

# FINAL REPORT ON THE SEA TURTLE TRADE ON THE SOUTH COAST OF JAVA



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## 1. FOREWORD

Indonesian seas are the habitat of 6 of the world 7 living species of sea turtles. The six species found in Indonesia are green turtle (*Chelonia mydas*), Olive Ridley (*Lepidochelys olivacea*), Loggerhead (*Caretta caretta*), hawksbill (*Eretmochelys imbricata*), leatherback (*Dermochelys coriacea*) and flatback (*Natator depressus*).

All species of turtles are protected by law in Indonesia, which means that it is illegal to trap and trade in turtles. According to the data from the Indonesian Directorate of Forestry Protection and Nature Conservation (PHKA), the Department of Forestry, there are 143 turtle nesting sites on the coasts of Indonesia.

One of the important turtle nesting sites is the Coast of Java Island. Several coastal areas in Java are known to be the natural habitat nesting sites of sea turtles. However, these areas are also recognized as centers for trade in turtles and turtle body parts. Java Island is the centre of economic activity and the heart of the Government of Indonesia.

The seaside, beaches and the lowland forest areas have tourism potential. The development of a tourism industry is profitable for majority of the community, but will no doubt have an impact on the conservation of several protected species, mainly those of marine biota.

The tourist resorts along the south coast of Java are well known for trade in turtles and turtle body parts. The scale of the trade will result in a decline of t sea turtle population in the wild.

**ProFauna** therefore conducted an investigation on the sea turtle trade on the south coast of Java from January until April 2005. The initial funding from **Royal Society for the Protection of Animals** (RSPCA) only covered the investigation in the area of Teluk Penyu (Turtle Beach Bay), in Cilacap, Central Java. However this has been stretched to cover investigations of other coastal areas in the south of Java. **ProFauna** regards that apart from Cilacap (Central Java), it is also important to study the sea turtle trade all over the south coast of Java.

## 2. FINDINGS:

During the period of investigation from January until April 2005, **ProFauna's** investigators recorded the species, numbers, statistic, prices, source of trade of sea turtles and turtle body parts. In addition, **ProFauna's** investigators have successfully recorded a documented film on the network of illegal sea turtle trade.

6 of the 11 coastal areas have sea turtle trading activities in the form of meat, eggs and fat as well as turtle shell souvenirs. These six coastal areas are:

1. Teluk Penyu Beach, Cilacap (Central Java)
2. Puter Beach, Banyuwangi (East Java)
3. Pangandaran Beach (West Java)
4. Pelabuhan Ratu Beach (West Java)
5. Pangumbahan Beach, Sukabumi (West Java)
6. Samas Beach (Yogyakarta, Central Java)

Details of the trades in these locations are as follows:

## **2.1 Pantai Teluk Penyu Cilacap (Central Jawa):**

Cilacap is a small town on the border of Central and West Java. It is renowned as an industrial and tourist town. The most popular place to visit is called Taman Hiburan Rakyat/THR Teluk Penyu (Turtle Bay People's Amusement Park). According to the locals, the name was derived due to the large number of beaching turtles in the past. This place is also known for the merchandising of turtle shell souvenirs.

The main occupations of the locals on the Turtle Bay are 70% fishing, 20% trading and 10% others, including civil servant and entrepreneurs. The majority of the traders are involved in merchandising turtle and turtle's by-products.

Visitors pay an entrance ticket for Rp 2,500/person to THR Teluk Penyu, where they can enjoy the sea view, seafood restaurants or shopping for souvenirs. According to the traders, the number of visitors has declined drastically due to fear of tsunamis.

**Table 1. Number of visitors to THR Teluk Penyu (Central Java) - 2002 to 2004**

<b>Visitors/tourists</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
Foreign	594	782	256
Domestic	209.568	153.340	133.230

The turtle trade is conducted openly, however there are some angry traders when photographs were taken. This proves that the traders understand that it is illegal to trade turtle and turtle parts.

All parts of turtle are traded, including shells, meat, eggs and oil. The local people believe that turtle oil has property to tighten skin and cure burn scars.

Apart from souvenirs, turtle meat and eggs are traded from the fishermen's catch. Sea turtles are regularly caught in the fishing net. The average number of turtles accidentally caught in the fishing nets is around 3 /per month.

Turtle eggs are obtained from the coastal areas on Nusa Kambangan island. Average turtle eggs sold per day are between 3 - 5 eggs/ per person. There are 3 turtle egg retailers.

Various turtle shell souvenirs and mounted or stuffed turtles are also traded here. One of the stalls is trading in live hawksbill turtles (*Eretmochelys imbricata*). Ironically, on the entrance to this resort right opposite the stalls, there is a prominent warning sign board with "forbidden to trade marine fauna and flora protected under the law and the consequences". In reality the merchandising of sea turtles and turtle body parts goes on unabated.

### **2.1.1 Prices:**

Prices for mounted turtles, turtle eggs and meat vary. The price for a mounted turtle depends on the size and the species. The bigger the size the higher the price. The

most popular and expensive mounted species are hawksbills (*Eretmochelys imbricata*) followed by green (*Chelonia mydas*) and Olive ridley (*Lepidochelys olivacea*).

**Table 2. Types of merchandise items, statistic numbers, prices, origin of turtles and body part of turtles traded at Teluk Penyu Cilacap (Central Java) during the month of February-April 2005**

No	Merchandise item	Price (Rp)	Number	Originate/sourced from:
1	Mounted dried turtles	35.000 -1.500.000	175	Situbondo & local
2	Cigarette holders	7.000	20	Situbondo
3	Rings	3.500 – 5.000	300	Local & Situbondo
4	Bracelets	7.000 – 10.000	65	Local & Situbondo
5	Turtle oil	15.000 – 50.000	500	Local
6	Dried & spicy turtle meat	4000	25	Local
7	Cooked turtle meat	1000	20	Local
8	Eggs	2000	400	Local
9	Dried hatchlings	35.000 - 50.000	5	Situbondo
10	Live turtles	35.000 – 100.000	1	Local

**Table 3. Prices of mounted turtles at Teluk Penyu (Central Java)**

No.	Turtle species	Price (Rp)	Originate/Sourced from
1	Hawksbill hatchling (young)	35.000 – 50.000	Situbondo
2	Small size Hawksbill	60.000 – 80.000	Situbondo/Local
3	Medium size Hawksbill	80.000 – 500.000	Situbondo
4	Large size Hawksbill	500.000 – 1.500.000	Situbondo
5	Medium size Olive ridley	60.000 – 80.000	Situbondo/Local
6	Large size Olive ridley	80.000 – 150.000	Situbondo/Local
7	Medium size green turtle	100.000 – 200.000	Situbondo/Local
8	Large size green turtle	200.000 – 300.000	Situbondo

The majority of stuffed turtles originate from Situbondo, East of Java and Madura Island (off Java island). Two years ago, they were sourced locally. The turtles from Situbondo are sent to Teluk Penyu by trucks and the off loading normally takes place at night.

Turtles for meat are obtained from local fishermen, who have accidentally trapped turtles in their fishing nets. Turtle eggs are obtained from the nearby coastal areas of Nusa Kambangan island.

### **2.1.2 Total number of merchandise stands/stalls:**

There are two main trading centres for souvenir and handicraft in Cilacap (Central Java); THR Teluk Penyu and Benteng Pendem. The former is much larger compared to Benteng Pendem.

29 out of 33 stalls in THR Teluk Penyu, and 2 out of 10 stalls in Benteng Pendem, sell real turtle shell souvenirs in addition to various handicrafts and other items.

6 of 30 stalls which sell fresh and salted fish, also sell turtle meat and eggs. One of the stall holders, Mr Agus, admitted that he also sells live turtles, it costs Rp 200,000 for a small one. Our investigators found 2 dried turtle hatchlings in his shop, retailing for Rp 10,000 each.

**Picture 1. Percentage of stalls involved in the trade of sea turtle and turtle body parts at THR Teluk Penyu – Cilacap**

## **2.2 Pantai (beach) Popoh, Tulungagung (East Java):**

Beside tourism, Pantai Popoh or Popoh Beach is the off loading centre for fish in Tulungagung. An entrance fee of Rp 3000/per person is charged to enter the beach area, which is crowded during Saturdays and Sundays.

The number of weekend visitors averages to 200/day and approximately 100/day during the week.

This area sells all sorts of handicrafts of marine biota, particularly seashells. None of the 15 stalls at this resort sells merchandise items made from sea turtles. Most of the souvenirs traded are made of sea shells, onyx and marble.

According to the local fishermen there is no one who particularly seeks to trap turtles for sale. Their explanation for sometime catching them, is that the turtle can damage their fishing nets. However, turtles are occasionally trapped in their fishing nets. They will release small turtles into the sea and the larger ones are for self-consumption, not for sale.

## **2.3 Pantai (beach) Prigi, Trenggalek (East Java):**

There are no turtle souvenirs or merchandise found in the Prigi seaside area. Most stalls and shops along the coast of Prigi sell only food, drink and a variety of fresh or dried seafood. According to the local fishermen, they do not trap turtles but occasionally find them in their fishing nets when fishing. If such turtles are trapped, they are normally for own consumption.

Beside Prigi Beach, **ProFauna's** investigators also visited other coastal areas nearby including Pantai Damas, Pantai Pasir Putih and Pantai Karanggongso. No turtles and their by-products were found for sale there.

## **2.4 Pantai (beach) Ngliyep, Malang (East Java):**

Pantai Ngliyep or Ngliyep Beach is one of the popular tourist resorts in the Malang district. This beach is renowned for big waves and high cliffs. It is mostly visited only during the weekends and public holidays, due to the scarcity of public transport.

Several stalls sell various souvenirs from marine biota. 7 of 35 stalls on Pantai Ngliyep sell souvenirs and handicrafts, the rest sells food and drink. No turtle merchandise items are found here.

## **2.5 Pantai (beach) Balekambang, Malang (East Java):**

This seaside resort is renowned as the prime tourist spot in Malang district, where there is a white sandy beach. Most visitors come here during the weekend and only a handful during the weekday.

There are 100 stalls and shops, mostly selling food and drink. Three stalls sell handicrafts and souvenirs, however none sells turtle merchandise items.

According to some traders, the local community of this seaside area regards the turtle as a sacred animal. This is due to a belief that turtles are the pet of "Nyai Roro Kidul" (a mythical powerful female goddess), whom people believe is the ruler of south Java sea. Most locals would not dare to harm the turtles for fear of misfortune.

## **2.6 Pasar (market) Banyuwangi (East Java):**

Turtle eggs are easily found in this market, on the north side of Banyuwangi town square. The trade takes place in the morning. There are 5 recorded traders. The traders admit that each day at least 100 turtle eggs are sold. Each turtle egg costs Rp 1,500 - Rp 1,750. Most are obtained from the National Parks Alas Purwo and Merebetiri.

Besides Banyuwangi main market, there are other markets nearby, Pasar Jajag and Pesanggaran, which sell turtle eggs. The price varies from Rp 1,000 to Rp 1,500 each. Each trader sells at least 15 eggs per day here. The number of turtle egg traders is 3 in Jajag and 2 in Pesanggaran.

## **2.7 Pantai (beach) Watu Ulo and Pantai Puger, Jember (East Java):**

Pantai (Beach) Watu Ulo was a popular local tourist destination in Jember district. However subsequent to the Tsunami disaster in Aceh, this seaside resort has become very quiet. There are only a handful of visitors each day. Most of the stalls here only sell food and drink. No turtle and their by-products are found here.

ProFauna's investigator also found no turtle or turtle by-products merchandisers in Pantai Puger.

## **2.8 Pantai (beach) Pangandaran (West Java):**

The area of Pangandaran was originally an un-irrigated agriculture area. In 1922 Pangandaran was established as a hunting reserve. A wild bull, 3 female cows and several deer were released. Due to the variety of unique wildlife native to the area, in 1934 Pangandaran was therefore changed into a wildlife sanctuary covering 530 ha of land area.

When the rare Rafflesia Fatma plant was discovered in 1961, the status was then changed to a Nature Reserve. Due to the increasing need of the community for recreational area, in 1978 part of the area (37.7 ha) was designated as a tourist park. In 1990 the surrounding sea area was declared a marine nature reserve (470 ha). The total protected land and sea areas is approx 1000 ha.

The outlets for souvenirs and turtle shells accessories trade is divided between 3 locations. The west coast, north coast and the tourist market.

- a. The west coast: 10 out of 21 stalls found here trade in stuffed/mounted turtles and turtle shells souvenirs.
- b. North coast: 19 of 25 stalls sell items made from turtle shells.
- c. Tourist market: 35 of 68 stalls sell turtle shell souvenirs. 99% of mounted turtles and turtle shell merchandise items are sourced from Teluk Penyus Cilacap, West Java. The traders in Teluk Penyus who supply the Pangandararan market namely are: Zaini, Sutikno, Ibu Solehah, Ibu Rebo. They obtain the turtles from Situbondo, East Java.

**Tabel 4. Species type, number and the price of turtle shell souvenirs items, traded in Pangandararan (West Java) during the month of April 2005**

No	Location	Type of item	Number	Price (Rp)
1	West Coast	Mounted hawksbill	25	150.000 – 250.000
		Mounted Olive ridley	16	200.000 – 300.000
		Bracelet	80	30.000 – 40.000
2	North Coast	Mounted Hawksbill	29	100.000-250.000
		Mounted Olive ridley	15	100.000-300.000
		Bracelet	38	30.000-40.000
3	Tourist market	Mounted Hawksbill	46	100.000-1.000.000
		Mounted green turtle	6	100.000-300.000
		Mounted Olive ridley	6	85.000-200.000
		bracelet	220	25.000-30.000

## **2.9 Pantai (beach) Pangumbahan, Sukabumi (West Java)**

Sukabumi is renowned for its natural resources. From long ago, it is also famous for its green turtle (*Chelonia mydas*). Not surprisingly the shell of the green turtle became the symbol of Sukabumi regency.

Pangumbahan seaside is located in Gunung Batu village, in Ciracap sub-district, part of Sukabumi regency in East Java. This 3 km coastal area is covered with white sandy beaches, well liked by turtles for nesting. It is recorded that thousands of green turtles nest on these beaches each year.

Due to the large number of beaching turtles in Pangumbahan, this area is known as one of the main centres in Java for trading in turtle eggs. Since the Dutch colonial time, the harvesting of turtle eggs was already taxable. The current local authority in Sukabumi through the local legislation no. 2 of 2001 levies tax on swallows nests, turtle eggs and sea grass harvesting. Trade in turtle eggs is legalised here. The local authority is a partner in a business joint venture with a private company, CV Daya Bakti, which harvests turtle eggs on Pangumbahan beach. A 10% tax is imposed on each egg. However, CV Daya Bakti is obliged to release 15,000 turtle hatchlings each year.

Hundreds of thousands of turtle eggs from this area are sold each year to Sukabumi, Bandung, Bogor and as far as Jakarta. The Sukabumi local authority's legislation no. 2 of 2001, clearly contradicts the National legislation no. 5 of 1990. They were prosecuted by the

Council of Animals Advocate (LASA). As a result the Indonesian Home Office on 29 April 2005 issued a letter to the Head of Sukabumi Regency to cancel such local ruling.

### **2.10 Pantai (beach) Pelabuhan Ratu (West Java):**

At present Pantai Pelabuhan Ratu (Queen Port Beach) is quiet. It seems that the Tsunami disaster in Dec 2004 has had an impact on the number of visitors. The stalls selling souvenirs are only around 8, the rest are clothing or food stores. Merchandised souvenirs are those made of sea shells and natural stones. No mounted turtle or turtle by-products are found here.

### **2.11 Sukabumi town (West Java):**

Trade in turtle eggs can be found along Ahmad Yani Road in this town. There are four traders selling turtle eggs sourced from Pangumbahan Beach. Each day at least 1,500 turtle eggs are sold.

### **2.12 Pantai (beach) Samas, Yogyakarta (Central Java):**

Three species of turtles land on this beach. These are: hawksbill, olive ridley and leatherback. Bantul Turtle Conservation Forum (FKPB) was formed by the BKSDA of the Department of Forestry of Central Java, in this coastal area. Chaired by Mr Rujito who was previously a fisherman and who used to catch turtles for meat.

Turtles caught by the fishermen are handed over to Mr Rujito. At the moment there are 3 olive ridley turtles in his turtle receiving tub, which are not well looked after and without proper water circulation. Normally a visitor who wishes to release a turtle to the Samas sea pays a "voluntary fee" to Mr Rujito.

### **2.13 Yogyakarta city (Central Java):**

Yogyakarta plays a very important part in turtle shell souvenirs trade. This town is well known for its fine silver handicraft as well as turtle shells accessories and souvenirs, which are openly traded along Malioboro Road. This city is visited by tourists from all over the world.

Malioboro is a very famous place in Yogyakarta which sells handicrafts and souvenir items. Many shops and stalls along this road are selling items made from turtle shells. Despite warning letters issued by the Office of Nature Resources Conservation (BKSDA) of the Dept of Forestry, the trade in turtle shell souvenirs is still conducted freely.

In addition to the outlets along the Malioboro Road, turtle shell souvenirs are also traded in the Malioboro Mall. All items on sale originate from Kotagede, Yogyakarta. The raw material of turtle shells come from Bali. The souvenirs are made into a variety of accessories and some are combined with silver.



**Table 5. Hawksbill turtle shell products traded at Malioboro Road, Yogyakarta (Central Java) during the month of April 2005**

No	Type of souvenir	Number	Price (Rp)
1	Ring	153	7.500-15.000
2	Small bracelet	833	10.000-30.000
3	Large bracelet	338	15.000-35.000
4	Jewelry box	119	15.000-60.000
5	Hair accessory	83	15.000-35.000
6	Lice comb	2	10.000-25.000
7	Hair comb	94	10.000-25.000
8	Matches box	46	15.000-35.000
9	Mirror holder	1	50.000
10	Earrings	146	7.500-20.000
11	Small dagger/kris	1	40.000
12	Necklace	76	8.000-25.000
	<b>Total</b>	<b>2.891</b>	

### **2.13 Jakarta city:**

Turtle eggs are traded in the capital city. Vendors can be found in China town in Glodok. Turtle eggs are obtained from Sukabumi, West Java. At least 500 turtle eggs are sold per day. The cost per egg is Rp 4,000.

## **3. DISCUSSION:**

It is ironic that the trade in turtle and turtle's parts is conducted freely along the south coast of Java Island, despite the issuance of the State Legislation no 5, year 1990, which stipulates that the trade in turtle, body parts and its eggs is prohibited. Tourist resorts along the coast of Java have become trading areas for turtle and turtle by products. More than 50% or six of the eleven seashores visited by **ProFauna** sell turtle or souvenirs made of turtle body parts.

The souvenir trade in the tourist resorts on the coast or along the famous Malioboro Road in Yogyakarta pose a serious threat to the sea turtle conservation. These resorts are visited by many different types of tourist. It is of real concern that the availability of such turtle by-products will entice or encourage visitors to buy merchandise items made from turtle's body parts. This sets a poor example for wildlife conservation education in Indonesia.

### **The trade in turtle meat:**

From the data gathered during the investigation by **ProFauna** on the south coast of Java Island, the trade in turtle meat can only be found in Cilacap, Central Java. Turtle meat on sale is from those accidentally trapped in their fishing nets. At least two turtles are trapped each month.

Turtle meat sold in Cilacap (Central Java) is centered in the fish market at THR Teluk Penyu. Normally it is sold in the form of dried and spiced meat (locally known as dendeng) in plastic boxes.

Turtle meat at Pantai Prigi and Popoh (East Java) comes from turtles which were trapped in fishing nets. Most are for self consumption and not for sale. At least 3 turtles are trapped in the fishermen's nets per month at these two places.

From the above data, 5 turtles are accidentally trapped in the fishing nets or about 60 turtles per year. The development of fishing nets which allow the turtle to escape must be encouraged in Indonesia, to avoid future accidental trapping.

### **Turtle egg trade:**

The egg is the part of turtle which is most heavily traded in many areas. Banyuwangi (East Java) and Pangumbahan (West Java) have the most trading activities.

There are 3 traditional markets (Pasar Banyuwangi, Pasar Jajag and Pasar Pesanggaran) in Banyuwangi (East Java) where turtle eggs are traded openly. All turtle eggs are harvested from the National Parks Alas Purwo and Meru Betiri. This is sad, such national parks should have been protected areas for turtles but in reality they have become places to steal turtle eggs.

In addition, the trade in turtle eggs has been going on for a long time in Pangumbahan (West Java), which was legalised by the local authority several decades ago. The regency authority of Sukabumi (West Java) gave a special concession to C.V. Daya Bakti company, to take advantage of the availability of turtle eggs. The harvested eggs from Pangumbahan are sold to many areas in Sukabumi, Bogor and Jakarta.

### **Turtle Oil trade:**

The recorded trade takes place only in Teluk Penyu Cilacap, West Java. It is locally known as "minyak bulus" (bulus oil) rather than turtle oil. It is believed by some that such oil contains the property to cure skin disease and to tighten skin.

To obtain a bottle of turtle oil of 150 ml, at least one medium size turtle is required. The standard bottle used is between 100 ml - 300 ml.

### **Mounted or stuffed turtle trade:**

There are two recorded locations in Cilacap (Central Java) and Pangandaran (West Java) where such items are found. During the investigation from February through April 2005, **ProFauna** recorded at least 325 stuffed turtles for sale. The types of stuffed turtles are hawksbill, green turtle and oliver ridley. The majority of the stuffed turtles sold in Cilacap come from Surabaya and Situbondo (East Java). The turtles used for mounting in Situbondo are sourced from Madura island and Kalimantan (Borneo).

There is only one person in Cilacap who is able to stuff and mount turtles. Most of the turtles used here are from those trapped in the fishermen's nets.

Besides Cilacap, mounted or stuffed turtles are traded in Pangandaran, most are sourced from Cilacap. During the visit in April 2005, **ProFauna** found 153 stuffed turtles of the above mentioned three species.

There are four individuals in Cilacap (Central Java) who supply turtles to Pangandaran (West Java). They are known as the source of stuffed turtles. They are: Zaini, Sutikno, Ibu Solehah and Ibu Rebo. They are responsible for bringing mounted turtles from Situbondo (East Java) to be supplied to Pangandaran (West Java).

From the field data gathered and interviews with the stuffed turtle traders, it is estimated that 1000 turtles are slaughtered each year to be stuffed and mounted, which are then sold on the south coast of Java. The majority of the mounted turtles are hawksbills.

**Tabel 9. Number, species and price of stuffed turtles in Cilacap and Pangandaran.**

No	Location:	Type/Specie of stuffed turtle	Total	Price (Rp)
1	THR Teluk Penyu (Central Java)	Hawksbill	195	60.000 – 1.500.000
		Oliver Ridley	97	60.000 – 150.000
		Green turtle	33	100.000 – 300.000
2	Pangandaran (West Java)	Hawksbill	100	100.000 – 1.000.000
		Olive Ridley	37	85.000 – 300.000
		Green turtle	6	100.000 – 300.000
<b>Total</b>			<b>468</b>	

**Picture 5. Comparison on species of turtle used for mounting and for trading in Cilacap and Pangandaran.**

#### **Turtle shell souvenirs trade:**

It is recorded that there are 3 locations which sell handicraft and souvenirs made out of turtle shells, these are Yogyakarta (Central Java), Cilacap (Central Java) and Pangandaran (West Java). Yogyakarta has the highest number of traded souvenirs and items from turtle shells, which can be found along Malioboro Road and souvenir shops in Kota Gede.

**Table 10. Number of turtle shells souvenir products in Yogyakarta, Cilacap dan Pangandaran recorded during the month of February - April 2005**

No	Location:	Number of products:	Price range (Rp)
1	Yogyakarta (Central Java)	2.902	3.000 – 75.000
2	Pangandaran (West Java)	338	30.000 – 40.000
3	Cilacap (Central Java)	390	3.500 – 10.000

**Table 11. List of type of souvenirs being traded in Yogyakarta, Cilacap and Pangandaran**

No	Item type	Yogyakarta (Central Java)	Cilacap (Central Java)	Pangandaran (West Java)

1	Bracelet	Yes	Yes	Yes
2	Ring	Yes	Yes	-
3	Hair accessories	Yes	-	-
4	Jewelry box	Yes	-	-
5	Matches holder	Yes	-	-
6	Lice comb	Yes	-	-
7	Photo frame	Yes	-	-
8	Hair comb	Yes	-	-
9	Earrings	Yes	-	-
10	Cigarette holder	-	Yes	-
11	Dried Hatchling	-	Yes	-
12	Mirror frame	Yes	-	-
13	Small Kris (dagger)	Yes	-	-

**Picture 6. Percentage of number of turtle shells souvenirs being traded in Yogyakarta, Cilacap and Pangandaran.**

### **Trade network:**

The network of the turtle trade on the south coast can be divided into two groups:

- a. the turtle eggs trade
- b. the turtle shell souvenir trade.

Both trades are inter connected from one district to another.

There are two types of turtle egg trade locations:

1. East Java
2. West Java.

The trade in East Java is on a large scale such as in Banyuwangi (East Java), where turtle eggs are sourced from National Parks Alas Purwo and Merobetiri.

The trade network in West Java is smaller and is centered in Sukabumi. Eggs are sourced from Pangumbahan coast, Sukabumi. The trade in Sukabumi was legalised by the local authority by giving a special concession to C.V. Daya Bhakti company to harvest turtle eggs along Pangumbahan coast.

The route for the turtle shell souvenirs trade network can be divided into two:

1. Turtle shells souvenirs traded in Yogyakarta (Central Java) come from Kota Gede
2. The souvenirs traded in Cilacap and Pangandaran come from Situbondo (in the north coast of East Java).

#### 4. CONCLUSION:

- The trade in turtle and turtle by-product is conducted freely on the south coast of Java Island. The trade involves meat, eggs, stuffed turtles, accessories and souvenirs made from turtle shells. The majority (98%) of the traded items are turtle eggs, followed by 1.3% turtle by-products, 0.11% stuffed or mounted turtles and 0.01% turtle meat.
- There are approximately 60 turtles trapped accidentally in the fishing nets per annum on the south coastal region of Java. Most of them are consumed by the fishermen. Fishing nets therefore pose a danger to turtles.
- The main centre of trade for souvenirs or turtle by-products is Yogyakarta. Where such merchandising is conducted freely in this international tourist town, along Malioboro Road and Kota Gede.
- Approximately 1000 turtles are slaughtered each year to be stuffed and sold along the south coast of Java.
- Existing laws to protect turtles have not been fully enforced. Despite the fact that all turtles are protected under the law, the trade in turtle and turtle parts still takes place freely on the south coastal region of Java.

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