pay and eat on Gili Air. A coupon model might be thought about. Every tourist operators buys coupons for specific restaurants and hands them over to one-day-tourists. Redemption of coupons can be at location having issued these coupons.
- II. Tourist operator leaders are responsible for cleaning and cleanliness of areas where tourists have been. They have to take back waste to starting point of their one-day-trip and dispose it properly - under their responsibility. Additionally this would be a good marketing for Gili Air.
- III. If none of these two suggestions would be accepted, **L.K.G.A.** would introduce a fee based system. Every tour operator has to pay a fee (per head) for their one-day-tourists to the **L.K.G.A.** for disposal of waste.

In Europe there have been introduced new laws. Everybody who leaves or disposes waste, not only in tourist areas, illegally has to pay a severe fine. Every nation fights against environmental problems and waste problems. It would be a great challenge for Indonesia to show that this problems are tackled in Indonesia.

f. PROBLEMS OF HORSE CARTS
(Dokar/Codomo)

Dokars are called wagons transporting goods; for people transportation *Cidomos* are used.

In both cases, horses are dressed up in colours and with high sounding little bells. In eastern part of Lombok the decorations are more lavish and more colourful than in the west.

At Gili Air these types of transportation is used for last fifteen years. As these transportation is popular and handy but it has its downsides which are seen only by inhabitants and tourists not by external visitors.

Like every other living animal, horses have a digestion, which in consequence brings excrements onto the street. Especially at Gili Air where as main street there is only one street (as an island circle street), the heaps are obvious and everywhere.

These horse' excrements are a good fertilizer helping to grow not only plants but also infections on the human body - especially at the feet which open wounds. On the contrary to Lombok, tourists at Gili Air walk mainly without shoes.



possible solution for Gili Air

- I. Current number of Dokars and Cidomos together is twenty five. Total number of this transportation should be limited to thirty. Every owner or operator of horse carts should be obliged to install a collecting device between horse and wagon for these excrements. Collected excrements can be sold as fertilizer or used on own land.
- II. For maintenance of streets on Gili Air the operators of transportation companies (as main users) should participate. Especially during the dry season (caused by structure of the soil) these streets dust heavily when cart is driving at them.
- III. All transport operators oblige themselves to keep the streets clean and according to degree of **L.K.G.A.** clean some parts of street together with owners of surrounding land. Through coverage with sand, these streets dust in dry season not so much and street appearance is much nicer.



g. POLLUTION TROUGH SHIP'S OIL

Now as boating between Lombok and Bali on one side and Gili islands on the other side has increased heavily, often outside engines are cleaned with sea water by captains or owners and additionally larger amounts of oil is released into water. This oil covers beaches, kills corals and fishes as well as birds.



possible solution for Gili Air

L.K.G.A. will do everything it can to make sure that a law is introduced forbidding these actions. When this law is broken, a huge fine has to be paid respectively boating license will be cancelled.

h. POLLUTION TROUGH WASTE IN WATER

Many times waste from tourists and inhabitants are thrown thoughtlessly into the water. Every day some parts of this waste are floating along local beaches or they flow in water, currents are taking waste with them and bring waste to far away beaches.

possible solution for Gili Air

Tourist guides, boating captains, hostel operators, etc. should be made responsible for their guests actions against the environment. The same is applicable for local inhabitants whereas punishment of these offences local Kepala Desa (mayor) is responsible. Here also severe fines should be result of breach of regulation.

i. PROBLEM OF HIGH SPEED BOATS

High speed boats are fast, noisy and dangerous! Main danger is, that these boats cause accidents with swimmers or snorkelling tourists many times. Noise caused by these fast boats is enough to disturb general silence at all three islands together. Not only silence-seeking-tourists and relaxation-seeking-people, but as well as noise of these engines alone with its killing effects at reefs is obvious.



Noise drives away many small and large fishes. Without number and variety of fish in this region, tourists start staying away and basis of local fisher's livelihood is destroyed.

High speed boats can damage local coral reefs. It is scientifically proven that unnatural vibrations near reefs actually kill corals.

We do never forget that the main reasons for tourists coming to Gili Air are dependant on water e.g.:

- snorkelling
- diving
- swimming
- relaxation at beaches
- enjoying the sun and silence

At many places in Europe private use of high speed boats in relaxation areas is strictly forbidden. Exemptions are only sovereign takes, e.g. police or rescuing missions. Additionally there are there are local laws in place for waterskiing and parasailing.

possible solution for Gili Air

- I. **L.K.G.A.** will work with together with governor of NTB (Nusa Tenggara Barat) to introduce a regulation in usage of such high speed boats (according to size of boat, e.g. by number of horse power) in this region.
- II. In this regulation a maximum number of boats in this region should be one boat per island (Gili Air, Gili Meno, Gili Trawangan). Usage of this speed boats should be watched over by police and mayor of every island.
- III. This license should have clause for priority usage by police and for rescuing missions.

j. PROBLEM OF HELICOPTERS

Lately it has occurred more often that heli-tourists from Bali do a stopover on one of these three islands.

Despite of noise und dust disturbing the peace, helicopter flights should be limited to emergencies only and not as standard tourist transportation vehicle.

Because of size of Gili Air and surrounding islands, motorbikes are absolutely unnecessary. They should stay forbidden now and forever.



k. DISTURBANCES TROUGH MOTORBIKES

Because of size of Gili Air and surrounding islands, motorbikes are absolutely unnecessary. They should stay forbidden now and forever.

I. **LODGING PRICE WAR**

Range of overnight stay possibilities on Gili Air starts at cheap Losman up to small traditional hotels. To enable owners of these accommodations not to lose money but make a profit out of their investments and no war about the cheapest price should start. There should be competition about quality, but not lowest possible price. The owners have to protect themselves.

It lies in nature of tourists that they are always looking for the best price they can get. Especially in low season when operators rely on overnight staying tourists more than in high season, operators fight a war in reaching lowest price. Result is that costs for these rents are higher than money earned.

Tourists like this very much and they are exploiting this situation.

In the long run service is becoming worse and is damaging Gili Airs reputation.

possible solution for Gili Air

- I. **L.K.G.A.** will sit together with all owners and operators of bungalows / hotels and tries to arrange agreement about minimum overnight stay pricing.
- II. When every owner or operator would ask for a minimum price per bungalow of 50.000 IDR (without meals) then it would be impossible for tourists with this regulation to have overnight stay possibilities below this minimum price and operators would no longer ruin themselves.
- III. Tourists will then pay at least minimum price. Tourist will not stay therefore any shorter on Gili Air.
- IV. Tourists will understand this situation and so more money - especially in low season with less tourists - will be to the benefit of inhabitants.
- V. Every owner and operator of bungalows can decide himself how much he charges above the minimum price.

9. POLICE AND SECURITY SERVICE

The more tourists come to a place, the more problems of many kinds occur, especially in connection with these tourists.

Knowing that tourism on Gili Air just has started; tomorrow more tourists will come and cause more and larger problems.

Today there are 1 000 adult inhabitants and approximately 400 kids on Gili Air. Additionally there are approximately 300 rooms for tourists with a maximum capacity of 600 tourists per day simultaneously.

Together with beach sellers, tourists' guides, one-day-tourists, etc. the maximum occupancy of people being at Gili Air simultaneously are 2 400 people occupying 173 hectare.

This huge number is the main reason why Gili Air needs a connected security system, with main police stations in Tanjung and Mataram and a branch on Gili Air.

possible solution for Gili Air

A small but efficient police station should be erected on Gili Air together with **L.K.G.A.**. This means two policemen with radio equipment and a fixed radio station (or mobile phones) to call, when necessary, police stations in Lombok / Tanjung or Mataram.

Additionally **L.K.G.A.** will employ two to four security people and pay them wages. This local security is responsible for waste avoidance at beaches, cleanliness of street, bungalows and hotel areas (for their cleanliness the owners are responsible for).

Additionally at night, the work as interface between owners of bungalows and local police. Also when rules of **L.K.G.A.** are not respected or street sellers are walking around in a disturbing manner, they are responsible to hand out relevant fine notices.



10. OTHER POINTS TO MENTION FOR GILI AIR

INTERNET AT GILI AIR

In Gili Air some have internet access, but because of costs only through old cables and with 56K-modems. In reality this works only slowly sending and receiving emails. One 56K-modem is connected to up to six computers at the same time sometimes.

L.K.G.A. will apply for DSL-cable licence, pay, use it and rent it to people being interested (e.g. internet café operators) against some fee.

MEETING POINT

L.K.G.A. will introduce a meeting point in Bangsal and Gili Air where tourists can leave messages for friends and others as a black board and to meet there.

DONATION BOXES

L.K.G.A. will, with agreement of operators of overnight-stay-bungalows and restaurants put up donation boxes, which are secured and sealed for financing **L.K.G.A.** activities. These donations will only help social activities, such as a local hospital and school.

SURPLUS FISH AND SURPLUS MEAT

To secure a stable supply with fish and meat, even in rainy season, **L.K.G.A.** will build a freezer warehouse with emergency power supply, buys regularly from fishers and cow owners' surplus fish / meat and freezes them. **L.K.G.A.** sells these fishes and meat when needed to restaurants and local inhabitants.