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Sea Turtle Annual Report

2010

Supported by Bamburi Cement Ltd.

Baobab Trust's sea turtle conservation project since 1989

Dr.hc René D. Haller –Hon. Executive Trustee
Sonal Singh – Office & Adm. Manager

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- **Our Year in the Project**

Baobab Trust has completed 21 years in the sea turtle conservation programme this year.

It has not been a different year than the other years in terms of our continued efforts to ensure our commitment in the project.

Our long established link with the fishermen is still on-going. With their help, we are able to ensure we protect nests and continue to create the awareness, which is still required, whilst on the beaches.

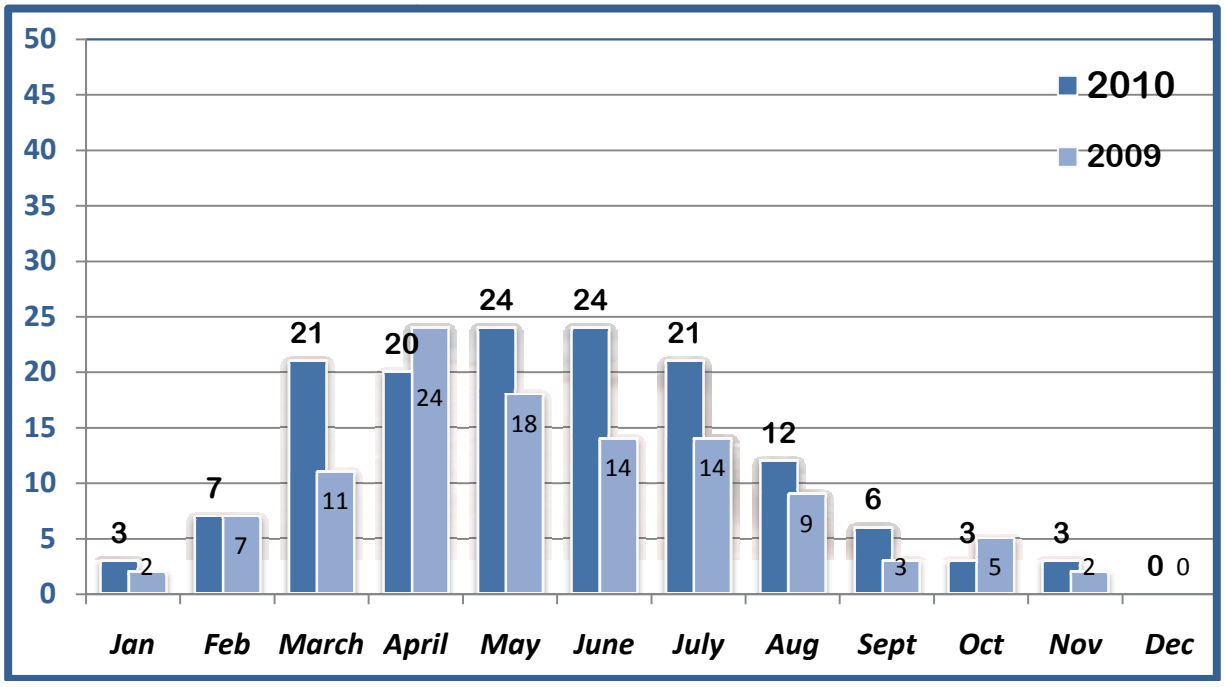
We successfully carried out our first World Turtle Day exercise. Detailed report is on Page 11.

A volunteer helped put together a random sampling of soil temperature for a few nesting bins.

- **2010 Summary Report**

Number of Nests	144
Species	Green
Number of Eggs	14,868
Number of Hatchlings	12,280

Mortality Report	2
Tagged Turtles	12



Comparison: 2009: 109 nests 2010: 144 nests

- **Donors**

This year's project has been again funded by Bamburi Cement Ltd. with a contribution of Kshs.321,141.00

With various expenses that include fishermen incentives for nests reporting and protection, transport, a turtle ranger, communication and others, the funding has been used to cover these costs.

Our source of funding:

Bamburi Cement Ltd.	Kshs. 321,141.00
Kescom – Community Development Trust Grant Fund	Kshs. 12,000.00
Baobab Trust	Kshs. 315,359.00
Private	Kshs. 36,000.00
Total Donation	**Kshs.684,500.00**

We acknowledge with thanks to the funding contributions received.

- **Expenses for 2010**

Details	**Kshs.**
Turtle Ranger	**132,000.00**
Fishermen Incentive	**107,500.00**
Transport and Logistics	**332,000.00**
Communication	**6,000.00**
Bamburi Hatchery upkeep	**36,000.00**
Administration and Miscellaneous	**71,000.00**

- **About Turtles**

The Life Cycle (http://www.seeturtles.org/1402/life-cycle.html)

A Green turtle returns to sea after laying eggs on Jumba Beach

The life cycle of a sea turtle starts when a female lays its eggs on a nesting beach, usually in the tropics. From six weeks to two months later (depending on the species and sand temperature), a tiny hatchling makes its way to the surface of the sand and heads to the water. From the time they take their first swim until they return to coastal waters to forage as juveniles may be as long as a decade.

When they have grown they return to coastal waters where they forage and continue to mature. During this time, these reptiles are highly mobile, foraging over large areas of ocean.

As sub-adults and adults, sea turtles are more easily studied using a variety of techniques which enable scientists to have a better picture of their habitat, behavior, and distribution.

The time to sexual maturity (when they are able to reproduce) varies among species but ranges between approximately 10-50 years.

Once they reach sexual maturity they will migrate to nesting areas to breed. Only females will come ashore to lay eggs, generally in the area where they were born. Most species will nest multiple times during a nesting season at intervals of 2-4 years over the course of their lifetime.

Adult Sea Turtle Diet

- Green: Adults are usually referred to as herbivores although as hatchlings they are omnivores. Their diet consists primarily of algae, seagrasses, and seaweed. Greens have a finely serrated (saw like) beak that allows them to scrape algae off rocks and tear grasses and seaweeds.
- Leatherback: They are sometimes referred to as *gelatinivores* (eating gelatinous prey) because their diet consists exclusively of jellies and other soft-bodied invertebrates like tunicates and sea squirts. They have 2 sharply pointed cusps, one on the upper and one on the lower jaw that allows them to pierce jellies and other soft-bodied organisms.
- Loggerhead: Adults are carnivores, eating only animals including crabs, conchs, whelks, and horseshoe crabs. Hatchlings are omnivores, eating both plant and animal material. Loggerheads have a massive head and strong jaws which enable them to crush hard-shelled prey.

- Hawksbill: They are often referred to as *spongivores* because of their specialized diet which consists almost exclusively of sponges. The hawksbill has a sharp, narrow "bird-like" beak that allows them to reach prey within crevices on the reef.
- Olive ridley: The olive ridley is an omnivore, eating a variety of animals and plants including crabs, shrimp, lobster, urchins, jellies, algae, and fish.
- Kemp's ridley: The Kemp's ridley is a carnivore eating crabs, fish, jellies, shrimp, and a variety of molluscs. It's preferred prey though is crab.
- Flatback: The flatback is an omnivore that consumes sea cucumbers, jellies, soft corals, shrimp, crab, molluscs, fish, and seaweed.

In the open ocean, turtles use the earth's magnetic field among other cues to navigate across thousands of miles of featureless terrain.

Threats to sea turtles

Fisheries
Poaching
Development
Plastic
Global warming
Pollution

Table 1 : 2010 Detailed Nesting and Hatching Data

Nest No.	Laying Date	Turtle Species	No. of eggs	Nest Site	Hatching Date	Hatching Days	No. of Hatchlings	Hatching %	Incubation Details	Release Site
1	8-Jan-10	Green	123	Nyali	26-Feb-10	49	87	71	Translocated	Bamburi Hatchery
2	15-Jan-10	Green	147	Serena	15-Mar-10	59	142	97	In-Situ	Serena
3	24-Jan-10	Green	171	Kikambala	22-Mar-10	57	168	98	In-Situ	Kikambala
4	4-Feb-10	Green	136	Vipingo	30-Mar-10	54	3	2	Translocated	Bamburi Hatchery
5	6-Feb-10	Green	148	Nyali	27-Apr-10	80	115	78	Translocated	Bamburi Hatchery
6	7-Feb-10	Green	115	Nyali	7-Apr-10	59	108	94	In-Situ	Nyali
7	5-Feb-10	Green	139	Nyali	5-Apr-10	59	137	99	In-Situ	Nyali
8	7-Feb-10	Green	92	Nyali	7-Apr-10	59	90	98	In-Situ	Nyali
9	8-Feb-10	Green	123	Nyali	8-Apr-10	59	115	93	In-Situ	Nyali
10	10-Feb-10	Green	149	Nyali	9-Apr-10	58	142	95	In-Situ	Nyali
11	3-Mar-10	Green	168	Jumba	3-May-10	61	150	89	Translocated	Jumba
12	4-Mar-10	Green	108	Nyali	6-May-10	63	84	78	Translocated	Bamburi Hatchery
13	5-Mar-10	Green	110	Vipingo	30-Apr-10	56	70	64	Translocated	Bamburi Hatchery
14	3-Mar-10	Green	131	Vipingo	28-Apr-10	56	72	55	Translocated	Bamburi Hatchery
15	8-Mar-10	Green	159	Vipingo	29-Apr-10	52	93	58	Translocated	Bamburi Hatchery
16	11-Mar-10	Green	96	Vipingo	12-May-10	62	68	71	Translocated	Bamburi Hatchery
17	12-Mar-10	Green	132	Vipingo	11-May-10	60	104	79	Translocated	Bamburi Hatchery
18	13-Mar-10	Green	139	Nyali	14-May-10	62	132	95	In-Situ	Nyali
19	13-Mar-10	Green	140	Nyali	13-May-10	61	137	98	In-Situ	Nyali
20	16-Mar-10	Green	124	Vipingo	13-May-10	58	91	73	Translocated	Bamburi Hatchery
21	18-Mar-10	Green	140	Vipingo	15-May-10	58	96	69	Translocated	Bamburi Hatchery
22	21-Mar-10	Green	125	Jumba	20-May-10	60	159	127	In-Situ	Jumba
23	18-Mar-10	Green	150	Nyali	15-May-10	58	136	91	In-Situ	Nyali
24	20-Mar-10	Green	140	Nyali	20-May-10	61	127	91	In-Situ	Nyali
25	20-Mar-10	Green	130	Nyali	20-May-10	61	121	93	In-Situ	Nyali
26	22-Mar-10	Green	146	Nyali	22-May-10	61	132	90	In-Situ	Nyali
27	25-Mar-10	Green	87	Vipingo	28-May-10	64	66	76	Translocated	Bamburi Hatchery
28	25-Mar-10	Green	89	Vipingo	29-May-10	65	72	81	Translocated	Bamburi Hatchery
29	26-Mar-10	Green	92	Vipingo	24-May-10	59	71	77	Translocated	Bamburi Hatchery
30	27-Mar-10	Green	148	Vipingo	28-May-10	62	138	93	In-Situ	Vipingo
31	28-Mar-10	Green	162	Jumba	26-May-10	59	160	99	In-Situ	Jumba
32	2-Apr-10	Green	149	Nyali	1-Jun-10	60	145	97	In-Situ	Nyali
33	4-Apr-10	Green	134	Nyali	2-Jun-10	59	125	93	In-Situ	Nyali

Nest No.	Laying Date	Turtle Species	No. of eggs	Nest Site	Hatching Date	Hatching Days	No. of Hatchlings	Hatching %	Incubation Details	Release Site
34	8-Apr-10	Green	130	Nyali	8-Jun-10	61	82	63	Translocated	Bamburi hatchery
35	10-Apr-10	Green	140	Vipingo	12-Jun-10	63	86	61	Translocated	Bamburi hatchery
36	11-Apr-10	Green	145	Jumba	10-Jun-10	60	140	97	In-Situ	Jumba
37	14-Apr-10	Green	109	Vipingo	13-Jun-10	60	100	92	Translocated	Bamburi hatchery
38	16-Apr-10	Green	92	Vipingo	14-Jun-10	59	72	78	Translocated	Bamburi hatchery
39	17-Apr-10	Green	110	Kikambala	15-Jun-10	59	71	65	Translocated	Bamburi hatchery
40	22-Apr-10	Green	121	Vipingo	2-Jul-10	71	91	75	Translocated	Bamburi hatchery
41	22-Apr-10	Green	96	Vipingo	1-Jul-10	70	96	100	Translocated	Bamburi hatchery
42	23-Apr-10	Green	84	Jumba	20-Jun-10	58	79	94	In-Situ	Jumba
43	23-Apr-10	Green	118	Jumba	22-Jun-10	60	118	100	In-Situ	Jumba
44	23-Apr-10	Green	102	Vipingo	5-Jul-10	73	79	77	Translocated	Bamburi hatchery
45	24-Apr-10	Green	100	Nyali	23-Jun-10	60	95	95	In-Situ	Nyali
46	25-Apr-10	Green	96	Nyali	25-Jun-10	61	90	94	In-Situ	Nyali
47	28-Apr-10	Green	96	Vipingo	1-Jul-10	64	88	92	Translocated	Bamburi hatchery
48	29-Apr-10	Green	89	Vipingo	10-Jul-10	72	61	69	Translocated	Bamburi hatchery
49	30-Apr-10	Green	78	Vipingo	5-Jul-10	66	60	77	Translocated	Bamburi hatchery
50	29-Apr-10	Green	130	Nyali	26-Jun-10	58	115	88	In-Situ	Nyali
51	30-Apr-10	Green	129	Nyali	27-Jun-10	58	120	93	In-Situ	Nyali
52	3-May-10	Green	40	Vipingo	5-Jul-10	63	28	70	Translocated	Bamburi hatchery
53	4-May-10	Green	90	Vipingo	23-Jul-10	80	79	88	Translocated	Bamburi hatchery
54	4-May-10	Green	70	Kikambala	19-Jul-10	76	60	86	Translocated	Bamburi hatchery
55	5-May-10	Green	98	Musumarini	23-Jul-10	79	83	85	Translocated	Bamburi hatchery
56	6-May-10	Green	142	Nyali	3-Jul-10	58	130	92	In-Situ	Nyali
57	7-May-10	Green	86	Nyali	23-Jul-10	77	75	87	Translocated	Bamburi hatchery
58	8-May-10	Green	79	Nyali	15-Jul-10	68	67	85	Translocated	Bamburi hatchery
59	8-May-10	Green	100	Vipingo	9-Jul-10	62	90	90	In-Situ	Vipingo
60	9-May-10	Green	120	Vipingo	2-Jul-10	54	110	92	In-Situ	Vipingo
61	9-May-10	Green	75	Nyali	3-Jul-10	55	72	96	In-Situ	Nyali
62	13-May-10	Green	96	Vipingo	12-Jul-10	60	41	43	Translocated	Bamburi hatchery
63	14-May-10	Green	42	Vipingo	23-Jul-10	70	27	64	Translocated	Bamburi hatchery
64	15-May-10	Green	186	Vipingo	12-Jul-10	58	172	92	In-Situ	Vipingo
65	14-May-10	Green	197	Jumba	13-Jul-10	60	189	96	In-Situ	Jumba
66	14-May-10	Green	31	Jumba	15-Jul-10	62	30	97	In-Situ	Jumba
68	20-May-10	Green	78	Kikambala	1-Aug-10	73	61	78	Translocated	Bamburi hatchery
67	15-May-10	Green	72	Jumba	16-Jul-10	62	69	96	In-Situ	Jumba

Nest No.	Laying Date	Turtle Species	No. of eggs	Nest Site	Hatching Date	Hatching Days	No. of Hatchlings	Hatching %	Incubation Details	Release Site
68	20-May-10	Green	78	Kikambala	1-Aug-10	73	61	78	Translocated	Bamburi hatchery
69	20-May-10	Green	105	Vipingo	3-Aug-10	75	83	79	Translocated	Bamburi hatchery
70	21-May-10	Green	96	Vipingo	2-Aug-10	73	78	81	Translocated	Bamburi hatchery
71	28-May-10	Green	93	Kikambala	5-Aug-10	69	75	81	Translocated	Bamburi hatchery
72	25-May-10	Green	93	Kikambala	3-Aug-10	70	69	74	Translocated	Bamburi hatchery
73	26-May-10	Green	74	Vipingo	3-Aug-10	69	64	86	Translocated	Bamburi hatchery
74	19-May-10	Green	140	Vipingo	25-Jul-10	67	132	94	In-Situ	Vipingo
75	31-May-10	Green	111	Vipingo	9-Aug-10	70	77	69	Translocated	Bamburi hatchery
76	2-Jun-10	Green	100	Vipingo	9-Aug-10	68	65	65	Translocated	Bamburi hatchery
77	3-Jun-10	Green	78	Kikambala	13-Aug-10	71	50	64	Translocated	Bamburi hatchery
78	3-Jun-10	Green	28	Vipingo	13-Aug-10	71	24	86	Translocated	Bamburi hatchery
79	7-Jun-10	Green	74	Vipingo	24-Aug-10	78	67	91	Translocated	Bamburi hatchery
80	4-Jun-10	Green	80	Msumarini	21-Aug-10	78	50	63	Translocated	Bamburi hatchery
81	7-Jun-10	Green	70	Nyali	9-Aug-10	63	54	77	Translocated	Bamburi hatchery
82	8-Jun-10	Green	164	Nyali	4-Aug-10	57	149	91	In-Situ	Nyali
83	5-Jun-10	Green	163	Nyali	1-Aug-10	57	145	89	In-Situ	Nyali
84	6-Jun-10	Green	142	Vipingo	31-Jul-10	55	139	98	In-Situ	Vipingo
85	10-Jun-10	Green	92	Vipingo	19-Aug-10	70	70	76	Translocated	Bamburi hatchery
86	12-Jun-10	Green	70	Vipingo	19-Aug-10	68	59	84	Translocated	Bamburi hatchery
87	12-Jun-10	Green	90	Nyali	4-Aug-10	53	83	92	In-Situ	Nyali
88	13-Jun-10	Green	83	Vipingo	31-Aug-10	79	64	77	Translocated	Bamburi hatchery
89	14-Jun-10	Green	90	Vipingo	15-Aug-10	62	86	96	In-Situ	Vipingo
90	15-Jun-10	Green	70	Jumba	15-Aug-10	61	68	97	In-Situ	Jumba
91	16-Jun-10	Green	50	Jumba	15-Aug-10	60	46	92	In-Situ	Jumba
92	16-Jun-10	Green	129	Vipingo	15-Aug-10	60	115	89	In-Situ	Vipingo
93	18-Jun-10	Green	53	Vipingo	3-Aug-10	46	38	72	Translocated	Bamburi hatchery
94	19-Jun-10	Green	102	Nyali	16-Aug-10	58	93	91	In-Situ	Nyali
95	20-Jun-10	Green	120	Vipingo	4-Aug-10	45	68	57	Translocated	Bamburi hatchery
96	22-Jun-01	Green	38	Vipingo	1-Sep-10	71	28	74	Translocated	Bamburi hatchery
97	23-Jun-10	Green	89	Vipingo	3-Sep-10	72	61	69	Translocated	Bamburi hatchery
98	24-Jun-10	Green	105	Vipingo	1-Sep-10	69	82	78	Translocated	Bamburi hatchery
99	25-Jun-10	Green	122	Vipingo	1-Sep-10	68	90	74	Translocated	Bamburi hatchery
100	2-Jul-10	Green	97	Jumba	3-Sep-10	63	89	92	In-Situ	Jumba
101	3-Jul-10	Green	72	Jumba	4-Sep-10	63	69	96	In-Situ	Jumba
102	2-Jul-10	Green	132	Nyali	3-Sep-10	63	114	86	In-Situ	Nyali

Nest No.	Laying Date	Turtle Species	No. of eggs	Nest Site	Hatching Date	Hatching Days	No. of Hatchlings	Hatching %	Incubation Details	Release Site
102	2-Jul-10	Green	132	Nyali	3-Sep-10	63	114	86	In-Situ	Nyali
103	3-Jul-10	Green	34	Vipingo	5-Sep-10	64	29	85	Translocated	Bamburi hatchery
104	4-Jul-10	Green	96	Nyali	3-Sep-10	61	90	94	In-Situ	Nyali
105	9-Jul-01	Green	53	Vipingo	9-Sep-10	62	32	60	Translocated	Bamburi hatchery
106	11-Jul-10	Green	80	Vipingo	13-Sep-10	64	63	79	Translocated	Bamburi hatchery
107	12-Jul-10	Green	96	Jumba	12-Sep-10	62	90	94	In-Situ	Jumba
108	13-Jul-10	Green	78	Jumba	14-Sep-10	63	74	95	In-Situ	Jumba
109	15-Jul-10	Green	80	Vipingo	13-Sep-10	60	9	11	Translocated	Bamburi hatchery
110	16-Jul-10	Green	72	Msumarini	16-Sep-10	62	68	94	Translocated	Bamburi hatchery
111	16-Jul-10	Green	139	Kikambala	16-Sep-10	62	130	94	In-Situ	Kikambala
112	18-Jul-10	Green	91	Jumba	19-Sep-10	63	86	95	In-Situ	Jumba
113	19-Jul-10	Green	130	Jumba	20-Sep-10	63	128	98	In-Situ	Jumba
114	20-Jul-10	Green	80	Vipingo	22-Sep-10	64	60	75	Translocated	Bamburi hatchery
115	22-Jul-10	Green	70	Vipingo	22-Sep-10	62	54	77	Translocated	Bamburi hatchery
116	23-Jul-10	Green	90	Nyali	23-Sep-10	62	76	84	Translocated	Bamburi hatchery
117	24-Jul-10	Green	76	Nyali	24-Sep-10	62	46	61	Translocated	Bamburi hatchery
118	1-Aug-10	Green	147	Nyali	27-Sep-10	57	142	97	In-Situ	Nyali
119	2-Aug-10	Green	153	Nyali	3-Oct-10	62	139	91	In-Situ	Nyali
120	28-Jul-10	Green	39	Jumba	28-Sep-10	62	35	90	In-Situ	Jumba
121	30-Jul-10	Green	75	Jumba	30-Sep-10	62	72	96	In-Situ	Jumba
122	3-Jul-10	Green	77	Vipingo	5-Oct-10	94	50	65	Translocated	Bamburi hatchery
123	5-Aug-10	Green	90	Vipingo	6-Oct-10	62	77	86	Translocated	Bamburi hatchery
124	6-Aug-10	Green	76	Vipingo	8-Oct-10	63	46	61	Translocated	Bamburi hatchery
125	7-Aug-10	Green	80	Vipingo	5-Oct-10	59	72	90	Translocated	Bamburi hatchery
126	8-Aug-10	Green	99	Vipingo	11-Oct-10	64	70	71	Translocated	Bamburi hatchery
127	19-Aug-10	Green	43	Vipingo	14-Oct-10	56	31	72	Translocated	Bamburi hatchery
128	21-Aug-10	Green	115	Vipingo	21-Oct-10	61	81	70	Translocated	Bamburi hatchery
129	26-Aug-10	Green	75	Kikambala	29-Oct-10	64	55	73	Translocated	Bamburi hatchery
130	28-Aug-10	Green	97	Nyali	30-Oct-10	63	63	65	Translocated	Bamburi hatchery
131	29-Aug-10	Green	138	Nyali	29-Oct-10	61	132	96	In-Situ	Nyali
132	31-Aug-10	Green	125	Msumarini	28-Oct-10	58	72	58	Translocated	Bamburi hatchery
133	3-Sep-10	Green	15	Kikambala	6-Nov-10	64	10	67	Translocated	Bamburi hatchery
134	8-Sep-10	Green	90	Vipingo	14-Nov-10	67	70	78	Translocated	Bamburi hatchery
135	10-Sep-10	Green	125	Vipingo	12-Nov-10	63	96	77	Translocated	Bamburi hatchery
136	11-Sep-10	Green	86	Msumarini	16-Nov-10	66	72	84	Translocated	Bamburi hatchery

Nest No.	Laying Date	Turtle Species	No. of eggs	Nest Site	Hatching Date	Hatching Days	No. of Hatchlings	Hatching %	Incubation Details	Release Site
137	11-Sep-10	Green	60	Kikambala	10-Nov-10	60	50	83	Translocated	Bamburi hatchery
138	17-Sep-10	Green	127	Kikambala	20-Nov-10	64	89	70	Translocated	Bamburi hatchery
139	1-Oct-10	Green	126	Kikambala	4-Dec-10	64	76	60	Translocated	Bamburi hatchery
140	2-Oct-10	Green	90	Kikambala	2-Dec-10	61	52	58	Translocated	Bamburi hatchery
141	14-Oct-10	Green	60	Kikambala	2-Dec-10	49	52	87	Translocated	Bamburi hatchery
142	5-Nov-10	Green	125	Kikambala	9-Jan-11	65	105	84	Translocated	Bamburi hatchery
143	7-Nov-10	Green	96	Msumarini	15-Jan-11	69	71	74	Translocated	Bamburi hatchery
144	18-Nov-10	Green	50	Kikambala	22-Jan-11	65	39	78	Translocated	Bamburi hatchery

Nesting and Hatching Summary data:

Number of nests: 144

Number of eggs: 14,868

Number of hatchlings: 12,280

Hatching percentage: 83%

Green Sea Turtle

Scientific classification

Kingdom: Animalia Phylum: Chordata Class: Reptilia Order: Testudines Family: Cheloniidae

Genus: ***Chelonia*** Species: ***C. mydas***

Binomial name ***Chelonia mydas***

- **Celebrating World Turtle Day**

The purpose of **World Turtle Day**, May 23, sponsored yearly since 2000 by American Tortoise Rescue, is to bring attention to, and increase knowledge of and respect for, turtles and tortoises, and encourage human action to help them survive and thrive. (http://en.wikipedia.org/wiki/World_Turtle_Day)

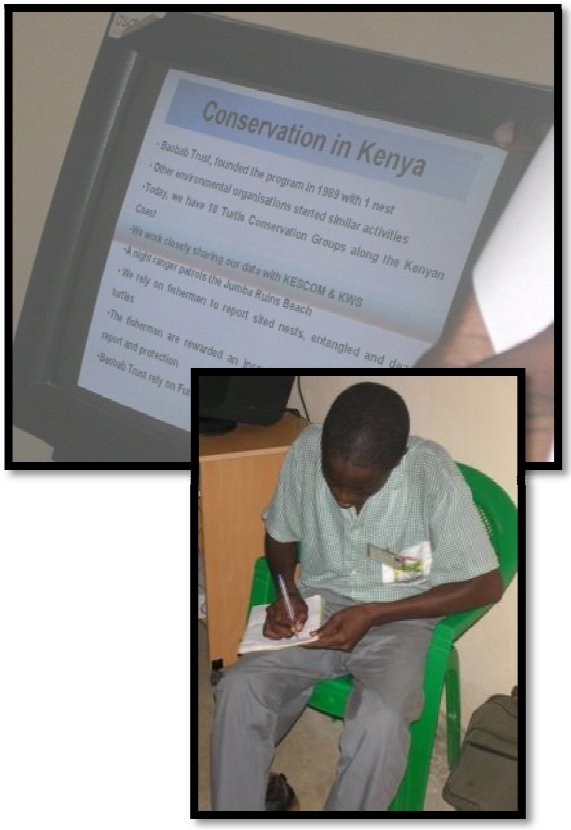
We were experiencing a lot of rains during this period. Our power-point presentation and trip to our Bamburi Hatchery was postponed on the 22nd May 2010 to the 29th May 2010.

As it was our very first time holding the event, we had quite a number of factors to take into account; the weather; eggs to hatch; the ocean's tide; electricity, transport and of course, the school children.

Our day started at the Nguuni Education Centre where all the children were seated. 31 school children from our Bird & Book Club from 4 surrounding schools;
Elimu Ya Kenya, Kiembeni Primary School, Concordia and Bluefield Schools attended the event.

We started off with a power-point presentation. This was lead by our turtle ranger, Jonathan Charo.
Jonathan went through each slide carefully elaborating. A 15-min question and answer session took place. We then proceeded to the Bamburi Hatchery.

Some of the school children after the presentation



The presentation

Trip to the Bamburi Hatchery

The Bamburi Hatchery ensures a safe place for unsecured eggs brought in from various nesting sites Bins which are numbered are placed ½m deep into the sand. These are covered with a wire mesh to prevent predators.

A short talk was given by Dr. Jennifer O'lealy from Kenya Wildlife Service accompanied by Mwanapili Hamisi, a sergeant from Kenya Wildlife Service.

The children for the very first time got to touch and see a sea turtle hatchling

- **Photo Journal**

Two Green turtles lay eggs at Jumba Beach

Returning to the ocean after laying eggs

There was no place for her to lay her eggs; she had to climb up the cliff

Nest/soil temperature being taken

Eggs brought unsecured site to Bamburi Hatchery

Empty egg shells

Hatchlings counted and recorded before being released into the sea

General discussion/awareness with the fishermen during a nest report

- **Concerning Issues**

Predators: Stray dogs

Trapped Mongoose

Developing/extension on beach fronts

A long time problem of littering along the beaches especially plastic bottles

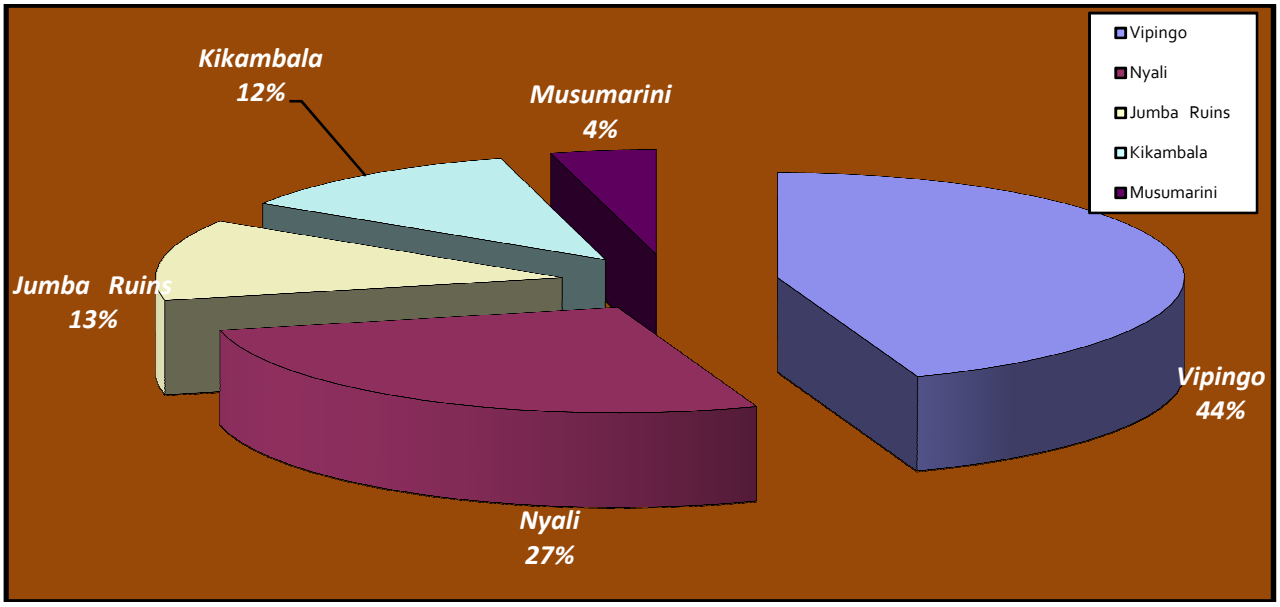
- **Table 2: Number of nests and species from 6 sites – 2010**

The nesting season started in January and gradually increased as months went by slowing down in October.

Nests laid were only by Green turtles this year. Vipingo beach recorded the highest number of nests while Nyali beach followed.

Nesting Site	No. of Nests:
Vipingo	63
Nyali	39
Kikambala	17
Jumba Ruins	18
Msumarini	6
Shanzu	1
Total nests	144

Fig.1 Below is the percentage of nesting sites



- **Green Turtle Distribution**

Distribution habitat: Atlantic Ocean, Gulf of Mexico, along Argentine coast, Mediterranean Sea, and Indo-Pacific tropical and subtropical areas near continental coasts and around islands

Five Sea Turtle Species Found In Kenya

English Name	Swahili Name	Scientific Name
Green turtle	Kasa wa Kawaida	*Chelonia mydas*
Hawkbill turtle	N'gamba	*Eretmochelys imbricate*
Olive Ridley	Kigange or Kigamba	*Lepidochelys olivacea*
Loggerhead	Kasa duvi or Kasa mtumbi	*Caretta caratta*
Leatherback	Kasa ilazi, kasa ngozi, kasa noa or kasa tasa	*Dermochelys coriacea*

- **Table 3: Turtle Mortality Data – 2010**

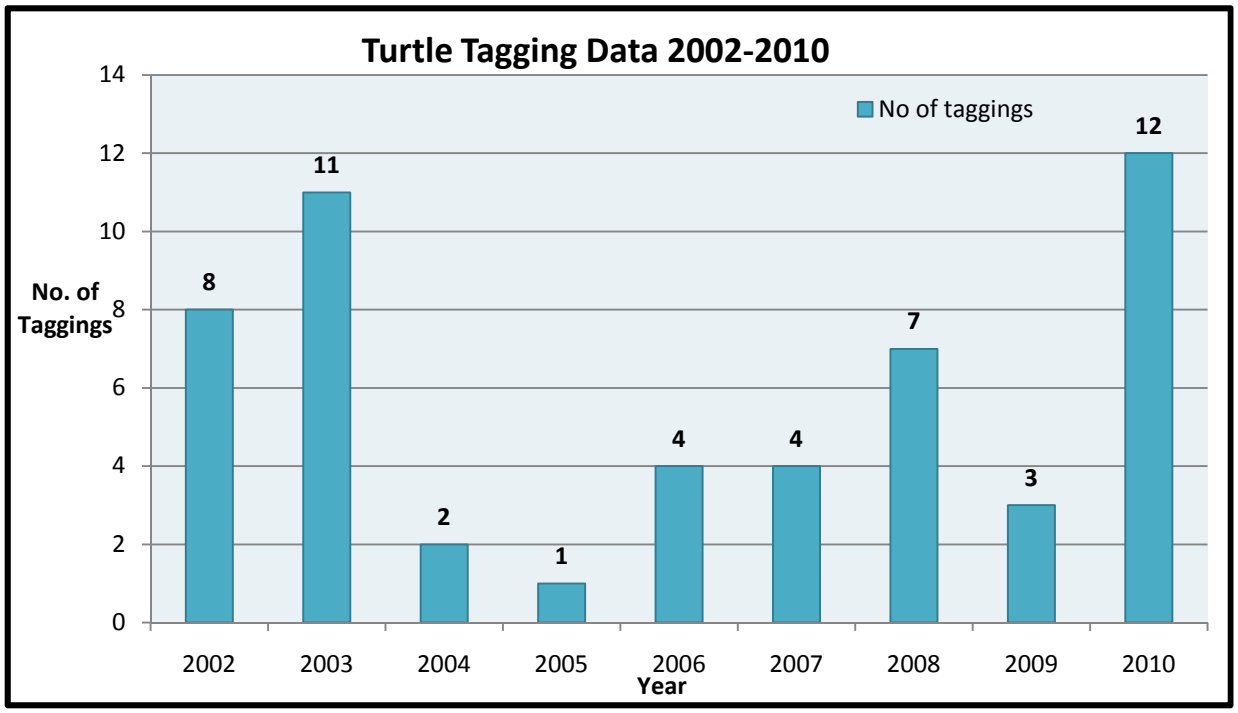
Date	Species	Location	Details	Measurement Length & Width
19.01.2010	Green	Bamburi Beach	Was washed out in the early morning by high tide. Death caused was unknown. Buried on site	94cm x 83cm
22.07.2010	Green	English Point	Found floating at the beach; a male turtle. Buried on site	48cm x 45cm

Bamburi Beach

English Point

- **Table 4: Tagging data & Chart 2010**

Tag No.	Species	Laying Date	Measurement Length & Width	No. of Eggs	Nest site	Incubation
KE0444	Green	14.04.**2010**	138cm x 115cm	109	Jumba Ruins	In-Situ
KE0445	Green	28.03.2010	128cm x 116cm	162	Jumbai Ruins	In-Situ
KE0446	Green	11.04.2010	139cm x 122cm	145	Jumba Ruins	In-Situ
KE0447	Green	23.04.2010	152cm x 128cm	84	Jumba Ruins	In-Situ
KE0448	Green	23.04.2010	128cm x 109cm	120	Jumba Ruins	In-Situ
KE0449	Green	14.05.2010	146cm x 130cm	197	Jumba Ruins	In-Situ
KE0450	Green	14.05.2010	132cm x 120cm	31	Jumba Ruins	In-Situ
KE0451	Green	15.05.2010	122cm x 109cm	72	Jumba Ruins	In-Situ
KE0452	Green	15.06.2010	153cm x 110cm	70	Jumba Ruins	In-Situ
KE0453	Green	16.06.2010	112cm x 96cm	50	Jumba Ruins	In-Situ
KE0454	Green	02.07.2010	120cm x 99cm	97	Jumba Ruins	In-Situ
KE0455	Green	13.07.2010	130cm x 101cm	78	Jumba Ruins	In-Situ



Green turtle laying eggs in Jumba Ruins

The turtle was tagged on site

<u>Information passed on by Kenya Wildlife Service:</u>

A turtle with tag **Tag number 3519 – KWS (Mombasa)** was accidentally caught by a fisherman in Tanga on 29th Dec 2009.

The turtle was caught at this location (05° 32´30.8''S 39° 02´09.6"E -5.5419 39.036).

Baby turtles are able to break through the eggshell and hatch by chipping away at the shell with a structure called an **egg tooth**, a temporary hard protuberance on their beaks.

- **Temperature dependence of sexual differentiation in sea turtles**

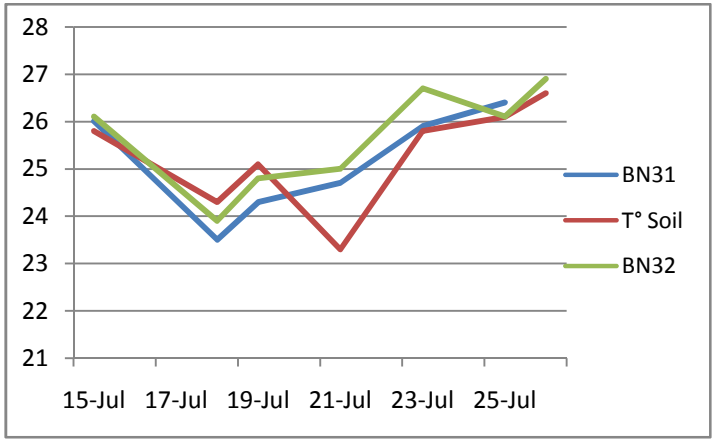
Green sea turtle eggs take about two months to incubate. Studies indicate that the temperature of the eggs during incubation influences the sex of baby sea turtles.

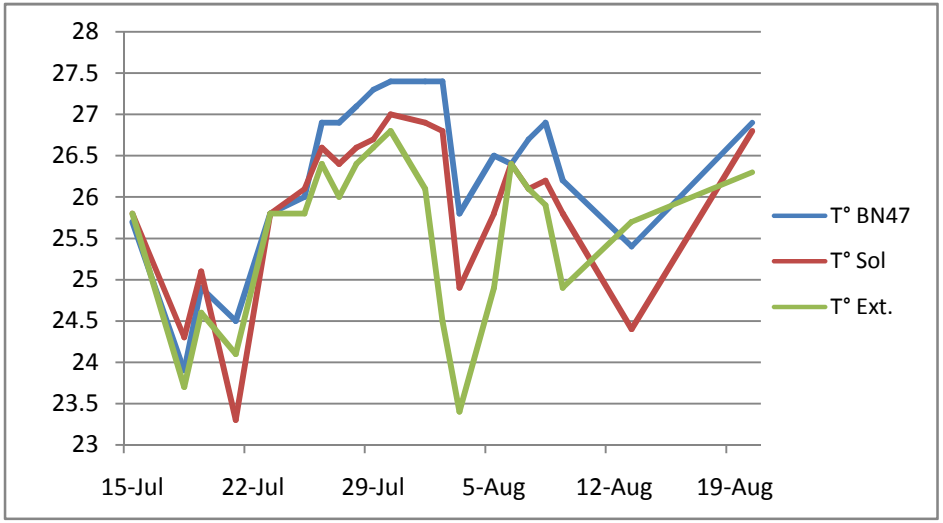
Lower temperatures tend to produce males, while higher temperatures tend to produce females.

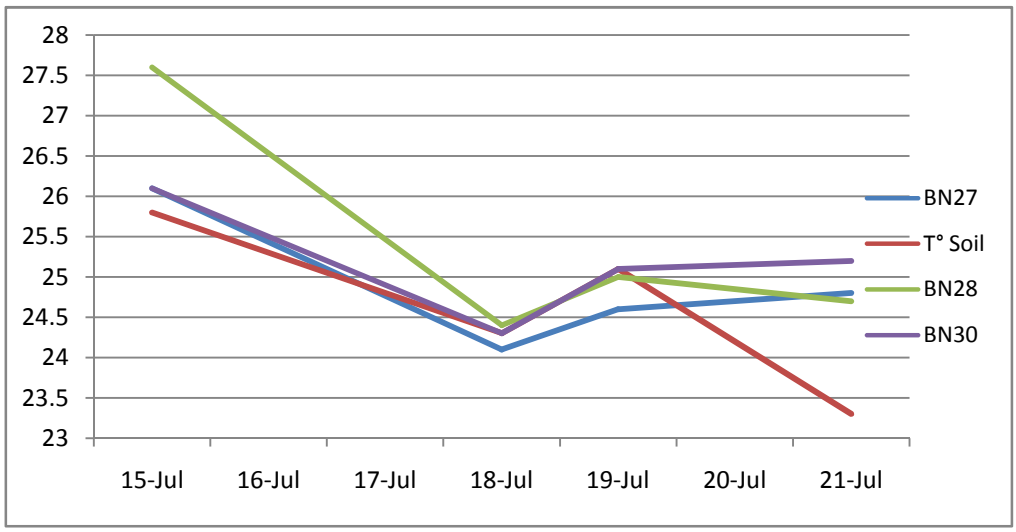
Mathilde Tuaden : A volunteer from ENITA de Bordeaux, France did a random sampling of various nesting bins, soil temperature on different days. The data still requires to be analysed.

Bin No.	BN50	BN52	BN53	BN54	BN32	BN31	BN30	BN29	BN28	BN27	BN36	BN34	BN41	BN42	BN47	T° Ext.	T° sol	T° sol - T° Ext.
Nest No.	88	95	96	97	62	58	57	55	54	53	70	68	76	77	85			
22-Jun	25.7	25.1														ND		
23-Jun	25.5	25.2														ND		
24-Jun	25.9	25.6														25,6 °C		
25-Jun	25.3	25.2														ND		
26-Jun	25.9	25.8														25,7 °C		
27-Jun	27	26.9														25,1 °C		
28-Jun	27.3	27.3														26,8 °C		
29-Jun	27.8	27.6														27,1 °C		
1-Jul	24.9	25.1	25.2	24.8	DA	24.6	24.4	DA	24.6	24.8	24.6	24.2	24.7	24.4	24.6	26.3		
3-Jul	24.6	24.7	25	24.3	DA	23.6	23.6	DA	23.6	24	24.1	23.6	24.2	24.2	24.2	26.1		
5-Jul	25	25.1	25.2	24.9	24.6	24.4	23.7	24.3	24.2	24.1	23.8	24.6	25.1	24.9	24.9	25.3		
6-Jul	23.7	23.8	23.9	23.7	23.6	23.6	24	24.1	24.6	23.9	23.9	23.6	23.7	23.7	23.7	24.1		
7-Jul	24	24.1	24	23.8	23.8	23.6	24.1	24.2	24.7	24.4	24.3	24	24.3	24.3	24.4	22.9		
9-Jul	25.7	25.7	25.5	25.5	25.4	25.3	25.6	25.7	26.2	25.7	25.7	25.6	25.7	25.3	25.1	24.6		
10-Jul	26.2	26.3	26.1	26.2	25.7	25.7	26	26.1	26	26.4	26.3	25.9	26.1	25.8	25.9	25.7		
12-Jul	25.3	25.6	25.6	25.3	25.1	25	25.2	25.1	26.7	25.4	?	25.2	25.4	25.3	25.1	25.7		
14-Jul	26.1	26.4	26.2	26.1	25.8	25.6	25.7	26.3	27.6	26.1	26.3	26	26.3	26	25.9	25.6		
15-Jul	26.5	26	26.1	26	26.1	26	26.1	26.1	27.6	26.1	26.4	26.1	26	nd	25.7	25.8	25.8	0
18-Jul	23.5	24.2	24.3	23.7	23.9	23.5	24.3	24	24.4	24.1	23.8	23.9	24.2	23.5	23.9	23.7	24.3	0.6
19-Jul	24.7	25.1	24.8	24.6	24.8	24.3	25.1	25.3	25	24.6	25.2	24.8	25.2	?	24.9	24.6	25.1	0.5
21-Jul	24.3	24.6	24.7	24.2	25	24.7	25.2	25.2	24.7	24.8	24.6	24.7	24.6	24.3	24.5	24.1	23.3	-0.8

Bin No.	BN50	BN52	BN53	BN54	BN32	BN31	BN30	BN29	BN28	BN27	BN36	BN34	BN41	BN42	BN47	T° Ext.	T° sol	T° sol - T° Ext.
Nest No.	88	95	96	97	62	58	57	55	54	53	70	68	76	77	85			
23-Jul	25.8	25.9	25.8	25.6	26.7	25.9	E	E	E	E	26.1	25.8	26.1	25.7	25.8	25.8	25.8	0
25-Jul	26.2	26.1	26.1	26.4	26.1	26.4	E	E	E	E	26.4	26.4	26.8	26.1	26	25.8	26.1	0.3
26-Jul	27.1	27.3	26.8	26.8	26.9	E	E	E	E	E	27.2	26.6	27.8	26.7	26.9	26.4	26.6	0.2
27-Jul	26.4	26.8	26.4	26.5	E	E	E	E	E	E	26.8	26.4	27.4	26.8	26.9	26	26.4	0.4
28-Jul	26.9	27.2	26.7	27.1	E	E	E	E	E	E	26.5	26.4	27.8	26.9	27.1	26.4	26.6	0.2
29-Jul	26.7	27.3	26.9	26.8	E	E	E	E	E	E	26.6	26.4	28.1	27.1	27.3	26.6	26.7	0.1
30-Jul	27.1	27.5	26.9	27.2	E	E	E	E	E	E	26.4	26.8	28.3	27.1	27.4	26.8	27	0.2
1-Aug	27.3	27.8	27.1	27.1	E	E	E	E	E	E	26.7	26.8	28	26.9	27.4	26.1	26.9	0.8
2-Aug	27.4	28	27.5	27.5	E	E	E	E	E	E	27.3	27.3	28	27.3	27.4	24.5	26.8	2.3
3-Aug	24.8	26.3	26.3	26.1	E	E	E	E	E	E	26.1	26.1	26.7	26.2	25.8	23.4	24.9	1.5
5-Aug	25.3	26.3	25.9	25.7	E	E	E	E	E	E	E	E	26.6	26.2	26.5	24.9	25.8	0.9
6-Aug	26.6	26.9	26.4	26.5	E	E	E	E	E	E	E	E	27.4	26.4	26.4	26.4	26.4	0
7-Aug	26.1	26.4	26.2	26	E	E	E	E	E	E	E	E	26.9	26.4	26.7	26.1	26.1	0
8-Aug	26.5	26.9	26.4	26.7	E	E	E	E	E	E	E	E	27.9	26.7	26.9	25.9	26.2	0.3
9-Aug	26.1	26.6	26.4	26.4	E	E	E	E	E	E	E	E	27.9	26.3	26.2	24.9	25.8	0.9
13-Aug	24.8	24.8	24.9	24.7	E	E	E	E	E	E	E	E	26.4	24.8	25.4	25.7	24.4	-1.3
20-Aug	27.3	27.9	27.3	28	E	E	E	E	E	E	E	E	E	E	26.9	26.3	26.8	0.5
24-Aug	27.8	28.6	27.8	28.9	E	E	E	E	E	E	E	E	E	E	E	26.8	27.8	1
29-Aug		27.2	27.3	27.4	E	E	E	E	E	E	E	E	E	E	E	26.4	27.3	0.9



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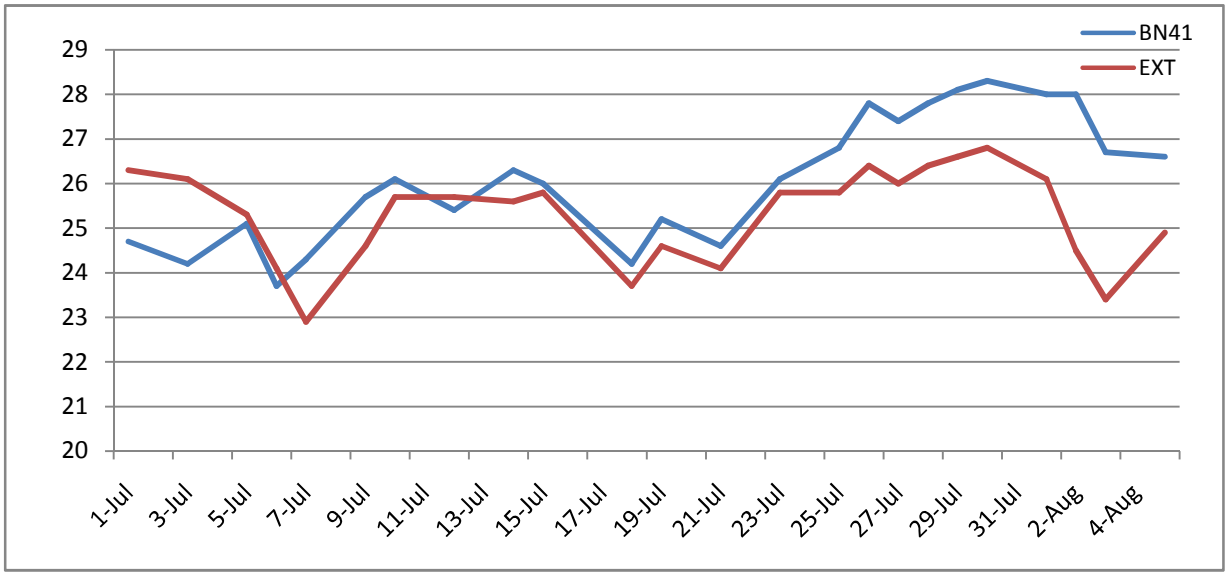
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- **What to Do if You Encounter a Nesting Sea Turtle**

Sometimes people encounter sea turtles on their own while walking on the beach at night during nesting season. If this happens to you, here are some simple rules to follow:

Do not walk on the beach with a flashlight or shine a light in the sea turtle's face. The light may cause the female to abort the nesting process, or other sea turtles nearby may be discouraged from nesting if there are lights on the beach.

Do not take pictures using flashes. This high-intensity light can be even more disturbing than the flashlights.

Stay clear and out of sight of the turtle until she begins laying eggs, otherwise you may scare her back into the sea.

For your safety, stay away from the turtle's head. Sea turtles, especially loggerheads, have very strong jaws and can harm you if provoked.

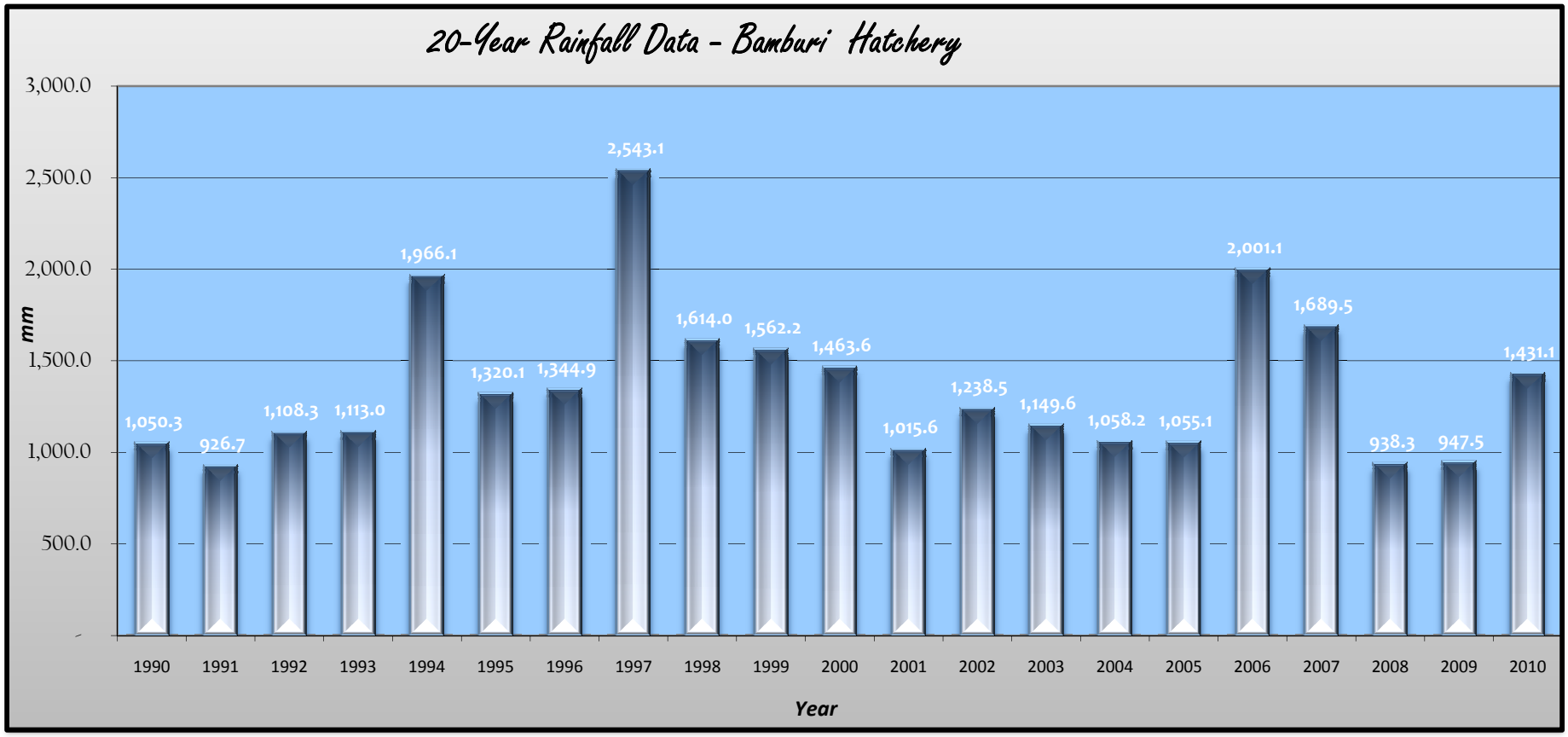
Do not handle the eggs or put any foreign objects into the nest. You can introduce bacteria or injure the eggs.

Do not handle or ride the sea turtle. In addition to being illegal, you may injure the turtle or cause her to leave without finishing nesting.

Do not disturb tracks left by turtles. Researchers sometimes use the tracks to identify the type of turtles that nested and to find and mark the nests.

Do enjoy the experience, and remember it for the rest of your life.

Figure 3: Chart showing rainfall in mm from 1990 – 2010



- **Useful Website Links**

http://en.wikipedia.org/wiki/Green_turtle

http://www.global-greenhouse-warming.com

http://ww.ioseaturtles.org

http://www.conserveturtles.org/index.php

http://www.kescom.org

End of Report