Working with elephant mahouts

Insights from workshops on assessing the welfare status of mahouts belonging to Temples and Mutts in Karnataka

Surendra Varma and Suparna Ganguly

Elephants in Captivity- CUPA/ANCF Occasional Report No.19
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Surendra Varma¹ and Suparna Ganguly²

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Preface

Mahouts play a critical role in managing elephants; they form the first layer of communication with elephants. A study carried out to assess the welfare status of elephant and mahout identifies that among all the institutions keeping elephants, the welfare status of elephants in religious institutions was poor, showing a wide gap between the target of satisfactory welfare and existing status. Achieving this target of acceptable welfare is just not the religious institutions’ responsibility but also depends on people who care and have knowledge about elephants to involve themselves in developing ways to attain better welfare. One way to achieve this goal is to develop a dialogue with religious institutions that keep elephants. The interactive approaches through workshops provide quality, space and time for meaningful exchange of ideas between concerned parties. It was found relevant authorities are often busy or committed to other assignments. In addition to this, on the ground the mahout who takes care of the elephants is an important participant needing information on more satisfactory ways to interact and maintain his/her elephant. With this background, workshop on captive elephants of religious institutions and their keepers (mahouts/assistants) was planned.

First workshop was held at Davangere, central Karnataka, with a participation of 8 mahouts, 5 Veterinarians, one elephant expert and one person from an NGO on animal welfare. The second was held at Dharamasthala- northern Karnataka, with the participation of 32 individuals that included 11 mahouts, 10 Veterinarians, 6 managers, 2 elephant experts, 4 persons from welfare NGO. The general objective of the workshops was to introduce the participants to concepts on captivity and welfare and hold discussions on various issues taking inputs from the mahouts to identify possible short term and long term welfare recommendations. The workshops become a very important source of knowledge; mahouts and managers felt this is the first step in changing their wrong opinions about the welfare of the species that has a historical and cultural association with human beings.
Acknowledgement

We are grateful to the following individuals, without whom these workshops would not have been possible.

Dr. Maheswara Gowda, Deputy Director Animal Husbandry Department (AHD) of the Davangere Dist, Dr. Kallappa AHD, Dr. Rudrappa (retd.) AHD, Dr. Chandrashekhar, Sakrebye Camp, Dr. Ramananda (retd.) ex-veterinarian, Sakrebye Camp, Dr. Shrinivas, Deputy Director, AHD, Dr. Somashekar, Mysore, Dr. Kallappa, Shimoga, Dr. M. Nagaraj, Dr. K.R. Acharya, Dr. Rajshekarpapp (retd.) AHD, CUPA.

Dr. L.H. Manjunath, Executive Director, Shri Kshetra Dharmasthala Rural Development Trust, Dharmasthala, Managers, Shri Narayanashetty, Shri Bhujabali, Shri Yogishbhat –Dharmasthala, Shri Gopalakrishna – Shringeri and Mr. T.K. Chandrai, Shrishaila mutt.

Elephant mahouts, Mr. B. Ismail, Sirigere mutt, Mr. Babusab Budensab Anera, Shrihaila, Davanagere, Mr. Mohamed Alisab Hazaratsab, Ujjaini mutt, Mr. Noushadsab Budansab Anera, Irinimutt, Ranebennur, Mr. Gousesab Badesab, Shirahatti mutt, Mr. Idaayat Munaafsab, Rambhapuri mutt, Mr. Rajabakshi, Muktimandira, Lakshmeswar, Mr. Raghavendra – Hombuja, Mr. Thimmiah Gowda– Shringeri, Mr. Ravi – Shringeri, Mr. Giriyappa– Hosanadu, Mr. Venkatesan- Kateel, Mr. Ayyanna– Kolluru, Mr. Nanniyappa, Mr. Manjunatha, Mr. Gopala, Mr. Shrinivasa, Mr. Krishna – Dharmasthala and Mr Babu Sab – ShreeshailaMutt.

Ms. Pragyna Chowta, Aane Mane Foundation and Ms. Rajani Badami, Trustee, CUPA. They helped in co-coordinating the arrangements made for the workshops at Davangere, Central Karnataka and Dharamasthala, northern Karnataka.
Section 1:
Workshop on Captive elephants and their Mahouts, Davangere, Central Karnataka 3rd February, 2011
Background
Workshop for mahouts of elephants from religious institutions was held at the Davangere Government Veterinary Hospital, Davangere, central Karnataka. It was attended by 7 mahouts, one temple manager, five veterinary doctors, Dr. Maheswara Gowda, Deputy Director Animal Husbandry Department (AHD) of the Davangere Dist., Dr. Kallappa AHD, Dr. Rudrappa (retd.) AHD, Dr. Chandrashekhar, Sakrebyle Camp, Dr. Ramananda (retd.) ex-veterinarian, Sakrebyle Camp and authors of this document (Surendra Varma from the Asian Nature Conservation Foundation (ANCF) and Suparna Ganguly, from Compassion Unlimited Plus Action (CUPA)) (see Appendix 1 for participants and 2 for photographs related to the events).

The workshop was held in context of the surveys held in 2005-2010, identifying number of elephants, their locations in the state and the welfare status of the elephants and their mahouts. Supported by the Animal Welfare Board of India, the workshop (Figures 1a, b and c) was limited to only the mahouts who worked for private institutions and establishments. The project was co-coordinated by a qualified and experienced elephant veterinarian. The mahouts who attended the workshop belonged to mutts, the elephants spent considerable time in traveling on tar roads, blessing people and collected offerings given by people. The workshop objective was based on critically inspecting the effect of food items elephants are exposed to, their travel on tar roads and analysis of associated problems; to provide a review of mahout’s conditions, as it is linked to the welfare status of both elephant and its keeper.

Dr. Ramanand introduced the session by a short talk on identifying the practical problems in maintaining captive elephants, for which a traditional approach has been followed so far, without understanding the logic or welfare governing the animal; e.g., the perceived notion that elephants can eat anything, can walk anywhere, etc. Since these were common assumptions, there is no intervention and the health and wellbeing of the animal suffers greatly.
The problems that were identified during the workshop
Mahouts described about the problems that they and the elephants faced in their working lives viz.,

1. Frequent digestion problems of the elephants
2. Elephants’ foot care or its absence
3. Poor or no remuneration and/or safety precautions for keepers
4. Mahouts’ attachment to the mutts in a feudalistic way, originating sometimes from their forefathers’ generation
5. Desire to form an association to further their livelihoods

It emerged during discussion on the above mentioned topics that a common feature of this category of mahouts is that they are not paid any fixed salary. The exceptions were Dharmasthala kshetra, Shringeri Mutt, Samson Distilleries, etc, whose mahouts were given fixed wages.
In all other cases, a meager amount ranging from Rs. 500-1,500.00 (per month) was given to them and this included cost of maintaining the elephant. The animal therefore became the sole source of income for a family of 6-8 individuals. The institution holds the animal legally and the animal gets its identity from the temple or mutt. The earnings from festivals, functions, weddings, etc., go to the mahouts. Daily donations, begging from shops, establishments and food contributed by devotees formed the upkeep of the animal and livelihood of the handlers.

These elephants when in towns and cities effectively ate items like

- Four idlis (Steamed food item made from dough of rice and pulse grains from 20 shops, a total of 80 idlis approx. per day)
- One kesari bhat (Sweet dish made from Semolina) from 10 shops = 20 plates of kesari bhat
- One dosa (Cooked food made by sautéing dough of rice and pulse in oil) from 10 shops, totaling 10 dosas per day
- Items like vadas (deep fried dough made from pulse and rice grains), excessive bananas from devotees, sweets, etc.

These elephants when in villages effectively ate items like

1. Paddy, Raw rice, ragi balls, cooked rice, coconut, jaggery, and banana. The quantity varied depending on place and items available.

The above items contributed to about 1/3rd quantum of their food intake, rest being bought such as greens, grass, sugarcane, etc. Frequent diarrhea was a problem. Poor digestion due to easy and free availability of the above mentioned food items often lead to gastric troubles. Left untreated, it can be fatal for the elephant. One of the authors (Mr. Surendra Varma) explained the significance of proper feeding for maintaining elephant health.

Water and food contamination are the reasons for frequent bouts of diarrhea. Natural feeding i.e., foraging, is linked to gaining adequate micro and macro nutrients, feeding activities provide scope for exercise and food is relatively free from contamination. Elephant diet has to be based on natural food varieties, like grasses, roots and branches which have associated nutrient qualities, the exercise of breaking and preparation of feed facilitates the energy loss and gain and leads to the prevention of obesity. Unhealthy weight gain is prevented by the feeding of foliage and natural foods, which would be free from contamination as against giving cooked rations.

The cooked foods given to these elephants, as listed by the mahouts, are high in the possibility of permanently and adversely affecting the health of the elephant. Cooked foods do not exercise the teeth and jaws of elephant e.g. idlis, contribute to contamination, lack of exercise, etc. Chewing of food is an important component of digestion. Though cooked food makes teeth last longer, this will have a negative effect by a mismatch of age, abilities and physical fitness of the elephant. By 60 years, the 6th molar drops, as per nature’s plan thus, the food intake reduces and the elephant goes through a cycle of slow decline.
The mahouts had trouble recognizing the elements of healthy feet. This indicated that their knowledge was very poor, in spite of their experience. They felt that pads that were well tracked were a health hazard and chose smooth soft pads as being desirable for the elephant. After pictures and visuals were shown they understood the role of track and grip is for the under pads; similar to the treads on vehicle tires. Elephants with smooth foot pads when walked on mud roads or dirt tracks can result in the elephant slipping and falling, as they do not have traction. This would result in loss of livelihood for the mahouts and additional cost of health care of the animal.

Figures 2a and b: Comparison of elephant pads across different regimes as examples to indicate natural pad

Dr. Kallappa, who has had experience in treating this category of elephants, had consistently noticed skin related issues (Figures 3a and b) that were absent in forest camp or wild elephants. The condition was called Warts, which may be due to malnutrition.

Figures 3a and b: Skin related problems observed elephants associated with mutts

The second author (Suparna Ganguly) spoke on legal matters governing elephants as Schedule 1 wild life. Legally, though the animal has some protection, the mahouts have none. Their hardship of maintaining a wild animal like elephant has issues that may affect their health and public safety. If there is any damage done by elephant to human life, then mahout’s livelihood is at
stake. If proper care is not there, it leads to an elephant becoming dysfunctional and again the mahout is at risk. Therefore, certain guidelines need to be brought in, with improvements for both man and animal. Current realities of this regime was discussed and as the economy of elephant keeping became clear, it was apparent that the elephant was not free to have natural food, get proper exercise and be kept or walked on appropriate substrates like mud, soil, forest floors etc.

This alternated with discussion on salaries, pensions, manpower needs and salary structures, with periodic increase and risk allowances. As all mutts run educational institutions, free education is possible. Travel allowances and rations during travel was needed, contrary to the temple assumptions that the mahouts generate their own and animal’s expenses. On being asked to list their needs for better living wages and conditions, these were the mahouts’ points:

1. Three men per elephant with mahouts pay as Rs. 12,000/- and two others at Rs. 10,000/- each
2. Health and risk insurance
3. Medical Insurance
4. Education for their children

The talks concentrated on feeding and foot care since these were critical areas of concern in the life of temple elephants. Work related issues included the practice of blessing by raising trunk repeatedly, giving rise to boredom and misbehavior by the animal. Demonstration of the problem of repetitive commands associated with begging-blessing was given.

The importance of animal interaction and giving some enrichment in the form of differing activity was emphasized as being integral to the animal’s mental health. This was stressed by everyone present. This activity of begging and blessing, in its current form, gives rise to great criticism of the mahouts and the mutts.

**Recommendations agreed upon by mahouts as practically possible:**

- Make elephant walk on mud tracks, wherever possible
- Not to let the animal stand in one place for many hours
- Vary activity to alleviate boredom
- To control types of food given

**Recommendations possible for mutts and temples:**

- Elephants should be kept and walked on mud floors and tracks, wherever possible.
- Ban on external foods
- Water bodies, rivers present and should be utilized fully for the comfort of the animals
- The animals should be kept free or tethered for restricted hours in different locations, under the tree shade or available shade. It would also help in maintaining hygiene.
- Investment in concrete floors is known for creating severe health, skin and joint problems for elephants and is considered self defeating; avoid concrete/hard floors
This workshop also indentified different elephant centers that could be used for conducting future workshops or initiating interaction among the mahouts:
(Centre and number elephant mahouts under each centre)
Davangere- 8
Belgaum - 4
Dharmasthala – 11
Bangalore – 14
Appendix I: Workshop participants

Dr. Maheswara Gowda, Deputy Director Animal Husbandry Department (AHD) of the Davangere Dist,
Dr. Kallappa AHD,
Dr. Rudrappa (retd.) AHD,
Dr. Chandrashekhar, Sakrebele Camp,
Dr. Ramananda (retd.) ex-veterinarian, Sakrebele Camp
Mr. Surendra Varma the Asian Nature Conservation Foundation (ANCF) and
Mrs. Suparna Ganguly, Compassion Unlimited Plus Action (CUPA)) and elephant mahouts
Mr. B. Ismail, mahout Sirigere mutt-
Mr. Babusab Budensab Anera, mahout Shri shaila mutt, Davanagere
Mr. Mohamed Alisab Hazaratsab, mahout Ujjaini mutt
Mr. Noushadsab Budansab Anera, mahout Irinimutt, Ranebennur
Mr. Gousesab Badesab, mahout Shirahatti mutt
Mr. Idaayat Munaafsab, mahout Rambhapuri mutt
Mr. Rajabakshi, Muktimandira, mahout Lakshmeswar
Mr. T.K. Chandrai, manager, Shrishaila mutt.
Appendix II: Photographs related to the events of the workshop Davangere, Central Karnataka 3rd February, 2011

Figures 1a, b, c, d, e and f: Workshop for mahouts at Davangere, mahout welcoming experts (a), speaking about their welfare issues (b), mahouts who attended the workshop (c) experts (d) certificate distribution (e and f)
Section 2:
Workshop on Captive elephants and their Mahouts, Dharmasthala-
18th February 2011
Background
Workshop for mahouts of elephants from religious institutions of the Malenad region was held on 18th Feb., 2011 at Dharmasthala. It was attended by the official team of Dharmasthala, led by Dharmasthala Kshetradhikari Shri Veerendra Hegde, veterinary experts, managers, elephant experts and the mahouts of elephants associated with the religious institutions in and around Dharmasthala. The workshop focused on imparting critical information to the mahouts on elephants and their welfare and held discussion between mahouts and elephant experts in an interactive way aimed at bringing about a positive change in the lives of their elephants. The mahouts’ presence and representation was integral to the success of the workshop (see Appendix I for participants). Initial part of the workshop addressing the relationship and bond between Man and Elephant was stressed, with emphasis laid upon kindness in dealing with the captive animal. It can be said that the mahout practically has two wives, one human and the other, the elephant; the amount of time spent underscores the need and importance for a strong bonding and sensitivity to the needs of the animal.

Workshop
All the mahouts, “Cawadis/Kavadis and managers introduced themselves. Translations in Kannada of ‘Gaja Nirvahane’ and the Kannada version of the book, ‘Gaja Samhite’, was distributed to all the participants. The workshop was initiated with interactive session, particularly discussions with veterinarians on elephant health. Dr. Srinivas – pointed out that elephant’s eyes should be clear, the mouth, nose cavity should be pink; the animals will never be still but always moving, ears flapping, shifting from leg to leg etc. Skin should be smooth and healthy looking. Fecal matter should be greenish not black. It should not pant and keep touching its chest with the trunk. De worming should be done regularly. Salt should be adequate in the diet. Salt intake should be more during the monsoon season so that water intake is proportionately increased. Vegetable intake to be increased, rice reduced and if more freedom and love is given, then there is no need for a Doctor.

Shringeri Manager- Shri Gopalkrishna suggested that the vegetable cabbage should be avoided. White pumpkin (locally called bagane soppu) was good because it helped to reduce the occurrence of “musth” in male elephants. Once ‘Musth’ comes on, “bagane soppu” is a help to reduce and cool down the animal. Diarrhea occurs when the elephant is exposed to a variety of feed and rice during festivals. Care should be taken to bring it back to a proper diet after that. “Chawanprash” as well as “Himalaya Batisa” was good for digestion.

Discussion was held on the condition of the temple elephant’s feet, a condition which is often very painful. Mahouts were advised on the care for the animal. All mahouts were shown three pictures and asked to identify which leg (Foot pad) is healthy and which is not. Most of them were able to identify the correct condition. They were also shown pictures of leg in bad conditions and asked whether their elephants have any of these. It was stressed that housing should have mud floors. They should be exposed to mud and water. Cement and stone floors are not good for elephants. Gopalkrishna said it is hard to find mud surfaces these days for the elephants. Of the 37 temple elephants on record, only 5 were male. This is because of ‘musth’ problems and all temples do not generally want to keep male elephants.
It was recognized that elephants Mahalaxmi of Kateel Temple and Laxmi of Horanadu Temple had increase of body dimension due to over-feeding and less movement. It was resolved to give all of them more exercise by indentifying suitable places and to keep them moving from place to place.

One of the managers suggested that the initiative should come from the mahout and he should take interest. He also suggested that mahouts should also make 4 areas of sand like sandpits for tethering elephants. They must be tied under trees for at least a few hours. They must be tied or exposed to mud floors for a few hours. This particular discussions lead to identifying different issues and passing different resolutions

**RESOLUTION 1** - It was resolved to keep the elephants on mud flooring and tied under trees at least for a few hours every day. The mud area should be cleaned of fecal matter and urine regularly.

One of the authors (Surendra Varma) suggested that since the elephant is unable to maintain the body temperature which is very important for it, the elephant should be tied outside in the shade (like under a tree) not in a shed during peak hours of the sun. During rainy season it can be kept in the shed but the roof should be high. It should also be exposed to rain. Another expert (Smt. Pragna Chowta) suggested that ideally, elephants should be left in the forest, to graze and forage for long periods. This led to passing the second important resolution by the workshop participants.

**RESOLUTION 2:** Managers and mahouts resolved to tie the elephants outside as far as possible and to send it out into the forest for free ranging. Even if there is no food to forage, the exercise is good for it. The elephant can be put a single long chain to control it. If it is tied to a tree, it could circle the tree continuously and get tangled with the chain. So, the chain needs to be tied loosely so that the chain revolves with the animal. There is a mechanism used for boats which can be used and which will help the elephant to move freely. Smt. Chowta offered to identify the place and procure these kinds of chains, if necessary.

**Status of food given**
Experts stressed the importance of proper feed. A survey through participants was done of the feeds being given to each elephant (see tables 1 to 5)

**Dharmasthala:**
Morning feed consists of “Ragi mudde” (boiled and mashed grain) - 25 kg for 3 elephants in the following proportions:

<table>
<thead>
<tr>
<th>Mahout</th>
<th>Age</th>
<th>Feed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lakshmi</td>
<td>6</td>
<td>3 kg</td>
</tr>
<tr>
<td>Latha</td>
<td>45</td>
<td>10 kg</td>
</tr>
<tr>
<td>Ganga</td>
<td>65</td>
<td>12 kg</td>
</tr>
</tbody>
</table>

Afternoon Feed consists of 10 kg of soaked rice + salt.
Evening Feed consists of 36 kg horse gram in the following proportion:

<table>
<thead>
<tr>
<th>Mahout</th>
<th>Feed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lakshmi</td>
<td>3 kg</td>
</tr>
<tr>
<td>Latha</td>
<td>10 kg</td>
</tr>
<tr>
<td>Ganga</td>
<td>23 kg</td>
</tr>
</tbody>
</table>
Night Feed consists of “Bagane Soppu” (or pumpkin): 6 branches per elephant

**Shringeri:**

<table>
<thead>
<tr>
<th>Name of the elephant</th>
<th>Srilakshmi</th>
<th>Jayalakshmi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>18 years</td>
<td>12 years</td>
</tr>
<tr>
<td>Afternoon</td>
<td>6 kg ragi</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(12pm-1pm)</td>
<td>12-15 kg rice (cooked)</td>
</tr>
<tr>
<td></td>
<td>4 kg - horse gram</td>
<td></td>
</tr>
</tbody>
</table>

This is divided between the two elephants. On crowded days, the diet is reduced accordingly because the public feed coconuts to the elephants. 30 coconuts are approximately fed by public.

Evening: Bananas 20kg, 1 ½ apple, 5 kg pineapples, ridge gourd, tomato, potato, onions, and bitter gourd also.

**Kolluru:**

<table>
<thead>
<tr>
<th>Name of the elephant</th>
<th>: Indira</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>: 40 years</td>
</tr>
<tr>
<td>Morning</td>
<td>: Bagane Soppu Water</td>
</tr>
<tr>
<td>Afternoon</td>
<td>: 10 kg rice (Cooked)</td>
</tr>
<tr>
<td>1pm</td>
<td>: 20-25 kg of banana</td>
</tr>
<tr>
<td>Evening</td>
<td>: Bagane soppu</td>
</tr>
</tbody>
</table>

**Hombuja, Hosanagar Talaq:**

<table>
<thead>
<tr>
<th>Name of the elephant</th>
<th>Aishwarya</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>38 years</td>
</tr>
<tr>
<td>Morning</td>
<td>5 kgs rice (uncooked) + hay</td>
</tr>
<tr>
<td>Evening</td>
<td>5 kgs rice (uncooked) + hay</td>
</tr>
<tr>
<td>From</td>
<td>10am-4pm forages in the forest eating leaves.</td>
</tr>
<tr>
<td>Also given</td>
<td>Bamboo leaves</td>
</tr>
<tr>
<td>Evening</td>
<td>Jackfruit + banyan leaves</td>
</tr>
</tbody>
</table>

**Horanadu:**

<table>
<thead>
<tr>
<th>Name of the elephant</th>
<th>Lakshmi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>16 years</td>
</tr>
<tr>
<td>Morning</td>
<td>10kgs ragi (cooked)</td>
</tr>
<tr>
<td>Afternoon</td>
<td>Bagane soppu</td>
</tr>
<tr>
<td>Evening</td>
<td>Rice 10 kg (cooked)</td>
</tr>
<tr>
<td></td>
<td>Wheat 5 kg (uncooked)</td>
</tr>
<tr>
<td></td>
<td>5-6 coconuts</td>
</tr>
<tr>
<td></td>
<td>Bananas- 2 kg</td>
</tr>
</tbody>
</table>
Kateel:

| Name of the elephant: Mahalakshmi |
| Age 21 years |
| Morning | Ragi 4 kg |
| Afternoon | Horse gram 1kg |
| | Ragi 2kg |
| | 7 bananas and Bagane soppu |

Experts analyzed food given and the feeding pattern and this gave an opportunity for stressing that food has to be weighed. Most of them are not weighing and consequently feeding them improper quantity of food, e.g. Horanadu and Kateel. Discussion took place on the various methods employed to carry the greens to the elephants. Humcha - elephant carries the leaves on its back. Dharmasthala and Sringeri - Hire tractors to bring the fodder Horanadu - Hires a tempo to bring the leaves and fodder Kateel - Brings it on a cycle

**Types of Vegetation given:**

| Bagane soppu | Common to all |
| Peepal leaves/Banyan Leaves | Kollur, Humcha and Kateel |
| Plantain stem | Kollur (weekly once), Sringeri (monthly once) |
| Jackfruit leaves | Sringeri, Kateel and Humcha |
| Bamboo shoots | Humcha and Hosanadu |

No fresh green fodder is given by anyone. Dharmasthala tried to give it but it resulted in loose motions for the elephant.

**RECOMMENDED DIET**

As per experts’ directions to the mahouts and the temple managers:

- Stop cooked food
- No surplus salt
- 10 is the minimum number of coconuts to be given per week. It should be given with the shell. Tender coconuts are good alternative.
- The way to feed rice is make a paddy husk packet, put the grains and cover it with more husk. This prevents spillage and is also a source of fiber.
- Horse gram should be broken and soaked in water.
- Maize should be broken and fed. It is low cost and not much chemical pesticide is used to grow the crop. Ms. Pragna Chowta worried about the genetically modified maize which may be marketed in future.
- Sugarcane is better than jaggery. Jaggery can be given when exhausted and should not exceed half a kilo.
- When diet is changed it should be gradual. The elephants should enjoy their food chewing slowly.
• The advantage while foraging in the wild is that certain minerals present in the soil, which, when ingested is good for the elephant.
• Alternative is, mineral mixture should be given for 5 days in a month.
• Elephants by nature waste food. They eat about 50% and approximately 45% is absorbed by the system.
• Main food is greens in free range where there is a choice. This searching is good for their soles of their feet.
• An adult female elephant needs to eat around 150 to 270 kg of greens and drink about 200 litres of water and not more than 10 to 12 kg of grains.

ADVICE AND EXPLANATIONS FOR GENERAL PROBLEMS
• Tail hair should not be pulled forcefully for talismans. This may result in fungal infections.
• During processions cheering crowds create confusion in elephants and they may refuse to obey the mahout. At such times the mahout should not poke the elephant with ankush on the trunk or near the eyes. The elephant may get distressed and retaliate.
• It was observed that the circumferences of the Dharmasthala elephants’ feet were more than normal. This makes them susceptible for joint aches. The animals should be exercised. Normally an elephant needs to walk at least for eight hours.
• Kateel mahout felt that his elephant was losing teeth because of food particles lodged in between. He was informed that taking the age into consideration, it was felt new teeth were growing.
• Free range foraging time of Dharmasthala elephants’ was 4 hours, Sringeri elephants’ was 2 hours, Kateel elephants’ was 2 hours and Humcha elephants’ was practically the whole day.

Suggestion was given to send the elephants to the forest for 2 to 3 months with permission from Forest Department. However it was felt if elephant carry any disease that become source of contaminating wildlife of the region

RESOLUTION 3
• Elephants’ should be given more greens. If ragi is to be given, it should be broken and soaked in water. Alternatively, “ragi mudde” and broken soaked horse gram can be tried with ragi mudde being phased out gradually.
• The continuous process of blessing devotees can be tiresome. The animals should be rested. Tuberculosis is on increase because of the closeness to people which in turn can infect mahouts. Blessings should be done from a distance.
• To increase free range time for foraging.
Appendix 1:
Participants and experts of the workshop

A) Chief Guest
Shri Veerendra Hegde, Shri Kshetra Dharmasthala Rural Development Trust, Dharmasthala

B) Veterinarians
1) Dr. Shrinivas, Deputy Director Animal Husbandry Department (AHD) of the District
2) Dr. Kallappa AHD
3) Dr. Rudrappa (retd.) AHD, AHD,
4) Dr. Chandrashekhar, Sakrebyle Camp,
5) Dr. Ramananda (retd.) ex-veterinarian, Sakrebyle Camp,
6) Dr. Somashekar, Mysore
7) Dr. Kallappa, Shimoga
8) Dr. Chidananda Belakod
9) Dr. M. Nagaraj
10) Dr. K.R. Acharya
11) Dr. Rajshekarappa (retd.) AHD, CUPA

C) Managers
1) Shri Narayanashetty
2) Dr.L.H.Manjunath
3) Shri Bhujabali
4) Shri Yogishbhat – Dharmasthala
5) Shri Gopalakrishna - Shringeri

D) Mahouts
1) Raghavendra – Hombuja
2) Thimmiah Gowda- Shringeri
3) Ravi – Shringeri
4) Giriypappa- Hosanadu
5) Venkatesan- Kateel
6) Ayyanna – Kolluru
7) Nanniyappa
8) Manjunatha
9) Gopala
10) Shrinivasa
11) Krishna – Dharmasthala
12) Babu Sab Mahout – ShreshthailaMutt
E) Elephant experts
   1) Mr. Surendra Varma, Asian Nature Conservation Foundation
   2) Ms. Pragyna Chowta, Aane Mane Foundation

F) Welfare Personals
   1) Ms. Rajani Badami, Trustee, CUPA
   2) Ms. Suparna Ganguly, CUPA
Appendix 2: Photographs related to the events of the workshop at Dharmasthala-18th February 2011

Figures 1a, b, c, d, e and f: Workshop for mahouts at Dharmasthala; inaugural address by Dharmasthala Kshetraadhikaari Shri Veerendra (a) Hegde, experts discussing various aspects of elephant and mahout welfare (b, c and d), mangers providing the details of issues related to keeping elephants and mahouts (e) interactions with mahouts for their inputs (f)
On ground, the mahout takes care of the elephants and is an important participant needing information on more satisfactory ways to interact and maintain his/her elephant. With this background, two workshops on captive elephants of religious institutions and their keepers (mahouts/assistants) were conducted at Davangere, central Karnataka and Dharmasthala- northern Karnataka. A total of 19 mahouts, 15 Veterinarians, 6 mangers, 2 elephant experts and 4 personnel from a welfare NGO participated. This document provides details of the concept, welfare issues and other aspects related to the welfare of both elephants and their mahouts.