

# The Fisher Friend Mobile Application: Case Studies on Effective Use of Ocean State Forecast and Potential Fishing Zone for a Better Livelihood



M S Swaminathan Research Foundation

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# FOREWORD

Since 1997, the M S Swaminathan Research Foundation (MSSRF) has been providing knowledge connectivity to the rural communities by setting-up and running Village Resource Centres (VRCs) and Village Knowledge Centres (VKCs). The basic purpose of these centres are to provide need based, locale-specific, demand-driven information to the resource poor marginal farmers and fishermen using different information and communication tools. It also includes organising need based training, awareness generation and creating linkages with various experts and organisations in view of knowledge into action.

MSSRF has been involved in developing several mobile applications for the marginalised communities. It is providing early warning, potential fishing zone, government schemes and entitlements, etc., for fishermen. Through icon based mobile applications (CDMA technology), it is offering audio advisories related to agriculture, animal husbandry, micro-enterprises, health, education, government schemes and entitlements. All these information and advisories are provided in local language. These applications cover more than 200,000 farmers / fishermen / self-help groups on a daily basis. In all these cases, MSSRF is maintaining a dedicated help desk and conducts phone-in-programme with appropriate experts.

Apart from mobile applications, MSSRF is using various communication tools such as the help desk to clarify community's queries, conducting phone-in-programme, GSM based public address system, electronic display boards, mobile soil and water testing van, community newspaper, hands on training, screening theme based films using K-Yan PC, fixed wireless local loop closed user group audio conferencing facility, etc.

MSSRF's knowledge connectivity programme at present covers more than hundred (100) fishing villages in Tamil Nadu, Puducherry and Andhra Pradesh using different communication tools. It also extensively uses mobile phones for dissemination of audio and text content to the fishermen. Recently, MSSRF has launched an exclusive mobile based help line for fishermen to provide necessary ocean state forecast and livelihood related information in partnership with Indian National Centre for Ocean Information Services (INCOIS). It is also conducts extensive training programmes on effective handling of GPS, value addition for non-commercial fish for fisher women, hygienic handling of fish and diesel engine mechanism for fishing boats with the support of National Fisheries Development Board (NFDB). With the support from Marine Products Exports Development Authority (MPEDA) and Network for Fish Quality Management and Sustainable Fishing (NETFISH), MSSRF's knowledge connectivity programme now covers the aspects of turtle excluder device, European union catch certification, sustainable fisheries including marine bio-diversity conservation for school children and boat registration.

Recently, National Council for Applied Economic Research (NCAER) conducted a study on 'Impact Assessment and Economic Benefits of Weather and Marine Services.' The complete report is available on the web (<http://www.ncaer.org/downloads/Reports/ImpactAssessment-MOES.pdf>). Some of the important highlights of the report are as follows:

- 'The catalytic role played by the M S Swaminathan Research Foundation (MSSRF), the adoption of the Fisher Friend programme, and PFZs leveraging technology options such as Digital Display Boards with NGOs intermediation were seen as positive outcomes in the study'
- The catalytic role played by the M S Swaminathan Research Foundation (MSSRF), Village Resource Centres (VRC) and Village Knowledge Centres (VKC) in raising awareness and the 'enabling' role of localised NGOs in facilitating knowledge transfer is evident from the Focus Study Group discussions and surveys
- The key takeaways from the proactive role of INCOIS with the catalytic role of the partnering agency M S Swaminathan Research Foundation could be major milestones in the road map for progress in this sector. The win-win partnership enables the following: the roles of localised NGOs, adoption of 'Fisher Friend Programme' through custom-built mobile handsets, identification of 'species-specific' PFZs leveraging technology options such as digital display board (IVRs) with NGO intermediation, etc.

This book covers a few case studies from the districts of Nagapattinam, Ramanathapuram, Kanyakumari in Tamil Nadu and the Union Territory of Puducherry. These case studies explain the timely and effective use of ocean state forecast, potential fishing zone and government schemes by the fishermen through the Fisher Friend Mobile Application (FFMA).

M S Swaminathan Research Foundation is grateful to QUALCOMM, Astute Systems and Tata Teleservices for taking this initiative to ground level in a leap frogging method. QUALCOMM is providing the financial and technical support for the Fisher Friend Mobile Application. QUALCOMM's Brew application is used for this technology. The Astute Systems Technology, Indore is providing the software for updating the information and maintains the software in its server, and integrates the software in the handsets. The Tata Teleservices provides the mobile network for disseminating the information to the fishermen on dynamic basis.

MSSRF is also grateful to INCOIS for providing continuous information in the area of ocean state forecast and potential fishing zone information. MSSRF believes that information alone cannot solve the problems. There is a need for building the capacity of fishermen on using this information dynamically for their sea safety and livelihood security issues. In this capacity building initiative, INCOIS played a major role along with MSSRF by providing trainings to the fishermen in the coastal villages of Tamil Nadu and Puducherry. Since September 2011, INCOIS and MSSRF initiated similar programme in East Godavari and Krishna districts of Andhra Pradesh.

I personally thank Mr S Surendran and Ms S Velvizhi for their tireless contribution towards the above. I am also thankful to other MSSRF staff mentioned in the contributions section of the book.

S Senthilkumaran  
Director – Information, Education and Communication

## SECTION:1

# INTRODUCTION TO THE FISHER FRIEND MOBILE APPLICATION

India is the third largest fish producer in the world with nearly 6 million fishermen, of which 2.4 million are full-time, 1.45 million are part-time and the rest are occasional fishermen. Fishing is mainly conducted in traditional fishing crafts, motorised boats (most converted from traditional boats) and small-mechanised craft. Generations of fishermen in the coastal districts of Tamil Nadu and Puducherry have practiced and perfected their craft for years. However, the changing weather patterns and the 2004 tsunami affected the fisheries sector in various ways with major implications on the livelihoods of fishing community.

One-third of the families affected by the 2004 Indian Ocean tsunami were linked to the fishing industry in India. Businesses are being rebuilt but seven years later, the per capita income is still not on par with pre-tsunami levels. The World Bank estimates that the total loss of income and damage to assets in Puducherry's fishing industry is approximately \$24.6 million. Given the emerging challenges, there is a need for providing timely and effective information to fishermen on fisheries livelihood information.

To address these challenges, the Fisher Friend Mobile Application was created to study the use of mobile phones in small fishing villages in Tamil Nadu and Puducherry, as a tool to keep fishermen informed about important safety, weather and livelihood information. This region was chosen specifically to address concerns raised by the local fishermen about their welfare after the 2004 Indian Ocean tsunami. FFMA is a BREW-based application offered on a low cost 3G and CDMA2000 1X handset with a graphic interface, an icon-based menu and programmable shortcut keys. In addition to safety and weather information, fishermen can receive the locations of fishing areas and real-time market prices with one-click, in their local language.





and technical support provider for the project, which includes development of the Fisher Friend Mobile Application and provision of 100 mobile handsets.

This book covers thirty four (34) studies from the districts of Nagapattinam, Ramanathapuram, Kanyakumari in Tamil Nadu and the Union Territory of Puducherry. These case studies explain that timely and effective information on ocean state forecast, potential fishing zone and government schemes can have significant impact on the livelihoods of fishermen.

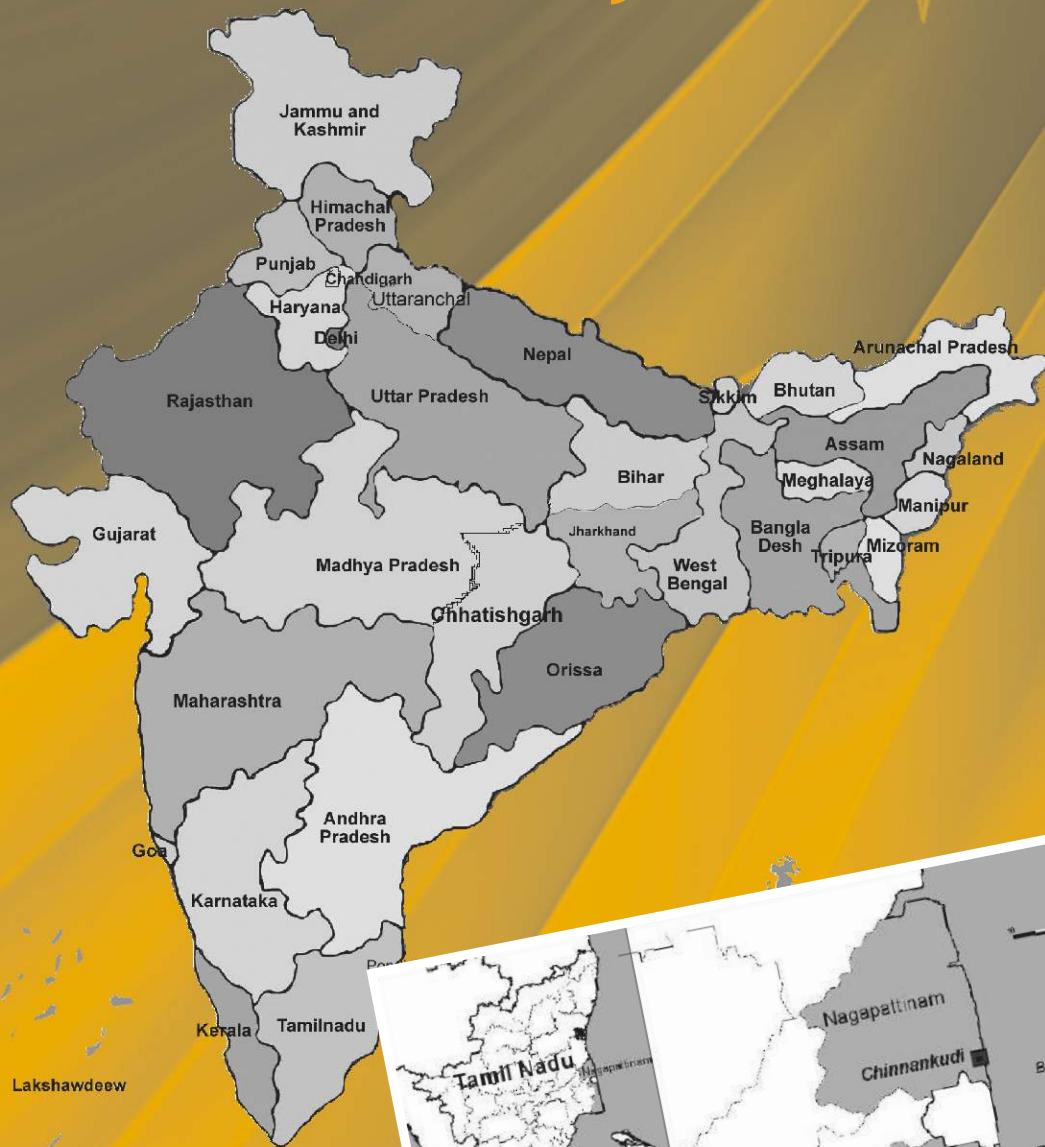
The initiative was launched in December 2007. The user-friendly features of FFMA were developed for Phase I of the project and rolled out in March 2009 across Tamil Nadu and Puducherry. The project directly involves 450 participating fishermen along with members of the project team, who visit the fishermen on a regular basis for training and research purposes. The flexible nature of the technology platform allows Fisher Friend to be customised through a user-friendly control panel.

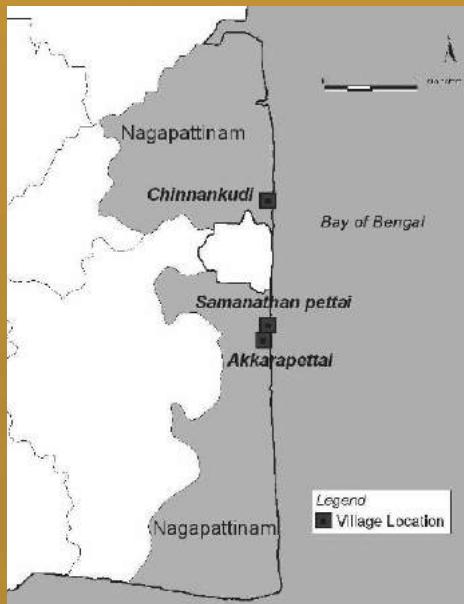
The M S Swaminathan Research Foundation (MSSRF) plays a major role in providing fisheries related information being disseminated through the Fisher Friend Mobile Application. The application leverages MSSRF's relationships and ongoing work with the fishing communities across Tamil Nadu and Puducherry. Tata Teleservices, the CDMA2000 network operator is providing free connectivity to 100 mobile handsets. Astute Systems Technology developed and created the BREW application. Qualcomm through its Wireless Reach initiative is the primary financial

# SECTION:2

## CASE STUDIES

# FROM NAGAPATTINAM DISTRICT, TAMIL NADU





**NAME: CHANDRAN**

**AGE: 27**

**TYPE OF BOAT: FIBRE BOAT**

**VILLAGE: CHINNANGUDI**

**DISTRICT: NAGAPATTINAM**

**STATE: TAMIL NADU**

Chinnangudi is a small fishing village located off the Coromandel Coast in Nagapattinam district of Tamil Nadu. For years, the fishermen from Chinnangudi village have been dependent upon traditional knowledge and institutions to understand and forecast the state of sea. Some of the traditional methods that were employed by the local fishermen include the following:

- During deep sea fishing when they come across whale then according to them a storm is imminent
- While they come across Lora fish it means very high wind speed

Fishermen in Chinnangudi used such techniques for ages to predict the state of sea, as there was no other agency or department that came forward to share with them such critical livelihood information.

Chandran is one of the fishermen from Chinnangudi village. This 27 year old fisherman started fishing when he was ten years old, along with his brother, Machandran. Chandran returned to India after a brief stint abroad as a labourer and joined his brother, who owns a fibre boat and ventures into the sea for fishing.

The Chinnangudi Village Knowledge Centre (VKC) selected Machandran as one of the pilot users of the Fisher Friend Mobile Application (FFMA) in mid-April, 2009. As part of the training, Machandran was trained on how to access critical information such as wave height, wind speed and direction, weather forecast, potential fishing zone, market information, latest fisheries related news alerts and fisheries related government schemes. Chandran was very optimistic about the FFMA and started using FFMA on behalf of his brother, whenever they venture into the sea.

Chandran is one of the fishermen from Chinnangudi village. This 27 year old fisherman started fishing when he was ten years old, along with his brother, Machandran. Chandran returned to India after a brief stint abroad as a labourer and joined his brother, who owned a fibre boat and ventured into the sea for fishing.

In June 2009, Chandran along with 50 other fishermen ventured into the sea in 12 fibre boats. They were planning to work together to lay purse seine type net which requires 11 to 12 boats working jointly to lay the nets and haul the catch. While entering deep sea, Chandran used FFMA to access the weather information and status of the sea. The FFMA predicted very high speed wind and high waves at that time. So, Chandran and his brother Machandran decided to return to the shore and they informed this to the fellow fisher folks. All the fishermen came back to the shore immediately. Within minutes after their return, the wind started blowing at much higher speed accompanied by high waves. Today, Chandran recalls that their safe return to the sea shore was due to timely information provided by the Fisher Friend Mobile Application.



**NAME: ARUMUGAM**

**AGE: 24**

**TYPE OF BOAT: FIBRE BOAT**

**VILLAGE: CHINNANGUDI**

**DISTRICT: NAGAPATTINAM**

**STATE: TAMIL NADU**

Chinnangudi is one of the Tsunami affected villages in Nagapattinam district of Tamil Nadu. Arumugam has been engaged in fishing for the past eighteen years. This 24 year old fisherman owns a small fibre boat and ventures out into the sea regularly.

In 2009, Arumugam was chosen as a user of the Fisher Friend Mobile Application. He was trained on using FFMA application and access fisheries related livelihood information such as wave height, wind speed and direction, weather forecast, potential fishing zone, market information, and latest fisheries related news alerts and government schemes.

Once Arumugam with his fellow fishermen headed into the sea hoping for a good catch. He steered the boat where he predicted a good haul. As time passed by, his intuition failed and found little or no fish in that part of sea. Arumugam referred FFMA for updates on latest Potential Fishing Zone (PFZ) and he got the PFZ data within seconds. He immediately moved on to the direction of PFZ in his fibre boat and cast his net. The prediction proved to be right Arumugam hauled a sizeable catch. With the timely information provided through the FFMA, Arumugam returned with a haul worth INR 4000. Otherwise, he might had come back empty handed and incurred significant losses.

In another instance, Arumugam along with six other fishermen ventured into the sea. One of the fishermen accompanying Arumugam accessed the information available on FFMA. Arumugam noticed the wind and wave forecast information which predicted high wind speed and rough waves. He immediately alerted rest of the fishermen in his boat and returned to the shore. He also alerted his relatives who were fishing near the Nagore coast regarding the rough sea conditions and they too returned to the shore. As predicted by FFMA, the sea condition became too rough after a short time. Arumugam today attributes the increased income and his safe return to the shore due to the timely information provided by FFMA.

Arumugam with his fellow fishermen headed into the sea hoping for a good catch. He drove the boat where he predicted a good haul. As time passed by, his intuition failed and found little or no fish in that part of sea. Arumugam referred FFMA for updates on latest Potential Fishing Zone (PFZ) and he got the PFZ data within seconds.



**NAME: NARAYANAN**

**AGE: 57**

**TYPE OF BOAT: DAILY  
LABOURER IN FIBRE BOAT**

**VILLAGE: CHINNANGUDI**

**DISTRICT: NAGAPATTINAM**

**STATE: TAMIL NADU**

Narayanan is a veteran fisherman from Chinnangudi village. He has been in fishing business from the time; Catamarans were paddled by muscle power to the latest fibre boats running on powerful outboard motors. This 57 year old has been eking out a livelihood by fishing in the sea for the last 40 years.

He was selected by the Chinnangudi Village Knowledge Centre as a initial user of the Fisher Friend Mobile Application. He was trained on accessing the application and avail fisheries related livelihood information such as wave height, wind speed and direction, weather forecast, potential fishing zone, market information, and latest fisheries related news alerts and fisheries related government schemes through the FFMA.

One day, Narayanan came across the wind speed forecast information predicted by FFMA. Being a long time fisherman, Narayanan knew the high risk of venturing out into sea when the wind speed is high. He did not go to the sea for two days as the information predicted high wind speed for the next two days. As predicted in the information the winds were very high for the next two days. Earlier to FFMA, Narayanan might not have had access to this critical information and ended up in a disaster like situation. Due to timely forecast provided through FFMA Narayanan avoided facing rough seas.

One day, Narayanan came across the wind speed forecast information predicted by FFMA.

Being a long time fisherman, Narayanan knew the high risk of venturing out into sea when the wind speed is high. He did not go to the sea for two days as the information predicted high wind speed for the next two days



**NAME: PANNEERSELVAM**

**AGE: 34**

**TYPE OF BOAT: FIBRE BOAT**

**VILLAGE: CHINNANGUDI**

**DISTRICT: NAGAPATTINAM**

**STATE: TAMIL NADU**

Chinnangudi saw a massive destruction after tsunami. The scars are still visible in the village. The destructive nature of the tsunami is still fresh in the minds of Panneerselvam. Panneerselvam is a fisherman hailing from Chinnangudi village in Nagapattinam district. He has been involved in fishing near Nagapattinam coast over the past fifteen (15) years. Though he does not own a boat, he ventures into the sea in his friend's fibre boat. He has been actively participating in the activities of Chinnangudi Village Knowledge Centre. He was trained on utilising global positioning system (GPS) for sea navigation and hygienic handling of fish by the VKC staff.

Panneerselvam had shown much interest in using FFMA even before he was chosen as a beneficiary. He used to access information from one of his friends. After seeing his keen interest, the Chinnangudi VKC staff chose him as one of the beneficiaries of the Fisher Friend Mobile Application. He was trained on accessing fisheries related livelihood information. After receiving FFMA enabled mobile, he became a regular user of sea and weather information and also shared the information to other fishermen.

One day, Panneerselvam came across the wind speed and weather forecast information provided through FFMA. Being a long time fisherman, he knew the perils of venturing out into sea especially when the waves were high. He did not venture out into the sea for that day as the information predicted very high wind speeds and high waves. As predicted in the information the wind speed and wave height were very high on that day. Due to the timely forecast provided through the Fisher Friend Mobile Application, he was able to avoid facing rough seas.

Panneerselvam had shown much interest in using FFMA even before he was chosen as a beneficiary. He used to access information from one of his friends. After seeing his keen interest, the Chinnangudi VKC staff chose him as one of the beneficiaries of the Fisher Friend Mobile Application



**NAME: MURUGANANDAN**

**AGE: 30**

**TYPE OF BOAT: TRAWLER**

**VILLAGE: AKKARAIPETTAI**

**DISTRICT: NAGAPATTINAM**

**STATE: TAMIL NADU**

Akkaraipettai is a major fishing village located 4.2km north-east of Nagapattinam town. Muruganandan, aged 30 is a fisherman from the Akkaraipettai village in Nagapattinam district. He has been fishing for the last 20 years. He owns a fishing trawler and ventures into sea for three to four days at a stretch. He was selected by the Akkaraipettai Village Knowledge Centre as a beneficiary of the Fisher Friend Mobile Application. He was given the orientation training on using the FFMA.

Akkaraipettai was one of the worst affected villages of the December, 2004 tsunami. After the tsunami, the Government of Tamil Nadu was providing subsidies to the affected fishermen in Nagapattinam district. Muruganandan had received the first round of support from the government.

Subsequently, the government had announced a second aid package to fishermen with subsidies of up to INR 10,000 for purchase of nets. Muruganandan came across this information under the Government schemes section of the Fisher Friend Mobile Application. He got benefitted and immediately informed other fishermen in village regarding the scheme. He received INR 10,000 from government as subsidy for damaged nets. Muruganandan claims that at least 200 more fishermen benefited due to the information shared by him.

Akkaraipettai was one of the worst affected villages of the December, 2004 tsunami. After the tsunami, the Government of Tamil Nadu was providing subsidies to the affected fishermen in Nagapattinam district. Muruganandan received this information the FFMA and he received the first round of support from the government.



**NAME: VISHWANATHAN**

**AGE: 25**

**TYPE OF BOAT: FIBRE BOAT**

**VILLAGE: CHINNANGUDI**

**DISTRICT: NAGAPATTINAM**

**STATE: TAMIL NADU**

Prior to December 26, 2004, the risk caused by tsunami or other natural hazards such as cyclones, floods and earthquakes were not considered significant by the community. The 2004 tsunami raised the concern of the Chinnangudi villagers. Vishwanathan is one of the victims of tsunami. He has been engaged in fishing for the past 10 years. He owns a small fibre boat and ventures out into the sea regularly. He lives with his wife Mahadevi along with their small child.

He was selected by the Chinnangudi Village Knowledge Centre with the help of the Traditional Panchayat leader Mr Vijayabalan as a beneficiary of the Fisher Friend Mobile Application. Subsequently, he was trained on accessing the information through the FFMA.

One day, Vishwanathan checked the weather forecast for his taluk using FFMA. The application predicted heavy rain along with wind for the later part of that day. However, Vishwanathan ventured out into the sea and he found that the sky was clear. So, he went against the advice provided by FFMA. But, as predicted four hours later, there was heavy rain and strong wind, which lead him to return to shore without any catch.

Within months, he came across the similar weather prediction as earlier; heavy winds were predicted. This time he decided to go by the information provided by FFMA and did not venture out into the sea. As predicted there was strong wind on that day and fellow fishermen who ventured out into the sea had to return to shore empty handed. Vishwanathan says that had he ventured into the sea he could have faced losses due to the expenses for diesel. Today, he shares that he would want to be a regular user of FFMA and he is willing to pay a fee to obtain the service as he has seen the enormous benefits provided by Fisher Friend Mobile Application.

He was selected by the Chinnangudi Village Knowledge Centre with the help of the Traditional Panchayat leader Mr Vijayabalan as a beneficiary of the Fisher Friend Mobile Application. Subsequently, he was trained on accessing FFMA.



**NAME: RATHINAVEL**

**AGE: 30**

**TYPE OF BOAT: FIBRE BOAT**

**VILLAGE: AKKARAIPETTAI**

**DISTRICT: NAGAPATTINAM**

**STATE: TAMIL NADU**

Rathinavel aged 30 is a fisherman from the Chinnangudi village of Nagapattinam district. He has been engaged in fishing for the past ten years. He discontinued his schooling to support his father in fishing. He owned a small fibre boat earlier and ventured out into the sea. He lives with his wife, Mahadevi and a small baby girl.

Two years ago, he purchased a trawler boat, which is bigger than a fibre boat and can sustain operations in sea for a longer period. He also utilises GPS to mark the point where he has had good catch so that he can return to the same location next time. Rathinavel has been a beneficiary of the Akkaraipettai Village Knowledge Centre's public address system. He said that the critical livelihood information shared through the public address system such as weather and important news has been very beneficial.

He was selected by the Akkarappettai VKC staff as a pilot beneficiary of the Fisher Friend Mobile Application. The Mobile device was given to him in the presence of the former Panchayat leader Thiru Saravanan. He was trained on using the mobile application for accessing livelihood information such as wave height, wind speed and direction, weather forecast, potential fishing zone, market information, latest fisheries related news alerts and fisheries related government schemes.

After receiving the mobile application, he regularly checked information such as ocean state forecast and weather related information and used to shared such information with other fishermen in the village.

While getting into the sea, Rathinavel checked for the Potential Fishing Zone information. The application provided information such as the direction, distance, bearing angle, sea floor depth and the latitude - longitude coordinates at which there was a very high probability of fish catch. He entered the Latitude and Longitude coordinates into his Global Positioning system and headed to the location. He cast his nets at the location and hauled a fish catch worth of INR 2,000 and on the next day he hauled fish worth of INR 1,600, totaling his catch worth of INR 3600. He says that he usually ends up with a catch worth of INR 2,000 only; thanks to the information provided by FFMA he was able to haul fish catch worth of INR 1,600 more. He says that FFMA is beneficial for fishermen like him and thanks M S Swaminathan Research Foundation for providing him the opportunity to use the application.

Rathinavel aged 30 is a fisherman from the Chinnangudi village of Nagapattinam district. He has been engaged in fishing for the past ten years. He discontinued his schooling to support his father in fishing. He owned a small fibre boat earlier and ventured out into the sea. He lives with his wife, Mahadevi and a small baby girl.



**NAME:** GOVINDHARAJAN

**AGE:** 57

**TYPE OF BOAT:** TRAWLER

**VILLAGE:** AKKARAIPETTAI

**DISTRICT:** NAGAPATTINAM

**STATE:** TAMIL NADU

Govindharajan is a veteran fisherman who hails from Akkaraipettai, a major fishing village in Nagapattinam District, Tamil Nadu. He owns a trawler fishing boat and ventures into the sea regularly along with his three sons. He uses trawl net for fishing and is equipped with GPS for navigation.

The VKC staff chose Govindharajan as one of the pilot users of the Fisher Friend Mobile Application. Kovintharajan and four of his crew members were trained on accessing fisheries related livelihood information using FFMA.

Govindharajan made a point to go through all sections of the FFMA application. Once, he came across a 'news flash' in the Fisher Friend Mobile Application which informed that the fishermen should carry their identification cards, otherwise they will have to face severe penalty. Govindharajan passed on this information and ensured that all his crew members carry their identity cards while they ventured into the sea. While they were returning back to the shore after two days, they were checked by the Indian Coast Guard for identity cards. Many fishermen who did not carry their identity card had to face hefty penalties. Thanks to the timely information provided through the application Govindharajan and his crew members were saved from penalties. He thanks M S Swaminathan Research Foundation for providing him with the application.

The VKC staff chose Govindharajan as one of the pilot users of the Fisher Friend Mobile Application. Kovintharajan and four of his crew members were trained on accessing fisheries related livelihood information using FFMA.



**NAME: ANAND**

**AGE: 20**

**TYPE OF BOAT: FIBRE BOAT**

**VILLAGE: CHINNANGUDI**

**DISTRICT: NAGAPATTINAM**

**STATE: TAMIL NADU**

Anand is a young fisherman from Chinnangudi, a small fishing village in Nagapattinam district of Tamil Nadu. He has been fishing for the past four years. He owns a small fibre boat in which he ventures into the sea along with three other fishermen. He lives in the Tsunami nagar with his parents and an elder brother.

Anand listens to the information provided by the Village Knowledge Centre through the Public Address System regularly. The traditional panchayat member recommended Anand as one of the beneficiaries of FFMA. The VKC staff trained him on the use of FFMA and explained its purpose. After the training, he can now access fisheries related livelihood information such as wave height, wind speed and direction, weather forecast, potential fishing zone, market information, latest fisheries related news alerts, and fisheries related government schemes.

He used to check FFMA for information such as wave height, weather and wind speed before venturing into the sea. One day before starting, he checked the weather information on FFMA and it predicted heavy rain accompanied by strong wind. Anand decided not to venture into sea due to the risks involved in fishing in rough conditions. As predicted there was heavy rain and strong wind in the sea on that day. Thanks to the timely information provided through FFMA, Anand was able to prevent disaster and economic loss that can potentially occur due to rough weather in the sea. He shares that he is willing to pay a small fee to obtain the application for regular use.

Anand listens to the information provided by the Village Knowledge Centre through the Public Address System regularly. The traditional panchayat member recommended Anand as one of the beneficiaries of FFMA



**NAME:** BALAKRISHNAN

**AGE:** 20

**TYPE OF BOAT:** FIBRE BOAT

**VILLAGE:** CHINNANGUDI

**DISTRICT:** NAGAPATTINAM

**STATE:** TAMIL NADU

Balakrishnan is a very young fisherman from Chinnangudi village of Nagapattinam district in Tamil Nadu. He is 20 years old and works as a labourer in a fibre boat. He lives with his father Kaliyaperumal and mother Meenakshi. He learned Basic Computers from the Chinnangudi Village Knowledge Centre in Chinnangudi. He also visits the VKC to read news papers and obtain weather related information.

On the recommendations of the traditional panchayat leader, the VKC staff chose Balakrishnan as one of the initial beneficiaries. He was trained on the various aspects of FFMA and this gave him confidence to independently handle the application.

He used to check for information such as wave height, wind speed and direction and weather forecast regularly before venturing into the sea. One day, while returning back to the shore Balakrishnan checked the weather forecast and the application predicted heavy rain in the later part of the day. Usually fishermen keep the some portion of the fish catch to produce dry fish. Due to the rainfall prediction information, he and other fishermen in boat decided to sell all the fishes without keeping remaining fishes for producing dry fish. So, they sold all their catch. As predicted it rained heavily during the latter part of the day. Thanks to the timely information provided by FFMA, Balakrishnan and his fellow fishermen sold off all their catch, as without any sun and heavy rain the fishes might have gone wasted. Balakrishnan now uses FFMA regularly to gather weather information.

On the recommendations of the traditional panchayat leader, the VKC staff chose Balakrishnan as one of the initial beneficiaries. He was trained on the various aspects of FFMA and gave him confidence to independently handle the application.



**NAME: MURUGANANDAN**

**AGE: 27**

**TYPE OF BOAT: FIBRE BOAT**

**VILLAGE: AKKARAIPETTAI**

**DISTRICT: NAGAPATTINAM**

**STATE: TAMIL NADU**

Akkaraipettai village had seen massive destruction during the December, 2004 tsunami. More than 2500 live were lost in this village itself and it was inaccessible for days after the tsunami. Muruganandan is a young fisherman who hails from Akkaraipettai a major fishing village in Nagapattinam district, Tamil Nadu. This 27 year old has a joint family and lives with his parents, brother, wife and a three year old daughter.

Muruganandan was chosen by the Akkaraipettai VKC staff as a pilot user of the Fisher Friend Mobile Application. He was trained on using FFMA and gained confidence in accessing fisheries related livelihood information such as wave height, wind speed and direction, weather forecast, potential fishing zone, market information, and latest fisheries related news alerts and fisheries related government schemes.

Even though he did not venture into sea for fishing, Muruganandan used to check News alerts provided through the application. Once he was traveling outside the village for a personal work, he came across the News alert regarding the Polio drops being given for children on that day. After reading the information, Muruganandan immediately returned back home and took his daughter to the nearest Polio vaccination centre and got his child vaccinated. He says that, had he not come across the information provided by FFMA he would have missed Polio vaccination for his child. He says that the application is very beneficial for fishermen like him and if it is ever commercialised, he would be the first person to obtain the application.

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Muruganandan was chosen by the Akkaraipettai VKC staff as a pilot user of the Fisher Friend Mobile Application. He was trained on using FFMA and gained confidence in accessing fisheries related livelihood information such as wave height, wind speed and direction, weather forecast, potential fishing zone, market information, and latest fisheries related news alerts and fisheries related government schemes.



**NAME: PARAMASIVAM**

**AGE: 20**

**TYPE OF BOAT: FIBRE BOAT**

**VILLAGE: CHINNANGUDI**

**DISTRICT: NAGAPATTINAM**

**STATE: TAMIL NADU**

Paramasivam is a young fisherman from Chinnangudi village in Nagapattinam district, Tamil Nadu. He works as a labourer in fibre boat. He has been engaged in fishing for the past 4 years and lives with his parents and sister.

Paramasivam's house is located near the Chinnangudi VKC. A vivid reader of Community Newspaper, Paramasivam visits the centre regularly. He is one of the initial beneficiaries of FFMA. He was trained to access fisheries related livelihood information using FFMA.

Paramasivam started benefitting from the application even before he was given a FFMA. After becoming a pilot user, he used to check for updates such as the wave height, weather forecast and wind speed regularly before venturing into the sea. As usual he checked the weather forecast and it predicted very high waves accompanied by severe wind in the sea. Paramasivam decided not to venture into the sea, as the conditions predicted were not suitable for travel.

As predicted by FFMA, the sea conditions were rough and two boats in his village were toppled and damaged completely. Paramasivam is sure that had he ventured into the sea, his boat would have also been damaged completely and could have even endangered his life. He requests M S Swaminathan Research foundation to provide the information regularly through all mobiles so that it will be useful for fishermen venturing into sea.

Paramasivam's house is located near the Chinnangudi VKC. A vivid reader of Community Newspaper, Paramasivam visits the centre regularly. He is one of the initial beneficiaries of FFMA. He was trained on access fisheries related livelihood information using FFMA.



**NAME: UDAYKUMAR**

**AGE: 26**

**TYPE OF BOAT: FIBRE BOAT**

**VILLAGE: CHINNANGUDI**

**DISTRICT: NAGAPATTINAM**

**STATE: TAMIL NADU**

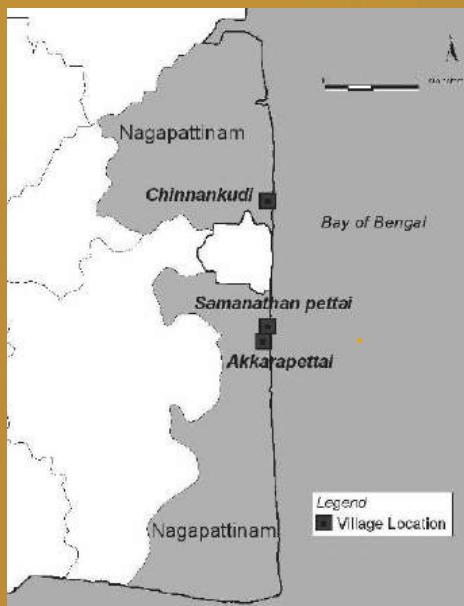
Udaykumar is a fifth grade drop-out from Chinnangudi village and has been engaged in fishing for the past ten years. He lives with his parents, Ramachandran and Ellaiyammal. He has been one of the active users of Chinnangudi Village Knowledge Centre.

He was identified by the VKC staff with the help of the traditional panchayat leader, as a pilot user of the Fisher Friend Mobile Application. He was trained on using FFMA and he is confident of using the application to predict wave height, wind speed and direction, weather forecast, potential fishing zone, market information, and latest fisheries related news alerts.

After becoming a pilot user, he used to check for updates such as the wave height, weather forecast, and wind speed regularly before venturing into the sea. At the initial stage of his usage, he came across weather information that predicted rainfall on the next day. Since he was a new user, he did not take the information seriously. Udaykumar's mother is engaged in groundnut cultivation and had sown groundnut seeds that day for cultivation. As predicted, it rained heavily and all the groundnut seeds sown had gone waste.

After ten days of FFMA use, he came across similar prediction regarding rainfall and coincidentally his mother had planned to sow groundnut seeds that day. He warned his mother regarding the impending rainfall and prevented her from sowing seeds. As predicted this time it rained heavily, but fortunately his mother had not sown the groundnut seeds this time. He shares that had his mother sown the seeds without the warning, his family would have faced economic losses. He says that it was due to the timely information provided by the application he was able to prevent losses. He states that the application will be beneficial for all fishermen.

After becoming a pilot user, he used to check for updates such as the wave height, weather forecast, and wind speed regularly before venturing into the sea. At the initial stage of his usage, he came across weather information that predicted rainfall on the next day. Since he was a new user, he did not take the information seriously.



**NAME:** C RAJA

**AGE:** 26

**TYPE OF BOAT:** FIBRE BOAT

**VILLAGE:** CHINNANGUDI

**DISTRICT:** NAGAPATTINAM

**STATE:** TAMIL NADU

Raja, aged 26 years also hails from the Chinnangudi village of Nagapattinam district. He has been engaged in fishing for the past eight years. He owns a small fibre boat and ventures into the sea regularly. In July 2009, he was selected as a pilot user of the Fisher Friend Mobile Application. Raja was trained on using the application and access fisheries related livelihood information.

Raja and his team of fisherfolks usually avoid venturing into sea during rough weather conditions, because heavy wind can result in capsizing of vessels. Raja goes into the sea during the middle of the night.

One day before venturing into sea, he accessed the application for weather forecast. He came across the information that forecasted high wind on the following day. Raja and his friends decided not to venture into sea for fishing. As predicted there was severe wind at very high speeds in the morning. Raja feels that it was good for him to not to have ventured that night as it could have resulted in massive economic losses coupled with endangering his live.

Raja and his team of fisherfolks usually avoid venturing into sea during rough weather conditions, because high speed wind can result in capsizing of vessels. Raja goes into the sea during the middle of the night.



**NAME:** L BALAMURUGAN

**AGE:** 25

**TYPE OF BOAT:** FIBRE BOAT

**VILLAGE:** SAMATHANPETTAI

**DISTRICT:** NAGAPATTINAM

**STATE:** TAMIL NADU

Samathanpettai is a small fishing village in the Nagapattinam district of Tamil Nadu. Balamurugan hails from Samanthan Pettai village. He has been engaged in fishing for the past eight years. He lives with his parents, sister and brother. He worked abroad for two years and then came back to his village. Since then, he is engaged in fishing. The family owns a small fibre boat and ventures into the sea regularly.

Since larger variety of fishes can be caught near rocks under the sea, Balamurugan uses wooden net to haul fish. He goes to sea five days in a week and earns around INR 10,000 every month. The VKC management committee recommended him to be a pilot user of the Fisher Friend Mobile Application and he was trained on using the application and access fisheries related livelihood information.

One day, Balamurugan along with other fishermen was fishing in the north east direction of Nagapattinam. There was not much fish catch. So, he referred the potential fishing zone information from FFMA. The application predicted the PFZ to be 8KM from the current location. So, Balamurugan moved towards that direction and cast his net at the exact location. He gained a profit of INR 2,000 more from his usual earning. He thanks M S Swaminathan Research Foundation for giving this application and he is willing to use this application on a regular basis.

One day, Balamurugan along with other fishermen was fishing in the north east direction of Nagapattinam. There was not much fish catch. So, he referred the potential fishing zone information from FFMA. The application predicted the PFZ to be 8KM from the current location.



**NAME:** JEYAPAL

**AGE:** 35

**TYPE OF BOAT:** FIBRE BOAT

**VILLAGE:** SAMATHANPETTAI

**DISTRICT:** NAGAPATTINAM

**STATE:** TAMIL NADU

Jeyopal is a native of Samathanpettai, a small fishing village affected by December, 2004 tsunami. More than 650 families are involved in fishing in this village. He is 35 years old and involved in fishing for the past 15 years. He lives with his wife and two girl children. He owns a small fibre boat and ventures into the sea regularly. The VKC staff along with the traditional panchayat members selected Jeyopal as a pilot user of the Fisher Friend Mobile Application. He was trained on using the application and access fisheries related livelihood information.

Jeyopal usually ventures into the sea along with other fisherfolks in ten boats. He used traditional techniques to predict the potential fishing zone and ventures into the sea. Jeyopal was given a thirty day free trial of FFMA. That day, the traditional technique did not work and there was no catch. So, he used FFMA to predict potential fishing zone.

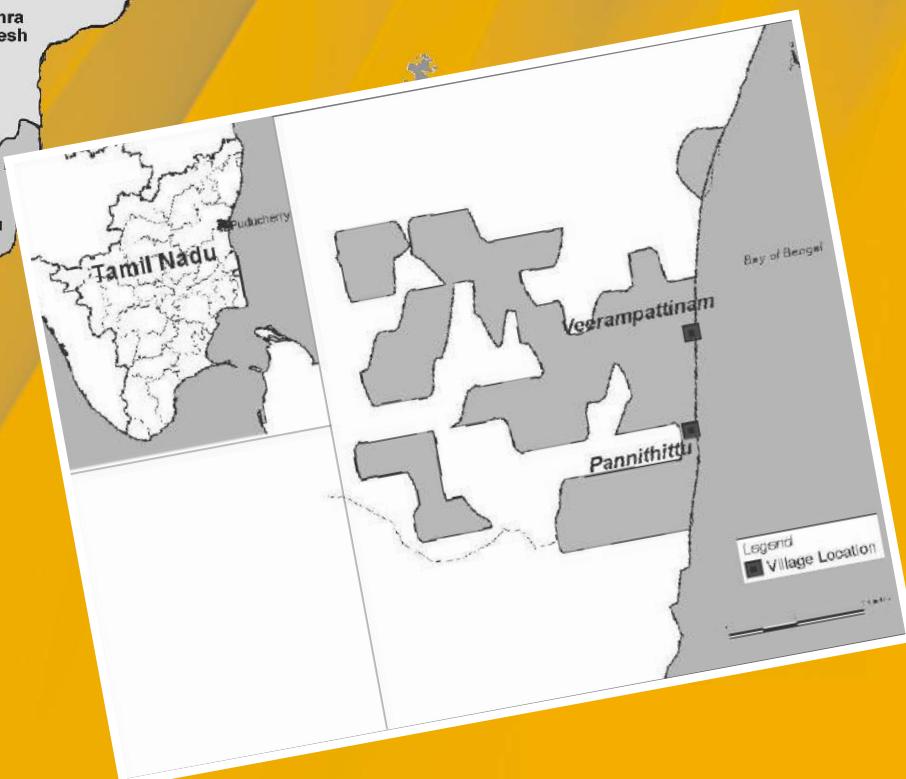
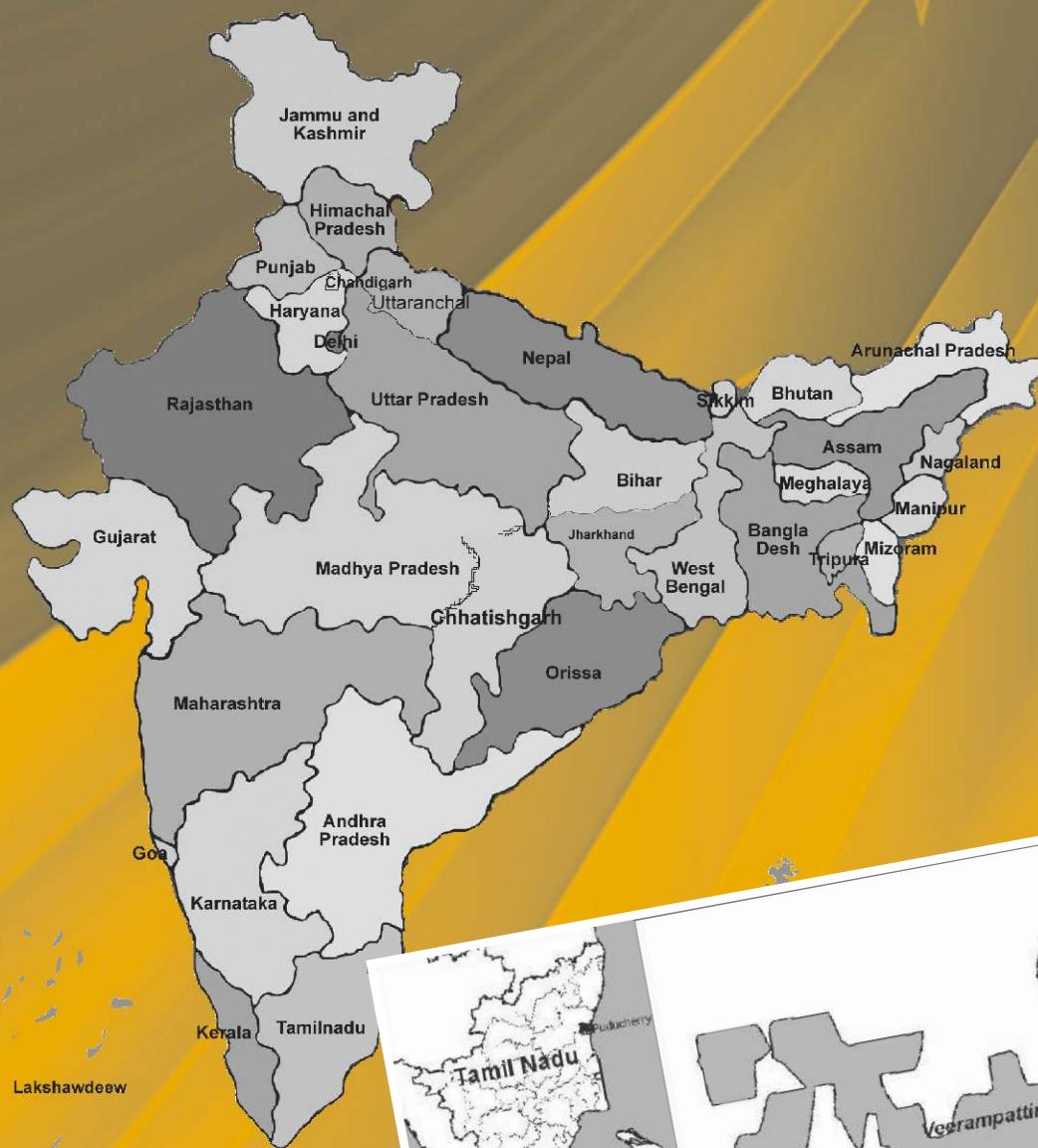
At around 9 am the FFMA provided the PFZ information such as direction, distance, GPS point, etc. to his mobile. Within an hour, Jeyopal and his fellow fisherfolks reached the predicted location and cast their fishing nets. They got a huge fish catch. The total profit for that single day was around INR 7,000 and all the ten boats equally shared the profit. Jeyopal attributes the timely information provided by FFMA for the increase income. He thanks M S Swaminathan Research Foundation and Tata Teleservices for this wonderful application.

Jeyopal usually ventures into the sea along with other fisherfolks in ten boats. He used traditional techniques to predict the potential fishing zone and ventured into the sea. Jeyopal was given a thirty day free trial of FFMA. That day, the traditional technique did not work and there was no catch. So, he used FFMA to predict potential fishing zone at around 9am.

# SECTION:3

## CASE STUDIES

### FROM UNION TERRITORY OF PUDUCHERRY





**NAME: ERUSAPPAN**

**AGE: 19**

**TYPE OF BOAT: FIBRE BOAT**

**VILLAGE: VEERAMPATTINAM**

**DISTRICT: PUDUCHERRY**

**STATE: UNION TERRITORY OF PUDUCHERRY**

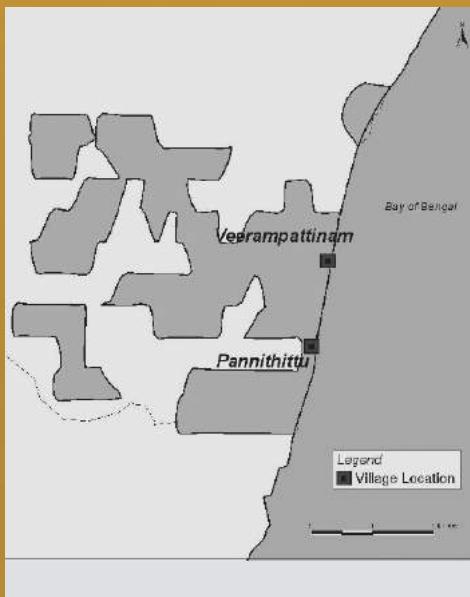
Puducherry is a Union Territory of India and located at 162 KMs south of Chennai, the capital of Tamil Nadu. Puducherry consists of four small unconnected districts. Veerampattinam is the biggest coastal village in the union territory of Puducherry.

Erusappan is a young fisherman from Veerampattinam village. He owns a fibre boat and sails regularly hoping for a better catch. He was selected by the Veerampattinam Village Knowledge Centre, as one of the pilot users of Fisher Friend Mobile Application. Erusappan was trained on accessing fisheries related livelihood information such as wave height, wind speed and direction, weather forecast, potential fishing zone, market information, and latest fisheries related news alerts using FFMA.

He uses the application to check wave height and weather forecast regularly before venturing into the sea. He says that the prediction provided in the mobile is accurate; therefore he refers to it in the early hours of 3 AM in the morning. Whenever rough conditions are predicted by FFMA, he does not venture out into the sea.

Apart from the ocean state forecast and weather information, Erusappan also refers to the Potential Fishing Zone information. Once he referred to PFZ information and it predicted PFZ to be in a direction different from the direction that he intended to go. But, Erusappan ventured towards the predicted location in his fibre boat and cast his net at the spot. That day alone he hauled a good catch and earned INR 2,000 which was higher than his usual haul.

Apart from the ocean state forecast and weather information, Erusappan also refers to the Potential Fishing Zone information. Once he referred to PFZ information and it predicted a different direction that he decided to go. But, Erusappan ventured towards the predicted location in his fibre boat and cast his net at the spot.



**NAME: MANIMARAN**

**AGE: 38**

**TYPE OF BOAT: FIBRE BOAT**

**VILLAGE: VEERAMPATTINAM**

**DISTRICT: PUDUCHERRY**

**STATE: UNION TERRITORY OF PUDUCHERRY**

Veerampattinam village is just 7km away from the Puducherry city centre. The village has a lengthy and beautiful beach in India. Most of the people of the village are following fishing profession. Manimaran is one of those fishermen from Veerampattinam village.

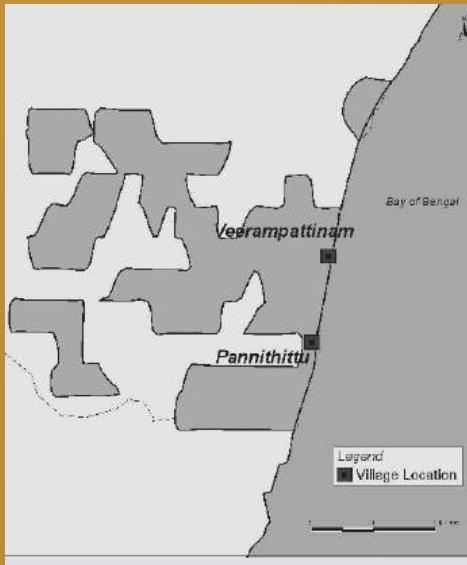
Manimaran owns a small fibre boat in which he regularly sails into the sea to eke out a living. The Veerampattinam VKC staff chose him as one of the beneficiaries of the Fisher Friend Mobile Application. Manimaran was trained on the basic usage of FFMA so that he can easily access the fisheries related livelihood information.

Manimaran used to check the application before venturing into the sea. One day the information in the application indicated very high waves and speedy wind conditions that would be very tough on any fisherman. Manimaran decided to stay back and not venture into the rough sea based on the information. The application's prediction became true and some of his fellow fisherfolks ended up incurring heavy losses.

Apart from saving his life and preventing economic losses through timely information, Manimaran also benefited economically by PFZ information predicted by FFMA. Manimaran used to refer the PFZ regularly. But, the potential fishing zones were located at a long distance, as he used a small fibre boat he could not reach there. One day he came across the potential fishing zone which was located closer to the shore with a depth of 17 fathoms. As this was reachable, Manimaran immediately move to that part of the sea. He cast his nets approximately at the location demarcated and had a huge haul of fish worth INR 5,000. On that singly day alone, he was able to make a profit of INR 2,500.

Manimaran owns a small fibre boat in which he regularly sails into the sea to eke out a living.

The Veerampattinam VKC staff chose him as one of the beneficiaries of the Fisher Friend Mobile Application. Manimaran was trained on the basic usage of FFMA and he can easily access the fisheries related livelihood information.



**NAME:** DEVANATHAN  
**AGE:** 55  
**TYPE OF BOAT:** VALLAM  
 (COUNTRY BOAT)  
**VILLAGE:** PANITHITU  
**DISTRICT:** PUDUCHERRY  
**STATE:** UNION TERRITORY OF  
 PUDUCHERRY

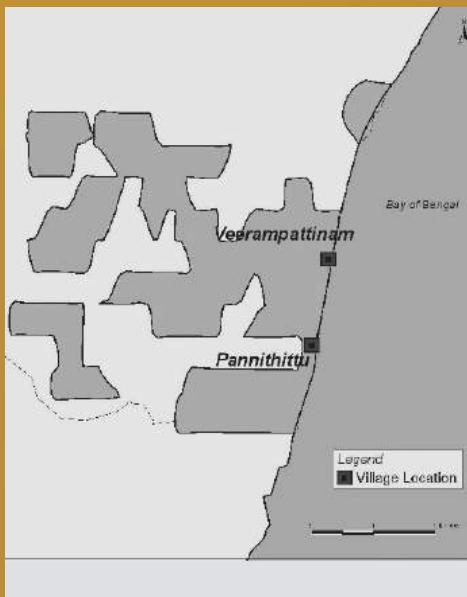
Panithitu is a small fishing village in the Union Territory of Puducherry. Devanathan is a veteran fisherman from Panithitu village. He owns a Vallam (Country boat), which is somewhere between a fibre boat and a trawl boat in dimensions.

Devanathan was chosen by the Panithitu VKC staff as a pilot test user of the Fisher Friend Mobile Application. Like others, Devanathan was also trained on basic operations of FFMA.

Devanathan shares that traditionally the fishermen mark or note the point in which they had a good fish catch and return back to the same location after some days hoping for a good catch. After the arrival of FFMA, he received PFZ information on his mobile phone, which indicated him an area towards Kalapet fishing village. Devanathan decided to venture to the area mentioned and cast his nets. He had a haul of fish worth INR 5,000.

Apart from benefiting from the PFZ information, he also checks the Ocean State Forecast provided by the application. He regularly watches the predictions before venturing into the sea. Once, the application predicted rough waves and strong winds. Devanathan decided to stick on with the advice and did not venture into the sea. As predicted by the information the sea conditions were rough on that particular day forcing other fisherfolks to return back to shore. He shares with us on how the conditions of the waves can be deceptive near the shore. According to him there are times when the sea looks calm when they start near the shore, however things can change dramatically once they are deep in the sea. He says because of FFMA, he was able to get accurate predictions in a timely manner enabling him to exercise caution before venturing into the sea. He says that he is indebted to the M S Swaminathan Research Foundation for providing him with FFMA.

Devanathan shares that traditionally the fishermen mark or note the point in which they had a good fish catch and return back to the same location after some days hoping for a good catch. After the arrival of FFMA, he received PFZ information on his mobile phone, which indicated him an area towards Kalapet fishing village. anathan decided to venture to the area mentioned and cast his nets. He had a haul of fish worth INR 5,000.



**NAME:** NAGALINGAM  
**AGE:** 40  
**TYPE OF BOAT:** FIBRE BOAT  
**VILLAGE:** PANITHITU  
**DISTRICT:** PUDUCHERRY  
**STATE:** UNION TERRITORY OF PUDUCHERRY

Nagalingam, aged 40 is a fisherman from Panithitlu village and he owns a small fibre boat. After hearing the announcement made by Panithitlu VKC staff through the public addressing system on the Fisher Friend Mobile Application, the curious Nagalingam registered to be a pilot test user of FFMA.

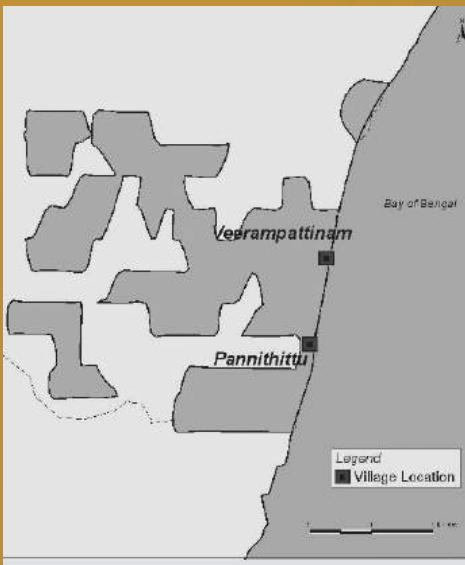
Nagalingam was trained on the operations of FFMA and he knows how to access fisheries related livelihood information such as wave height, wind speed and direction, weather forecast, potential fishing zone, market information, and latest fisheries related news alerts.

After receiving the training, Nagalingam did not go to the sea for the first one week due to heavy rain. On October 23, 2008, the application predicted high wave accompanied by severe wind. So, Nagalingam decided not to venture into the sea based on the advice and as predicted the conditions in the sea were rough on that day.

Nagalingam shares that because of such predictive information, it is possible to be cautious and decide whether or not to venture into the sea. He tells that this is a very useful application and it is highly beneficial for fishermen in saving their lives and preventing economic losses.

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Nagalingam was trained on the operations of FFMA and he knows how to access fisheries related livelihood information such as wave height, wind speed and direction, weather forecast, potential fishing zone, market information, and latest fisheries related news alerts.



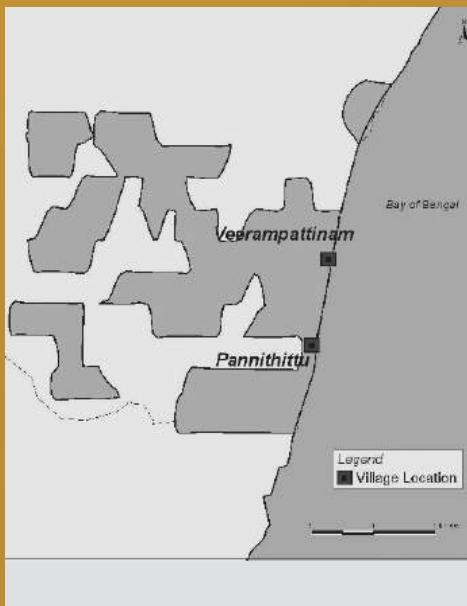
**NAME:** RAJENDRAN  
**AGE:** 48  
**TYPE OF BOAT:** FIBRE BOAT  
**VILLAGE:** PANITHITU  
**DISTRICT:** PUDUCHERRY  
**STATE:** UNION TERRITORY OF PUDUCHERRY

Panithitlu is predominantly a fishing village. The village had seen massive destruction during the December, 2004 tsunami. Rajendran is a fisherman from Panithitlu village and he owns a small Fibre boat.

Rajendran was selected by the Panithitlu Village Knowledge Centre as a pilot user of the Fisher Friend Mobile Application. He had undergone basic training on the basic functions and operations of FFMA and he is confident of accessing fisheries related livelihood information.

Rajendran shares that the information such as wave height and weather forecast are very useful for a small fisherman like him. Once the application predicted that there will be heavy rain coupled with thunder storm. So, he decided not to venture into the sea due to the rough conditions predicted. As predicted it rained heavily that day, which would have made fishing difficult. Today, Rajendran understands the beneficial value of the information provided by FFMA and he is ready to pay a small fee to receive the information regularly.

Rajendran was selected by the Panithitlu Village Knowledge Centre as a pilot user of the Fisher Friend Mobile Application. He undergone basic training on the basic functions and operations of FFMA and he is confident of accessing fisheries related livelihood information.



**NAME: MAYILAN**

**AGE: 22**

**TYPE OF BOAT: FIBRE BOAT**

**VILLAGE: PANITHITU**

**DISTRICT: PUDUCHERRY**

**STATE: UNION TERRITORY OF PUDUCHERRY**

Mayilan is a fisherman from Panithitu village. He ventures into the sea in his own small fibre boat. He was selected by the Panithitu VKC staff as a pilot user of the Fisher Friend Mobile Application. He was trained on the usage of FFMA and he can access fisheries related livelihood information.

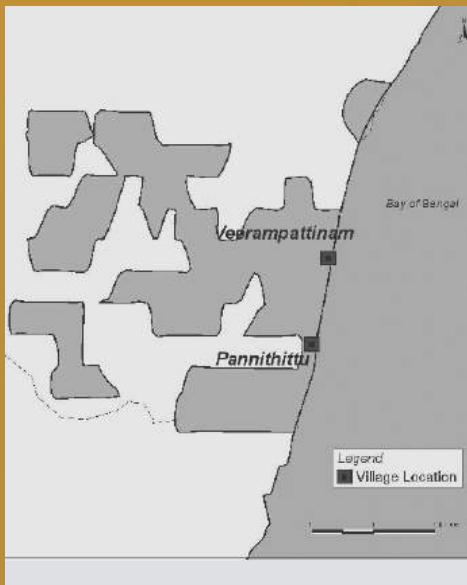
Once, Mayilan came across the information on his FFMA that predicted very high waves. So, he decided not to venture into the sea on that particular day. As predicted the waves were very rough that day. Apart from preventing disaster and economic loss, the information services provided by FFMA helped him economically too.

Mayilan shares that on three consecutive days he went to the PFZ areas predicted by FFMA and to his surprise on all the three days he earned INR 2000, 1700 and 900 respectively. This was above what he used to make regularly. Traditionally he used to cast his nets where he had previously cast and had a haul, however nothing was certain and there are times when they would return empty handed. He shares that if he casts his nets in the areas identified as PFZ he has a definite haul.

Today, Mayilan stresses that FFMA is something that every fisherman should possess. He also shares that the service is so beneficial for small fishermen like him that he is willing to pay a small service fee of up to INR 150 per month for the service.

Once, Mayilan came across the information on his FFMA that predicted very high waves. So, he decided not to venture into the sea on that particular day.

As predicted the waves were very rough that day. Apart from preventing disaster and economic loss, the information services provided by FFMA helped him economically too.



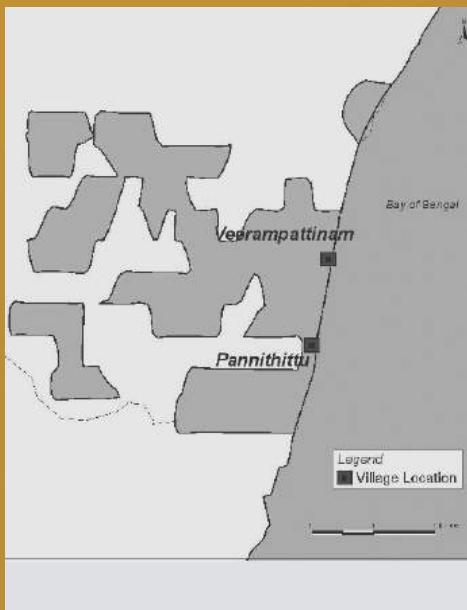
**NAME:** SHANKARAMURTHY  
**AGE:** 38  
**TYPE OF BOAT:** FIBRE BOAT  
**VILLAGE:** PANITHITU  
**DISTRICT:** PUDUCHERRY  
**STATE:** UNION TERRITORY OF PUDUCHERRY

Shankaramurthy is a fisherman who hails from Panithitu village. He owns a small fibre boat in which he ventures into the sea regularly. He was chosen as a pilot user of the Fisher Friend Mobile Application by the Panithitu VKC staff. He was trained on how to use the application and access fisheries related livelihood information such as wave height, wind speed and direction, weather forecast, potential fishing zone, market information, and latest fisheries related news alerts.

Shankaramurthy used to refer the potential fishing zone information regularly, before venturing into the sea. The application provided him with directions, bearing, depth, latitude and longitude coordinates in which there was a very high potential for fish catch. On two occasions, Shankaramurthy decided to follow the directions mentioned and try out his luck. On both the occasions, he cast his nets in the PFZ area and obtained a huge haul of fishes. He shares with us that on both the occasions factoring expenses, he obtained a profit of INR 5000 and 3000 respectively.

Apart from PFZ, Shankaramurthy used to refer the Ocean State Forecast such as wave height, wind speed and direction. He mentions that ocean condition and weather forecast are the two main factors that could pose danger whenever fishermen venture into the sea and FFMA provides those information. Apart from using the information for his benefit, he shares the information with other fishermen too. He states that FFMA is critical for fishermen like him and if provided with a low price he is willing to obtain the application for his regular use.

Shankaramurthy used to refer the potential fishing zone information regularly, before venturing into the sea. The application provided him with directions, angle, depth, latitude and longitude coordinates in which there was a very high potential for fish catch. On two occasions, Shankaramurthy decided to follow the directions mentioned and try out his luck.



**NAME:** NAGARAJ

**AGE:** 30

**TYPE OF BOAT:** FIBRE BOAT

**VILLAGE:** PANITHITU

**DISTRICT:** PUDUCHERRY

**STATE:** UNION TERRITORY OF PUDUCHERRY

The massive destruction left behind by tsunami is still visible in Panithitu village. Nagaraj is one of the fishermen who were a victim of 2004 Tsunami. He owns a small fibre boat in which he ventures into the sea regularly. The Panithitu VKC staff selected him as a pilot use of the Fisher Friend Mobile Application and he was trained on using FFMA and access fisheries related livelihood information. Nagaraj usually checks the wave height, PFZ, news flash and yellow pages information regularly. Apart from using the information, he used to share the information with other fisherfolks too.

Once, he checked the PFZ information on his FFMA. The PFZ information provided him with data such as direction, bearing angle and the sea floor depth of the area. Based on the information, Nagaraj moved to the location indicated in the application. On that day alone he had a huge haul of oil sardine fishes worth INR 15,000 and he made a profit of INR 5,000.

Apart from benefiting him economically, the information provided through the application helped him prevent disaster and economic losses too. He recalls one instance when the information in the application predicted very high waves. He decided to follow the advice and not to venture into the sea. As predicted the conditions on sea proved to be rough with high waves and many of the fishermen who ventured had to turn back empty handed. Today, he recalls that had he ventured into the sea, he would have only returned empty handed like others, wasting diesel and resulting in economic loss.

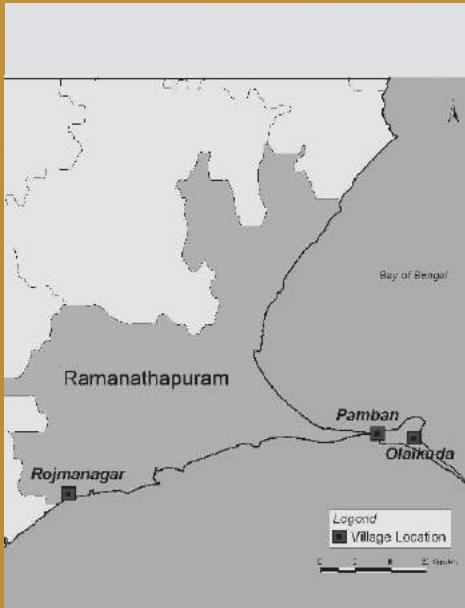
Once, he checked the PFZ information on his FFMA. The PFZ information provided him with data such as direction, bearing angle and the sea floor depth of the area. Based on the information, Nagaraj moved to the location indicated in the application. On that day alone he had a huge haul of oil sardine fishes worth INR 15,000 and he made a profit of INR 5,000.

# SECTION:4

## CASE STUDIES FROM

# RAMANATHAPURAM DISTRICT, TAMIL NADU





**NAME: ANTHONY JEGANRAJ**

**AGE: 29**

**TYPE OF BOAT: FIBRE BOAT**

**VILLAGE: OLAIKUDA**

**DISTRICT: RAMANATHAPURAM**

**STATE: TAMIL NADU**

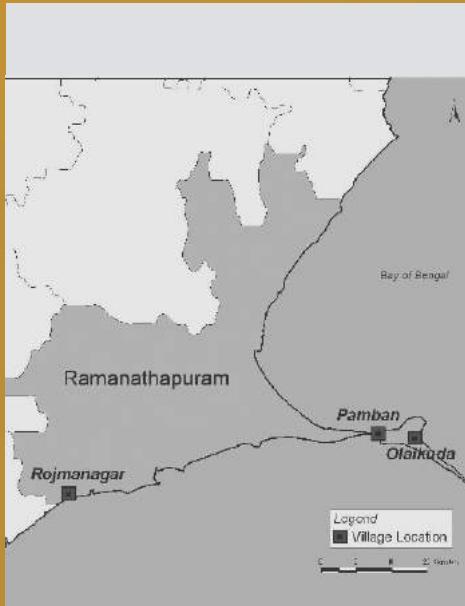
Ramanathapuram is an administrative district in the southern state of Tamil Nadu. The district contains the Indian portion of Rama's bridge, an east-west chain of low islands and shallow reefs that extend between India and Sri Lanka. Rameshwaram is an island situated in the gulf of manner.

Olaikuda is a small fishing village located about 1km from Ramanathaswamy temple, Rameshwaram. Jeganraj is a fisherman from Olaikuda village. He has been engaged in fishing for his livelihood from a very young age onwards. He lives with his parents, his wife, Paraloga Jayasundari and their two young children. He owns a small fibre boat in which he ventures into sea regularly.

Jeganraj has actively participated in several fisheries related training programmes organised by the Olaikuda VKC. Some of the training programmes he participated include diesel engine mechanism training for boat engines and training on utilising GPS for fishing. During one of his visits, Jeganraj came to know about the Fisher Friend Mobile Application. He enrolled himself as a pilot user of FFMA immediately. In March, 2009, he was provided with a handset containing FFMA. He was trained on accessing fisheries related livelihood information.

After becoming a pilot user, he used to check for updates such as the wave height, weather forecast and wind speed regularly before venturing into the sea. On a windy day, Jeganraj cast his nets near a rocky formation beneath the sea. The idea was that fishes are usually concentrated near rocky areas. However, there is an inherent risk involved in this technique as there is high probability that the net might drift and entangle in the rocks. Gradually, the wind speed increased up to 40 Kilometer per hour. The worried Jeganraj checked FFMA for wind speed predictions. The application predicted that the wind was expected to very heavy towards south west direction. He realised that the undersea rocks were situated in the same direction and there was a high possibility that the nets could drift towards the rocks and can cause under water current too. So, he immediately hauled back his net and returned back to shore. Due to timely information, he was able to protect his nets which are very expensive to buy or repair. Realising the beneficial value of the application, he is willing to pay a fee to avail FFMA services regularly. He thanks M S Swaminathan Research Foundation for providing with the opportunity.

Jeganraj has actively participated in several fisheries related training programmes organised by the Olaikuda VKC. Some of the training programmes he participated include diesel engine mechanism training for boat engines and training on utilising GPS for fishing. During one of his visits, Jeganraj came to know about the Fisher Friend Mobile Application.



**NAME:** SESU

**AGE:** 18

**TYPE OF BOAT:** FIBRE BOAT

**VILLAGE:** PAMBAN

**DISTRICT:** RAMANATHAPURAM

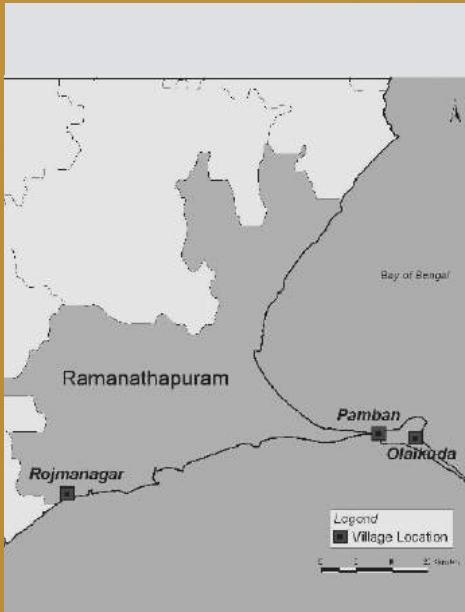
**STATE:** TAMIL NADU

Pamban is an island located between peninsular India and Sri Lanka. Sesu is a fisherman from Pamban, a major fishing village in the island of Rameshwaram, Tamil Nadu. He dropped out of school due to poverty in his family and since then been engaged in fishing for livelihood.

Sesu works as a labourer in a fibre boat owned by his friend. He came to know about the Fisher Friend Mobile Application through one of his friends. Later through the same friend, he was contacted by the Village Knowledge Centre to become a pilot user of FFMA. He was trained on accessing fisheries related livelihood information.

After becoming a pilot user, he used to check for updates such as the wave height, weather forecast, and wind speed before venturing into the sea. One day, while browsing the application, he came across information that predicted strong wind in the sea. Sesu decided not to venture into the sea based on that particular information. As predicted the wind speed was very high on that day. According to him, had he not received the warning, there was a very high probability that he would have ventured into the sea and faced disaster or economic loss. He requests M S Swaminathan Research Foundation and Tata Teleservices to enable the application to be available for him and all other fishermen on a regular basis and he would not mind paying for the service provided.

Sesu works as a labourer in a fibre boat owned by his friend. He came to know about the Fisher Friend Mobile Application through one of his friends. Later through the same friend, he was contacted by the Village Knowledge Centre to become a pilot user of FFMA. He was trained on accessing fisheries related livelihood information.



**NAME: ANTHONY AROKIYA RAIYAPPAN**

**AGE: 28**

**TYPE OF BOAT: VALLAM  
(COUNTRY BOAT)**

**VILLAGE: OLAIKUDA**

**DISTRICT: RAMANATHAPURAM**

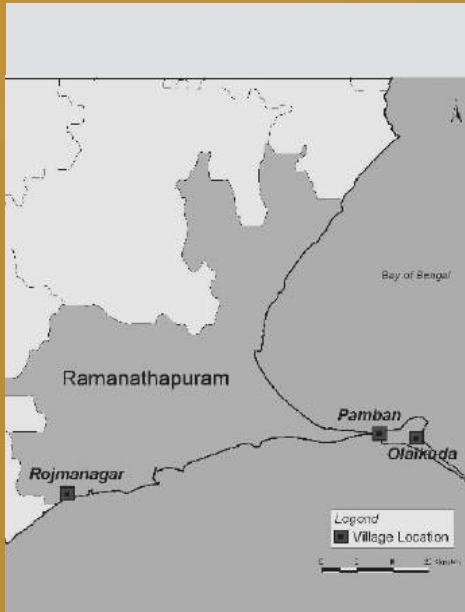
**STATE: TAMIL NADU**

Anthony Arokiya Raiyappan is a fisherman who hails from Olaikuda, a small fishing village in the Island of Rameshwaram, Tamil Nadu. He lives with his wife Antony Chandra and their young child. He had to drop out of school when he was studying eighth grade due to poverty and since then he has been engaged in fishing for a livelihood. Today he owns Vallam, a small wooden boat and ventures into the sea along with his team for fishing.

Anthony has actively participated in fisheries related training programmes organised by the Olaikuda VKC. The village management committee has recommended Anthony to be a pilot user of the Fisher Friend Mobile Application. He was trained on using FFMA to access fisheries related livelihood information.

Anthony used to check for information on wind speed and wave height regularly before venturing into the sea. From his brief usage of FFMA, there were several instances in which he had referred to the application to decide whether to venture into the sea or not. He used the wave height and wind speed information to arrive at a decision. He had refrained from venturing into the sea whenever the application predicted strong wind and rough waves. He shares that it is very risky to venture into the sea especially when the waves and wind are very strong and that it can potentially end up in loss of life. According to Antony, the information predicted by FFMA helped him avoid such dangerous situations by providing timely predictions. Today, he thanks the M S Swaminathan Research Foundation for providing him this service.

Anthony has actively participated in fisheries related training programmes organised by the Olaikuda VKC. The village management committee has recommended Anthony to be a pilot user of the Fisher Friend Mobile Application. He was trained on using FFMA and accessing fisheries related livelihood information.



**NAME: SHYAM**

**AGE: 21**

**TYPE OF BOAT: VALLAM**

**VILLAGE: PAMBAN**

**DISTRICT: RAMANATHAPURAM**

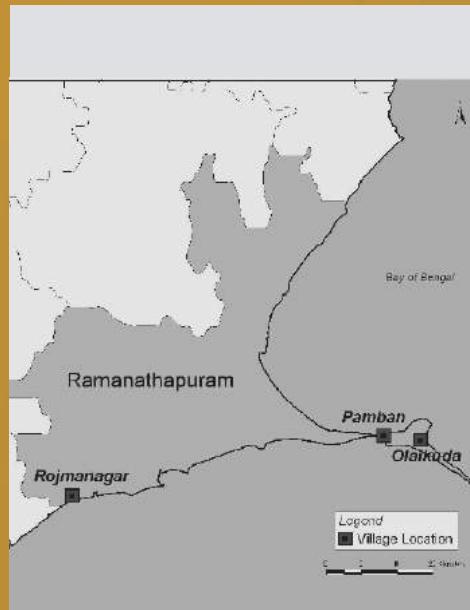
**STATE: TAMIL NADU**

Pamban is a fishing village which is the main point of entry for Rameshwaram. Shyam is a fisherman from Pamban village. He lives with his parents, three sisters and a brother. His family owns Vallam, a wooden fishing vessel similar in dimensions to a fibre boat. Shyam regularly ventures into sea along with his family members.

Shyam came to know about the Fisher Friend Mobile Application through his sister who once worked as a knowledge worker in the Pamban VKC. Shyam became interested in the application and had registered himself as a test user of FFMA. He was trained on the basic operations of FFMA and access fisheries related livelihood information.

One day, Shyam along with fifty other fisherfolks camped in an area known as Athankarai to venture into that part of the sea for fishing. The indications of storm were evident and prevalent. The fishermen were not sure whether to venture into the sea or not. Shyam was receiving constant updates on the prevalent conditions in the sea. On that week alone nearly twenty five fishermen approached him to obtain information on weather, wind speed and wave height information. Because of the timely information, none of them ventured into the sea for that entire week. Shyam recalls that in those times of uncertainty FFMA proved to be very useful for him and the other fishermen. He feels happy that he was provided with the opportunity to utilise the application and thanks M S Swaminathan Research Foundation for providing him with the opportunity.

Shyam came to know about the Fisher Friend Mobile Application through his sister who once worked as a knowledge worker in the Pamban VKC. Shyam became interested in the application and had registered himself as a test user of FFMA. He was trained on the basic operations of FFMA and accessing fisheries related livelihood information.



**NAME: DHIPRIN BOYVA**

**AGE: 35**

**TYPE OF BOAT: LABOURER IN FIBRE BOAT**

**VILLAGE: PAMBAN**

**DISTRICT: RAMANATHAPURAM**

**STATE: TAMIL NADU**

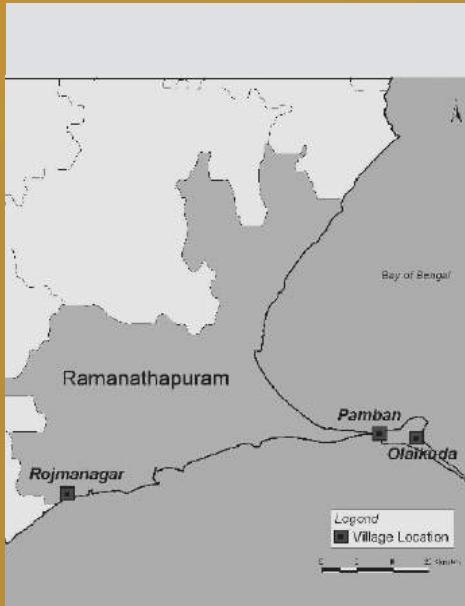
Dhiprin hails from Pamban and fishing is their traditional business. He is married and has two children. He is a daily labourer in a fibre boat and earns around INR 300 to 500 per day. He has been engaged in fishing for the past 12 years. He dropped out school of at a very early age, so he cannot read and write.

Dhiprin's boat owner has recommended him as a pilot beneficiary of the Fisher Friend Mobile Application. He used to get the information such as wind speed, direction, wave height, potential fishing zone, etc. on his FFMA enabled mobile phone. But, he does not know how to read them. So, he requests his wife to read the message and explain it to him in Tamil, local language.

One day before venturing into the sea, he received information on potential fishing zone and he requested his wife to help in reading the message. He noted down all the information and went into the sea. They cast their net at three different locations without any catch. He was about to return back to the shore empty handed. Suddenly, he remembered the FPZ information predicted by FFMA. He along with other fishermen proceeded to the predicted location and they reached within 15 minutes. They cast their nets on the predicted location and got around six tons of fish.

Because of the timely information, Dhiprin and other fishermen could get a haul of fish catch. That day, he earned a sum of INR 1,000, which was higher than his usual income. He thanks M S Swaminathan Research Foundation for providing the opportunity to utilise FFMA.

Dhiprin's boat owner has recommended him as a pilot beneficiary of the Fisher Friend Mobile Application. He used to get the information such as wind speed, direction, wave height, potential fishing zone, etc. on his FFMA enabled mobile phone. But, he does not know how to read them. So, he requests his wife to read the message and explain it to him in Tamil, local language.



**NAME:** ABRAHAM  
**AGE:** 32  
**TYPE OF BOAT:** FIBRE BOAT  
**VILLAGE:** ROJMANAGAR  
**DISTRICT:** RAMANATHAPURAM  
**STATE:** TAMIL NADU

Rojmanagar is a small fishing village in the Ramanathapuram district of Tamil Nadu. Abraham is a 32 year old fisherman from Rojmanagar and belongs to a traditional fishing family. He has a joint family and the family owns a fibre boat for fishing. Abraham regularly ventures into the sea along with his family members.

Though his boat is fitted with a global positioning system, it does not show the potential fishing zone. It can just help in marking the route to the catchment area. Mostly, Abraham cast his nets in 29, 30, 27 metre depth range. Because, if they go to 70 and 65 metre deep then it will consume more time and the price of fish will go down.

Abraham has volunteered to be a pilot user of the Fisher Friend Mobile Application. He was trained on using FFMA and can access fisheries related livelihood information. He used to receive information on wind speed, wave height, potential fishing zone, etc. One day, he received information on potential fishing zone predicted by FFMA. Since his boat developed some technical snag, he could not venture into the sea. But, one of his relatives was getting ready to get into the sea. So, Abraham passed on the PFZ information to his relative and directed him.

Abraham's relative cast his nets on the PFZ location predicted by FFMA and he got a good haul of fish. The total catch was worth around INR 35,000. Abraham's relative thanked Abraham for the timely information and requested him to share the information on a regular basis. Abraham says that FFMA is a major gift for the fishing community and thanked M S Swaminathan Research Foundation for the opportunity to use the application.

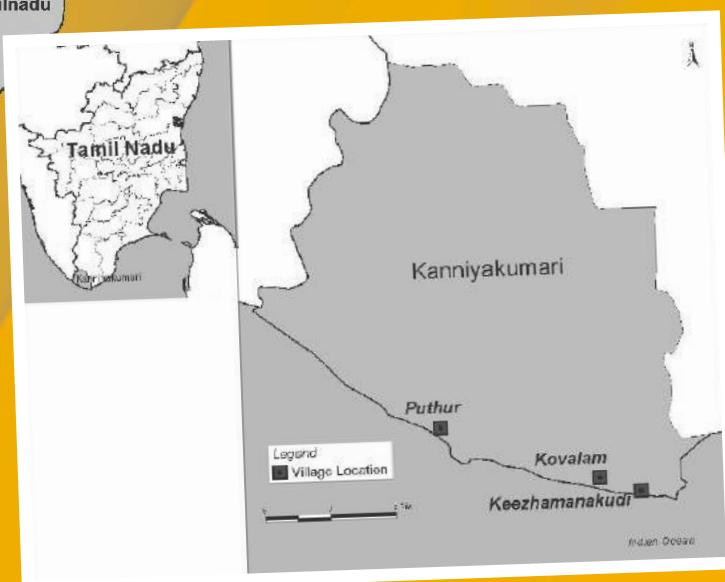
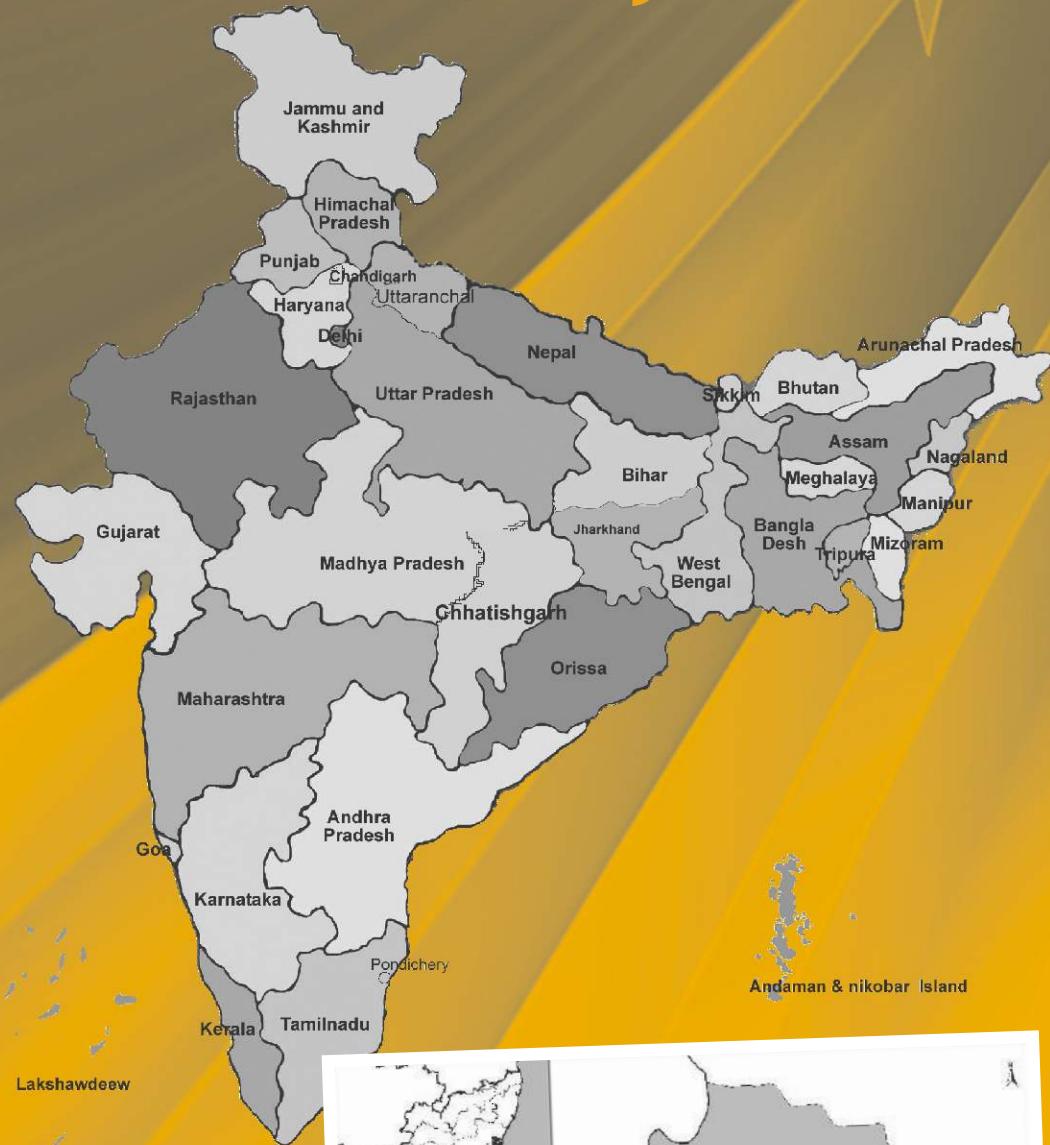
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Though his boat is fitted with a global positioning system, it does not show the potential fishing zone. It can just help in marking the route to the catchment area. Mostly, Abraham cast his nets in 29, 30, 27 metre range. Because, if they go to 70 and 65 metre then it will consume more time and the price of fish will go down.

# SECTION:5

## CASE STUDIES

# FROM KANYAKUMARI DISTRICT, TAMIL NADU





**NAME:** JOHN BRITTO S

**AGE:** 19

**TYPE OF BOAT:** FIBRE BOAT

**VILLAGE:** KOVALAM

**DISTRICT:** KANYAKUMARI

**STATE:** TAMIL NADU

Kanyakumari is located at the southernmost tip of the Indian Peninsula. Many of the natives of the district are into fishing activity and other maritime professions. Kovalam is a small fishing village in the Agastiswaram taluk in Kanyakumari district.

John Britto is hails from a traditional fishermen family of Kovalam village. He is 38 years old and has studied till XII standard. The local VKC staff has trained him on using GPS and hygienic handling of fish. He is also one of pilot beneficiaries of the Fisher Friend Mobile Application (FFMA) pre installed in a mobile phone. He used to check the information such as the wave height, weather forecast, PFZ, market prices and flash news.

One day, he came to know about an announcement made on the grievance redressal day about the final phase of distribution of tsunami relief materials and other related details to avail the same. He met the Fisheries Officer from Kanyakumari district with all the required documents and collected the token to receive the relief materials. Later, he collected the materials from Keezhmanakudi tsunami centre. The relief materials consisted of a life jacket, a bi-cycle, emergency light, first aid box, ice box and cash of INR 10,000 for buying fishing net. He estimated that the total worth of all these was around INR 42,000. As he passed on this information to other fishermen, they were also able to collect the relief materials.

He also said that the information regarding the removal of ban on fishing by motor boats within Kanyakumari district flashed on the mobile helped him to resume fishing immediately without losing time. He is happy that without going anywhere, he can get important information and announcements that benefit fishermen in several ways.

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**NAME:** X A ARUN SEELAN RAJA  
**AGE:** 52  
**TYPE OF BOAT:** FIBRE BOAT  
**VILLAGE:** KOVALAM  
**DISTRICT:** KANYAKUMARI  
**STATE:** TAMIL NADU

Arun Seelan is a veteran fisherman from Kovalam, a small fishing village in Kanyakumari district, Tamil Nadu. This 52 year old fisherman has been engaged in fishing for the past 32 years. He lives with his wife and three children. On an average, he earns INR 5,000 per month.

Arun Seelan is highly aware of the Village Knowledge Centre and its functions in Kovalam. He acknowledges that several people in his village including women and children have benefited from the services offered by Kovalam VKC. One day he came across an announcement by a VKC staff and a local parish priest about the Fisher Friend Mobile Application (FFMA). He immediately enrolled himself as a pilot beneficiary of FFMA. He was oriented on using the application and accessing fisheries related livelihood information.

Arun Seelan used to check the information provided through the application such as the wave height, weather forecast, potential fishing zone, market prices and flash news. While going through the information, he came across the information which predicted a high wind speed of up to 64 kilometre per hour. So, he and his team decided not to venture into the sea based on the information. As predicted, the day saw heavy rain with speedy wind and at the same time Nagapattinam was hit by Cyclone Nisha. Even before the warnings could be telecasted on television, Arun Seelan was fully aware of the rough conditions in the sea due to FFMA and he even informed other fishermen regarding the conditions in the sea. He is happy about the timely information he received during the day and thanks M S Swaminathan Research Foundation and Tata Teleservices for providing him with the service.

Arun Seelan is highly aware of the Village Knowledge Centre and its functions in Kovalam. He acknowledges that several people in his village including women and children have benefited from the services offered by Kovalam VKC. One day he came across an announcement by a VKC staff and a local parish priest about the Fisher Friend Mobile Application (FFMA).



**NAME:** C JONES

**AGE:** 33

**TYPE OF BOAT:** FIBRE BOAT

**VILLAGE:** PUDUR

**DISTRICT:** KANYAKUMARI

**STATE:** TAMIL NADU

Pudur is a tsunami affected village in the coastal belt of Kanyakumari district. Jones is a fisherman from Pudur, a small fishing village. He is 33 years old and lives with his wife and their two children. He has been engaged in fishing for the past 12 years and earns an average of INR 9,000 per month. He owns a small fibre boat in which he ventures into the sea.

Jones came across an announcement regarding the Fisher Friend Mobile Application, by the Pudur VKC knowledge worker and the parish priest during a meeting. He was selected as a pilot user of FFMA. Like other fishermen, he was also trained on using the application and accessing fisheries related livelihood information. He used to check the information on the wave height, weather forecast, PFZ, market prices and flash news.

Once, Jones came across a news alert informing the enforcement of 45 day ban period in the sea for fishing, beyond a certain distance. The ban was enforced to protect the breeding and spawning of fishes in the sea. Jones immediately informed other friends who had planned to venture beyond the permissible distance. They then resorted to fishing in the nearby waters within the permissible distance.

Jones had a friend interested in ornamental fish breeding and used to enquire about training programmes regarding the same. One day, Jones came across the information in FFMA that informed about a three day training programme on ornamental fish culture organised by the Fisheries Research Institute, Parakkai in Nagercoil. He immediately informed his friend regarding the training programme, after which his friend enrolled himself and attended the training programme.

Jones is happy with the timely information provided by the application and had even enquired on how to buy the application for regular use. He says that he is ready to pay a nominal fee to obtain the service of the application and is expecting the commercial launch of the application. He thanks M S Swaminathan Research Foundation and Tata Teleservices on behalf of fishing community for enabling such a service.

Once, Jones came across a news alert informing the enforcement of 45 day ban period in the sea for fishing, beyond a certain distance. The ban was enforced to protect the breeding and spawning of fishes in the sea. Jones immediately informed other friends who had planned to venture beyond the permissible distance. They then resorted to fishing in the nearby waters within the permissible distance.



**NAME: AMALDHAS**

**AGE: 34**

**TYPE OF BOAT: FIBRE BOAT**

**VILLAGE: KIZHAMANAKUDI**

**DISTRICT: KANYAKUMARI**

**STATE: TAMIL NADU**

Kizhamanakudi is a small fishing village deeply affected by the December, 2004 tsunami. Amaldhas is a fisherman and a victim of the tsunami. He is from Kizhamanakudi village. He has been engaged in fishing for the past 18 years and owns a small fibre boat in which he ventures into the sea regularly. On an average he earns INR 6000 per month

He is aware of the Village Knowledge Centre and its activities in Kizhamanakudi. He says that many fishermen, women and children in Kizhamanakudi have been benefited by the activities of the VKC. He came to know about the Fisher Friend Mobile Application program through a knowledge worker and the parish priest of Kizhamanakudi. He was selected to be a pilot user of FFMA. He was trained on using the application and accessing fisheries related livelihood information.

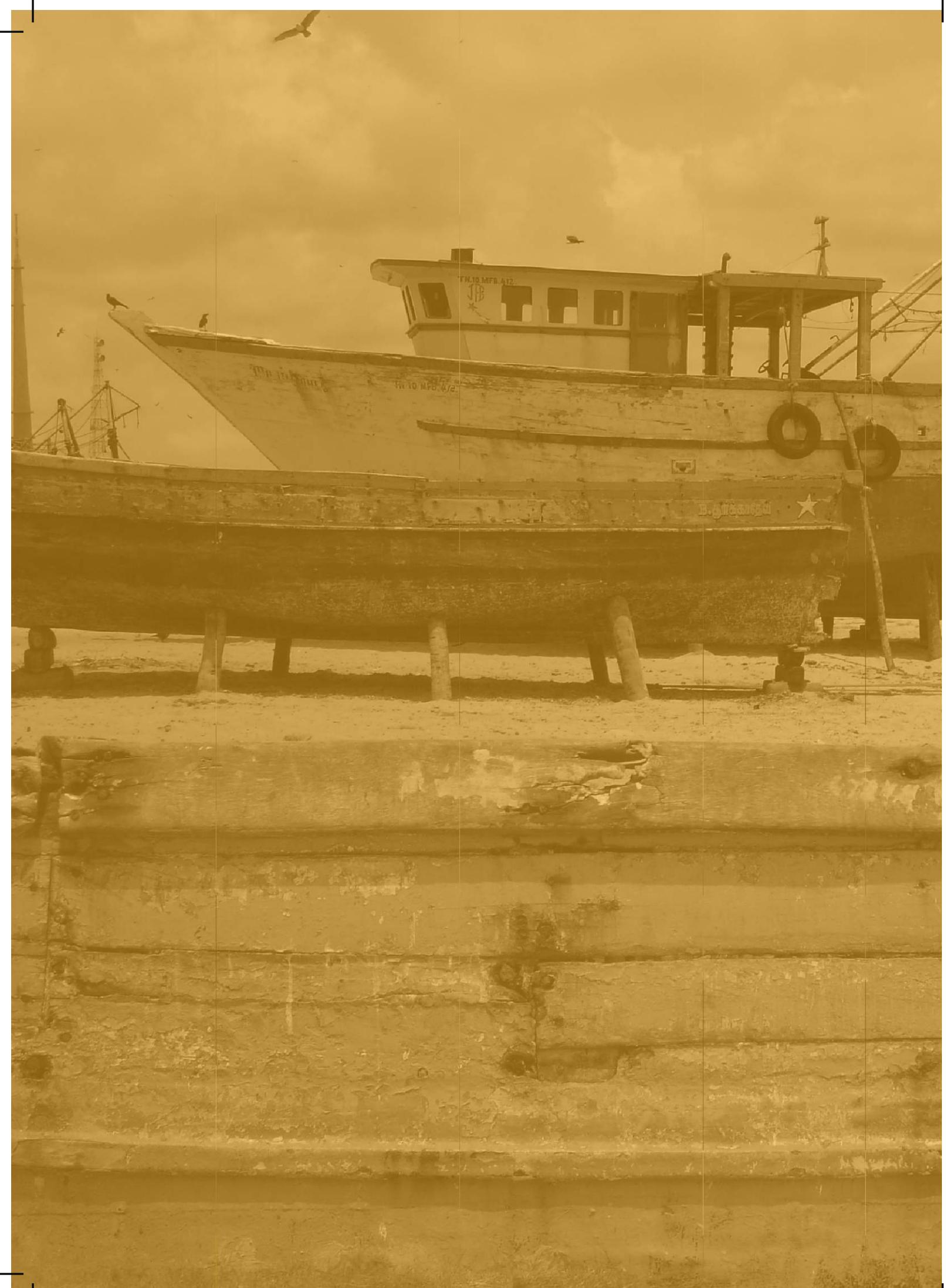
Amaldhas used to check the information on wave height, weather forecast, potential fishing zone, market prices and flash news. One day, he left his personal mobile at home and ventured into the sea for fishing. However, he carried the FFMA enabled handset. On the later part of the day, a cyclone warning was announced in Kizhamanakudi. The knowledge worker in Kizhamanakudi contacted the VRC and informed them regarding the situation. The VRC staff immediately uploaded the warning and called Amaldhas and confirmed him regarding the cyclone. Amaldhas took the warning seriously and called up his other friends, who were at sea and informed them regarding the situation. All of them returned back to the shore safely. On hearing the news of his safe return, his family was overjoyed.

Apart from benefiting from the information, Amaldhas regularly used to share information regarding news such as job opportunities provided through FFMA to his friends and relatives. Amaldhas thanks the M S Swaminathan Research Foundation and Tata Teleservices for providing him the opportunity to utilise the application.

Amaldhas used to check the information on wave height, weather forecast, potential fishing zone, market prices and flash news. One day, he left his personal mobile at home and ventured into the sea for fishing. However, he carried the FFMA enabled handset. On the later part of the day, a cyclone warning was announced in Kizhamanakudi.

The knowledge worker in Kizhamanakudi contacted the VRC and informed them regarding the situation.





## **ACKNOWLEDGEMENT OF MSSRF STAFF CONTRIBUTIONS FOR THIS STUDY**

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