OUR SHRIMP - THEIR LIVES
The more we know about the Tiger Shrimp, where and how it lives and its behaviour, the better our chances of catching it at the right size, the more money for us fisherfolk and the more shrimp now and for tomorrow. That is what we are going to read about in this book. In the previous book we looked at how we fish and how that affects the fish. With what we learn in this book we can look after the shrimp so the shrimp can look after us!!
That was one of the best catches of Tiger Shrimp we have ever had, Raghu.

Here, Ponni. This is for us.

Aha! Such big ones! Where did you catch them?

Look! This one’s as long as my palm!
Raghu made us go. Never before have we gone there with the trammelnet.

We went out to where the water is almost 10 metres deep.

We were lucky. It's not normal to find such big Tiger Shrimp, and in such quantities, at that depth.

This one is even larger. But it has a soft shell.

It's probably a female.

The male is smaller. The female grows much faster than the male, so the female is larger than the male of the same age.
What’s going on here? Oh! Not a bad size of Tiger Shrimp!

With your BLC you can catch much bigger ones because there are plenty of them in deeper waters.

Trawlers can fish in water 60-70 metres deep. That’s where they catch the biggest ones ... each about twice the length of your palm.

But we were lucky. These big Tiger Shrimp happened to be where we had set our trammelnet.

Let’s go back to what we were talking about. This is how a shrimp looks at each stage of its growth.
Where do they lay their eggs?

In the sea, between 20 and 60 metres depth.

You can’t see the eggs or the next three stages. They are so very, very tiny.

If you can’t see them, how do you know about these stages, Raghu?

In the Fisheries Institute, we had an instrument like this. It’s a microscope. It’s used to look at very tiny things because it makes them look large.

This is how the eggs and larvae look through the microscope. They look very different from the adult Tiger Shrimp.
The eggs hatch into larvae in 4 or 5 days and rise to the surface. In the next 3 or 4 days the current carries them inshore to lagoons.

They stay there for one or two months, living close to the muddy bottom. Then they slowly move towards the open area.

There, when they are 4 to 5 months old, they begin to mate. Some months later, the females lay eggs. They keep moving slowly out towards the deep sea for the next few months till they reach depths of 60 to 70 metres. During this period they continue to mate and lay eggs.

At 70 metres depth each of them is almost twice the length of my palm and weighs about 350 grammes.
The Life Cycle of the Giant Tiger Shrimp

- Juveniles (3-4 weeks)
- Sub-adult (1st mating) 2-3 months)
- Adults (1st spawning in the sea at 10 months) 4-5 months
- Eggs (12-18 hours)
- Larvae (1.5-2 days)
- Largest adults (14-18 months)
- See bottom

[Diagram showing the life cycle stages and durations]
Later, at the lagoon —

Those men there are using pushnets and scoopsnests to catch shrimp.

Those larvae should be allowed to grow bigger and reach deeper water. When we catch them there, we will earn much more.

Look! Those men are taking out their boat-seine.

Let’s go with them.
They have made quite a good haul, haven't they?

What's the use, father? Compare the size of these shrimp and fish with what we caught in our trammelnet.

Look at the small mesh size. They've caught so many tiny shrimp.
Raghu, pushnets, scoopnets, boat-seines, trammelnets and trawlnets catch Tiger Shrimp in different depths at different stages of their lives.

A trammelnet is the only net which catches ONLY the bigger ones. All the others catch either the small ones or small and big ones.

If the young are caught now, there will be few bigger shrimp left for us to catch later.

That is true. If we don’t do something about it now, we’ll be the ones to suffer.

What can we do about it?

Ideally, we should not use small-mesh boat-seines. They are destructive. They destroy our fish resources by taking away almost all the young shrimp and fish.
But there are thousands of our people catching even smaller ones with their pushnets and scoopnets. How will they earn a living if they stop using these nets?

We must find an answer to that, too. But whatever the answer, we must not catch so many of the very young ones.

What about the trawlers?

Don't they catch too many of the big females in the spawning areas? Won't this reduce the production of young ones and affect future fishing seasons?

Yes, it definitely will. In fact, they are complaining of catching less shrimp nowadays. In addition, they also capture many young ones when they fish in the shallow waters during the season when the young are plentiful in these waters.

How do we solve this problem?

They do that too! They come close to the shore and catch the young ones. They also damage our nets.

Somehow we must get them to reduce or even stop trawling.
Does this mean that trammel nets are the best gear for shrimp?

Yes, I've already said they catch only fish and shrimp of a certain size. Another reason is, this gear is passive, it waits for its catch instead of sweeping up everything that is available.

Trammel nets are the gear for catching Tiger Shrimp, provided they are set in deeper waters where the adult Tiger Shrimp are.

We should reduce the use of small-mesh gear! I can understand that. But how do you expect us to make a living?

I don't have all the answers. Let us sit down and think about it. Those of us catching the small shrimp using small-mesh nets could move to the deeper waters and fish the bigger ones with trammel nets and earn even more.

But see how many of us there are. If all of us move into another fishery, wouldn't we be creating other problems?

You have a point there. May be we should also be talking about reducing the number of fishing craft and fishing gear. May be even reducing the number of fisherfolk.
How do we do that?

Perhaps we could encourage our children to look for other kinds of jobs. We could even get fisherfolk to learn other trades.

As I said, I don't have all the answers. But I do know one thing. If we don't do something, we're in for trouble. BIG TROUBLE!

And what do we do for an income?

Tiger shrimp have two peak spawning periods... from January to March and July to September. Let us for a start, reduce the use of small-mesh nets in shallow waters in April-June and in October-November. Also, let us get the trawlers to reduce their effort in very deep waters (60m) during January - March, the main spawning season. We should also get them to avoid using their gear during June and July and in 10 - 20 m, where there are small ones.

We use trammelnets, fish in deeper waters, catch the bigger ones and make up the loss.
You said we should not over-fish the shrimp. But how do we know we are over-fishing?

How very important it is not to over-fish! Yet it is so difficult not to do so.

We have talked of some ways. Are there other ways?

But we must do it. Or we will lose our fish stocks and our livelihood.

We could reduce the number of fishing craft catching Tiger Shrimp.
Reduce the number of fishing craft?! What do you mean?

Think of it this way. The more the boats, the less each boat catches, and the less we make. And destructive methods like trawling make this doubly true.

In other villages, certain kinds of fish are not caught in certain seasons. Or the fisherfolk agree which fish should be their target and in which season.

In some fishing communities, the fisherfolk have for many years agreed that some will fish on some days and some on other days.

Those are excellent ideas. Why don’t we build on them by sitting down with Fisheries Officers to see what we can do about our future?

If we don’t do it, nobody will. So let us begin.

Isn’t that as good as reducing the number of fishing craft?
WHAT WE HAVE LEARNT

1. By catching too many young Tiger Shrimp found near the shore we do not allow enough of them to grow big. Bigger shrimp provide a better income for us.

2. By catching too many morther shrimp in deep waters, as trawlers do, we do not leave enough in the sea to lay eggs and provide us with shrimp for the next season.

3. Pushnets, dragnets, scoopnets, and boat-selines are active gear with small meshes and these are destructive. They destroy our future by removing large quantities of young shrimp and fishes.

4. Trawlnets catch too many morther shrimp in deep waters and too many small ones in shallow waters because they are active and efficient gear with small meshes. This gear causes the greatest damage to our shrimp fishery.

5. Trammelnets used in deeper waters will be better for shrimp fishing as they are passive gear. Besides, they catch only the large sizes.

6. Too many craft and gear operating in one area means a smaller and smaller share of the catch for all of us and a reduction of our precious shrimp resources.

7. We can prevent damage to our shrimp fisheries only if all of us fisherfolk catching shrimp at different stages in their lives, co-operate and act together to ensure that we will have something to fish tomorrow. We have to agree on what to do and make sure it gets done. The Fisheries Officers and the Government can help, but it is really something only we fisherfolk can do.
WHAT WE CAN DO

1. Fish in deeper waters using trammelnets. The big Tiger Shrimp are found there. And the money is there.

2. Try and reduce the use of pushnets, dragnets, scoopnets and boat-seines. Particularly from January to March and July to September when there is an abundance of young ones.

3. Work towards reducing the number of trawlers or fishing with trawlers for shrimp.

4. Discuss with Fisheries Officers and agree on certain seasons which can be closed to certain gear. This will let the shrimp reach adulthood and, thus, a larger size. Bigger shrimp not only weigh more, but also get higher prices, which means much more income. By taking adult shrimp, you will help to conserve our shrimp resources, as the shrimp will then get a chance to lay their eggs at least once before they are caught.

5. Make a beginning by coming together and discussing our problems and solutions amongst ourselves and with Fisheries Officers. Our future is in our hands.
Use trammel nets in deeper waters and catch big tiger-shrimp. This way, more of us small-scale fisherfolk can make more money.
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