

MUMBAI TRANS HARBOUR LINK FISHER-FOLKS COMPENSATION POLICY

1. INTRODUCTION

The proposed Mumbai Trans Harbour Link is likely to impact the fisheries and livelihood of fisher-folks to some extent. Although most of the impacts are expected to be during the construction period, some impacts are identified to be more of permanent nature and hence a policy has been drawn under the JICA guidelines to identify the entire fisherman who might be impacted due to the proposed project and to offer a fair compensation to the affected fisher-folks. It has been acknowledged that no such policy exists in the Indian context and therefore compensation offered by National Green Tribunal in the 27 February 2015 order (application no. 19/2013, before the Western Zone Bench of National Green Tribunal), has been used as a base.

This Fisher-folks Compensation Policy (FCP) is a result of numerous discussions with the Fishing Community, Fisheries Scientists and other stakeholders including the concerned Government Departments. A Fisher-folks Compensation Committee (FCC) was set up by the MMRDA with Additional Metropolitan Commissioner as the Chairman, and members from Fishing Community, Department of Fisheries, Revenue, MMRDA, Police, Fisheries Scientist and MMRDA as its members. The Committee conducted four meetings for formulating the policy. In addition, a Stakeholder's meeting was conducted by the Dept. of Fisheries and site visits were conducted with PAPs.

After recording the concerns expressed by the community and after considering the engineering and environmental aspects, a policy was formulated that conforms to most of the guidelines of JICA and World Bank standards.

1.1 Participation Process

A Stakeholder Engagement Plan is being developed by JICA study group which includes a full identification and mapping of stakeholders, prioritization, and the design of communication. The plan clearly conveys expectations, responsibilities and the commitment to engagement.

Early stakeholder engagement significantly helps to understand stakeholder expectations and to channel them to feasible, sustainable projects. This substantially reduces conflicts in the short and medium-terms and lowers project implementation costs. It is a key to understanding project dynamics and sources of leverage.

Proceedings of all meetings and workshops held with project stakeholders are recorded using audio, video and photographs. Meeting attendance lists are signed by the participants at the close of each meeting.

1.2 A Legitimate Process

Potentially impacted stakeholders are being carefully consulted during the preparation of the Plan. Representatives of potentially impacted fisher-folks, mussel harvesters' associations, and others are participating in the compensation program selection, providing legitimacy to the process and its results.

Compensation is being closely supervised by JICA & MMRDA. Since compensation will be participatory, the institutions that supervise or observe the Project will be able to validate the transparency and the results of the resulting programs.

1.3 Magnitude of displacement (Economic)

The actual number of PAPs will be provided by the survey findings of the JICA study group. BEIPL is commissioned by the Oriental Consultants Group for this task. On the 16500-m ROW (250 m both sides), some of the fisher-folks are likely to be affected partially as they will not be allowed to fish there during the construction phase. However, they will be able to fish in the rest of the creek. There will be restrictions to fish very near the bridge piles during the Operations period as well, for security reasons. (They will be restricted to fish in the close proximity of the bridge piles during the Operations period for security purposes.) Fishing is a seasonal activity. Most fisher-folks fish during winter and beginning of summer, but there are some of them who also fish in the rest of the seasons, including rainy season.

Though, for many fisher-folks, fishing is the primary source of livelihood, some fisher families are not solely dependent on fishing activities and may have some other sources of income.

1.4 Objectives

Objectives of the Fisher-folks Compensation Plan are as follows:

1. To minimize the economic displacement caused by MTHL restrictions on access to coastal and marine resources.
2. To improve or at least to restore the livelihoods and standards of living of all persons experiencing economic displacement as a result of the construction or operation of proposed MTHL facilities.
3. To ensure that compensation activities are implemented with appropriate disclosure of information, consultation and the informed participation of those affected.

1.5 Brief description of the project

The proposed project is of high strategic and economic values linking Mumbai Island to the Navi Mumbai Area. The proposed link will also be the most dependable link to the proposed International Airport at Navi Mumbai. The total length of the bridge is 22 km of which 16.5 km is the length of the sea section.

1.6 Project sponsor

The project is being executed by the Mumbai Metropolitan Region Development Authority (MMRDA) and 85% of the project cost shall be provided by Japan International Cooperation Agency (JICA) in the form of a loan.

1.7 Brief description of the various impacts on the fisher-folks

The possible impacts of the project are envisaged to be of six basic types and coded from C1 to C6. They are as follows:

- C1:** Loss of fishing and livelihood due to removal of fishing stakes ('sus') and nets in the ROW. This is the permanent impact.
- C2:** Permanent decrease of revenue due to decline in fish catches and changed seawater currents. This permanent loss is considered for only sus/dol Nets that are dependent on current up to 500 mts from the location of Bridge Piers on Southern side of the alignment only. The basis for this calculation is based on the CWPRS study that shows overall insignificant impact on tidal strength in the area but some reduction of current strength up to 400 mts from the location of Bridge Piers. The affected area thus concluded as 500 mts from the location of Bridge Piers. This is a fair limit of compensation covering all the affected fisher-folks with Nets depending on currents.
- C3:** Loss due to restricted movement of subsistence level fisher-folks for hand picking of fishery organisms. This has been considered as the permanent impact.

- C4:** Loss of fishing time and increased operating cost (fuel) to reach fishing grounds from their hamlets due to MTHL during construction phase. This impact, though temporary, has been considered as candidate for permanent impact as the compensation will be difficult to quantify on daily basis. The impact was considered for Commercial and Artisanal fisher folks only. The Commercial trawlers, though have high maintenance, they do not travel daily for fishing. Even the Artisanal fisher-folks do not travel for more than 15 days in a month. Based on activities and construction schedule and alignment, it was observed that the Mumbai Island side boats are more affected during the construction phase. Considering that the Bridge construction activities in the Sea section will be impacting for less than 5 years, a comparable package is being offered.
- C5:** Loss of fish due to increased turbidity during construction phase. This is a temporary impact. This category will also be considered for only those fisher folks affected by increased turbidity due to MTHL construction activity beyond the 250 m limit of ROW on both sides. Fisher folks already covered under other compensation categories excepting C4 and C6 will not be covered under this category.
- C6:** Damage of fishing boats and nets due to movements of barges, vessels, machinery materials and men along the ROW, jetties, casting yards and labour sites during construction phase. This will be incidental and compensation will be offered only against an incident.

1.8 Other relevant documents

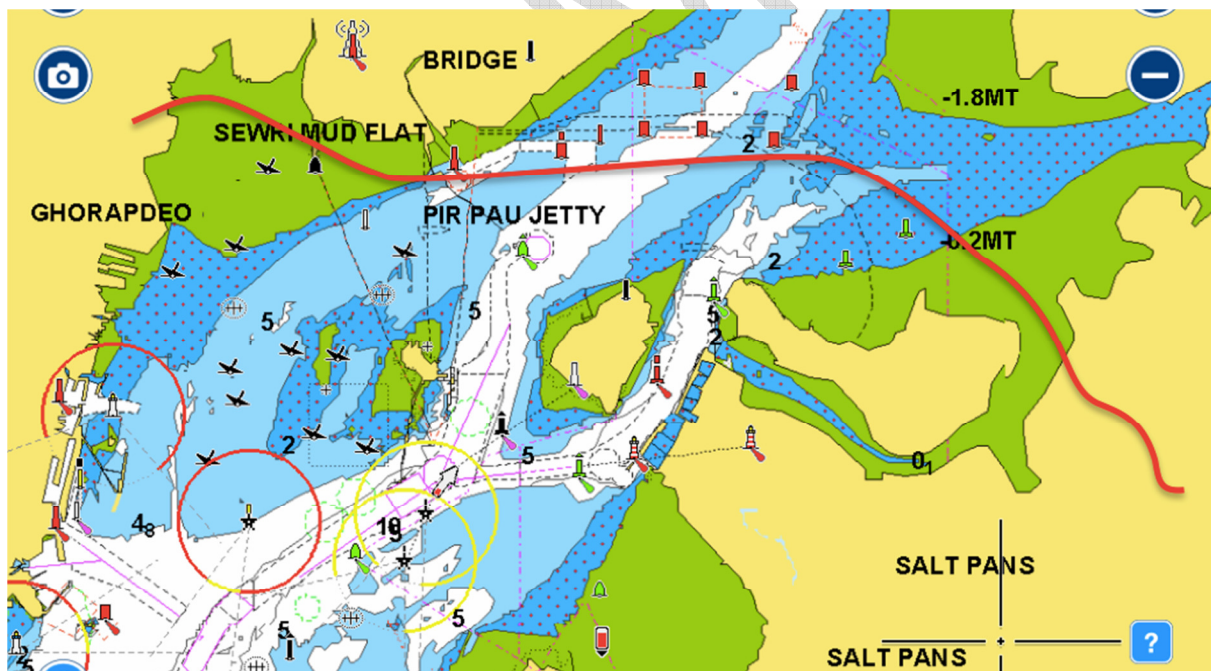
This Fisher-folks Compensation Management Plan should be read in conjunction with the following other project social and environmental documentation:

- Stakeholder Engagement Plan
- Community Affairs Management Plan
- Project Grievance Procedure
- Environmental & Social Impacts Assessment

1.9 Project area



Fig. 1.1 Google Image of the Project area



GREEN: tidal zone, BLUE: shallow water (up to -10m), WHITE: navigation channel (over -10m)

Fig 1.2 Activities recorded in the Project Area by JICA Study Group

1.10 Avoidance and minimization of impacts

A comprehensive EIA was carried out for the project in 2005. Based on this EIA, the project received Environmental Clearance in 2005. A rapid EIA was conducted in 2012 for obtaining CRZ clearance. The JICA further appointed a study group to identify the gaps in the earlier studies and for JICA Guidelines for the ESIA. Accordingly, the updated ESIA was prepared by the JICA study team by bridging the identified gaps. This Fisher-folks Compensation Plan is part of the Supplemental ESIA. The ESIA describes the physical, biological and social baseline, and predicts potential impacts on environmental, social or cultural resources. It includes a framework management plan, which makes various commitments, and outlines measures to minimize and mitigate the direct and indirect impacts of the project vis – a –vis compensation. It also outlines measures for monitoring predicted impacts and if further mitigation is required.

1.10.1 Impact Identification and Mitigation Summary

The Project EIA conducted an environmental assessment impact analysis for the construction and operation of the proposed MTHL. The purpose of this assessment was to identify the potential environmental aspects as a result of the construction and operation of the proposed MTHL Project. The management of those potential aspects together with the economic benefits derived from the Project implementation will generate a sustainable development that will be environmentally and economically favourable to the region and the country. The objectives of the environmental assessment included the following:

- To identify the environmental and social-economic resources that will be potentially affected by the construction and operation of the Project.
- To assess temporary, residual, and accumulative impacts produced by the construction and operation of the Project. To assess the magnitude of the impacts identified both in temporal and spatial contexts. The impacts identified are potential in nature with varying degrees of probability and are based on worst-case scenarios in many cases and assumed static environmental conditions, which in reality may vary naturally and may actually heighten or lessen impacts.
- To analyse information obtained during the public consultation process of the ESIA and JICA requirements, including observations, suggestions and recommendations

expressed by the affected public, concerning the construction and operation of the Project.

- To rank the potential impacts identified for the Project according to their importance with regard to the environmental setting in the project area.

1.11 Summary of the Construction and Operation Activities

1.11.1 Summary of Activities

The following activities are anticipated during the construction phase of the Project:

- Transportation and Mobilization, including all the activities related to the transportation of equipment, machinery, supplies and personnel to and from Sewri section and Navi Mumbai Section, during the entire construction phase. Transportation will be conducted by land and sea.
- Site Preparation including all the activities related to earthwork (cut and fill) on the non-marine portion of the site required for the construction of the process areas, storage and support building areas.
- Construction of Infrastructure and Utilities including the construction of internal access roadways, installation of the temporary construction camp, administrative areas, firewater system, the effluent treatment system and other services.
- Construction of Process and Storage Areas including the construction of metal-framed structures, erection of piles, casting area, the assembly of mechanical components and the construction of all mechanical and electrical components of all the processes, storage and loading units.
- The marine area construction including temporary jetty, bored piles, bridge assembly etc.

During the operations phase, the activities include movement of vehicles over the bridge and periodic maintenance.

1.11.2 Impacts on Land

The most significant impacts on land during the construction of the MTHL is related to the alteration of the landforms from activities related to site preparation during the construction of the land based infrastructures such as storage yards, fabrication yards, internal accesses roadways, temporary lay down areas etc. However, considering that most of the landward area on both sides is a sufficiently built area, the overall impact is less significant.

1.11.3 Impacts on Water Regime

During the construction phase, water will be used for dust control, soil compacting and concrete mix. Water required for these activities will be obtained mainly from the water suppliers from Mumbai and Navi Mumbai using tankers.

Other construction activities, such as construction of the Jetty, Bored Piles may have impacts on seawater at different magnitudes. However, these impacts can be avoided, minimized, or mitigated according to the ESIA and associated environmental and social management plans. A comprehensive marine monitoring program has also been proposed to verify predictions made in the ESIA.

1.12 Loss of Fixed Assets

There is a loss of fixed assets at both Mumbai and Navi Mumbai sites and is being compensated as per applicable policies.

1.13 Impacts on Marine Flora and Fauna

Extent of Losses:

The sea link construction is likely to have some impacts on the mangroves. As a part of mitigation, compensatory mangrove afforestation is planned through the Mangrove cell of Maharashtra State Forest Dept.

The project crosses over the mudflats of Sewri-Mahul area, an identified Important Bird Area (IBA) of India. An estimated number of 10-15 thousand flamingos (mainly lesser flamingos) feed in this area. Additionally almost 150 species of birds have also been recorded by confirmed/unconfirmed sources. Six species of birds that are recorded here are identified as vulnerable globally.

The other aquatic diversity is not worth noting in this area as the marine area in this region has been under enormous anthropogenic pressures like ports, petroleum facilities, sewage and effluent disposal, navigation and over fishing. The decline in fish availability has already been highlighted in many studies that were conducted in this region.

The high diversity and numbers of aquatic birds are mainly due to food availability for the birds owing to algal blooms as a result of siltation of mudflats and availability of warm waters. The density and variation in bird species is reported to have increased since 1994.

It is estimated that the impact on birds will be chiefly during the construction period. This area being the southernmost area of existing bird activities in the area, the birds are expected to move northwards and along the new mudflats on the south eastern side. The avifauna is expected to restore during operations phase as it has been seen near other existing bridges northwards in the Thane Creek.

1.13.1 Predicted Environmental Impacts on Fisher-folks

- Potential changes in the structure and the composition of the benthic and planktonic communities
- Potential changes in the type and quantity of fish caught in the littoral zone.
- Temporary periods of increased noise levels and seawater turbidity.
- Detours for navigation in place of the usual routes

1.13.2 Mitigation Measures

- Gradual increase in noise levels during piling activities to minimize impacts on fisheries
- Monitoring coastal and marine flora and fauna in area of influence and control stations
- Periodic monitoring of seawater turbidity during bored piles operations

The establishment of a modified environment in and around the piers is considered as neutral to positive impact because the structure may provide habitat for species that may be of interest to the local fisherman.

1.13.3 Impact on Community Resources and Infrastructure

Access to the ROW (by land and sea) is restricted in order to protect the fisher-folks and other people against the hazards related to the construction and operation of a major sea link. During the operation phase a small group of artisanal fisher-folks may be excluded from a small portion (1.5 km) of their usual fishing area which extends for about 250 m on both sides of the bridge due to underpass.

- Marine substrate removal and the loss of land area will result in temporary decrease of fisheries in the construction area and also immigration of these species to other areas.
- The terrestrial and maritime transportation of equipment, machinery and supplies to the project site will create temporary interruption of normal waterway traffic.

2. FISHING ECONOMY IN THE VICINITY OF THE PROJECT AREA

2.1 Introduction

There are three broad types of fisher-folks in this area.

- (a) Commercial: They reside in the villages but do not fish in the creek area. They have large trawlers for fishing in the deep sea.
- (b) Artisanal Fisher-folks: These are traditional fisher-folks fishing in the area for generations. They have kind of net like dol, gill or drift net that is used for fishing during particular seasons.

Artisanal fishing in this area provides an important source of household income to households in the area. However, these fisher-folks families usually supplement their income from the catch, by employing some family members in Petrochemical companies; commerce industries, carpentry and masonry work especially during the non-fishing months. Most of their catch is sold in the local markets. A small portion of the catch is kept in the cold storage to ensure freshness and to obtain a higher price later.

- (c) Subsistence Fisher-folks: These are daily fish catchers who catch the fish generally by hand picking. Large number of women is also involved in subsistence fishing. This group is highly unorganised and hence qualifies for maximum care and special attention during the compensation distribution.

2.2 Fishing Areas

Artisanal shoreline fishing in the Project area is conducted mostly by fisherman from nine identified villages. These villages are Mahul, Trombay, Uran Koliwada, Belpada Koliwada, Hanuman Koliwada, Gavhan Koliwada, Belapur, Sarsole and Diwale .

At the time of baseline studies, an average of 17 to 25 artisanal fisher-folks were reported fishing in the area, at an average about 15 fisher-folks fishing per week during the low season. About 400 fisher-folks were counted as subsistence fisher-folks.

As mentioned earlier, artisanal and subsistence fisher-folks supplement their income by working in other areas such as agriculture, commerce, services and other jobs. Their immediate families comprise 4 -7 individuals and their basic needs are not always met with by income from fishing alone. More than half of the total fisher-folks fish throughout the year and almost 75% of them fish every day.

The main fish collected in the area is anchovy, mullet, catfish, Pomfret, Indian salmon, prawns, lobsters, crabs and shellfish. The subsistence fisher-folks earn approximately Rs. 300 to Rs.1000 a day. The artisanal fisher-folks fish for about 14 days a month and may earn between Rs. 50,000 and 200,000 per month.

The main concerns of the local fisher-folks are pollution, the variability of fish productivity, the dependence on the weather (such as rough sea, El Niño currents, etc.), illegal fishing, debris in the fishing areas, transportation and access(as a lot of area is now out of bounds for them)along the BARC, TATA Thermal Power Station and Petrochemical Units.

2.3 Study Objectives for the Fishing Survey

The general objective of the study is to obtain a comprehensive socio-economic baseline study that can be used to refine mitigation measures (if necessary), to form the basis of the Fisher-folks Compensation Plan (FCP), and also to form the basis of a social monitoring program for the Project. The specific objectives are as follows:

- Enhance the social baseline study presented in the ESIA to address recommendations received from international stakeholders in the project (JICA).
- Confirm the potential for social impacts on fisher-folks arising from the construction of the Sea Link.
- Identify the socio-economic indicators that are of relevance to fisher-folks in the Project's area of influence, e.g. fishing traditions, methods and locations, and catch-effort data etc.
- Establish a plan to define how to identify genuinely affected fisher-folks and identify the procedures to be followed during negotiations on compensation.
- Propose a coordination and negotiation strategy that aligns Project timetables with stakeholder expectations.

The study is participatory in nature and will establish solid grounds for compensating the fisher-folks and monitoring their livelihoods.

2.4 Impacted Stakeholders' Survey

The geographical extent of the survey is from Mahul-Sewri mudflats to Nhava area in Navi Mumbai.

From both sides of the Sea Link, nine villages have been identified as possible impacted villages and shall be considered for detailed study to be conducted with the help of Fisheries Department.

2.5 Methods to Identify Impacted Stakeholders

This participatory, transparent study will identify affected stakeholders (individuals or groups), directly or indirectly affected by the Project and will evaluate the level and the nature of the impact on their socio-economic environment. In this way, the process becomes as important as the results, consolidating dialogue and negotiation. The study is a tool to help determine the amount and type of compensation that should be provided.

The field research will use quantitative and qualitative methods to gather information for a detailed diagnostic of the fisher-folk's economy and its internal logic, the technology used, and social networks (economic, political and cultural).

The study will determine the social, economic and cultural characteristics of these groups and a participatory approach will confirm, validate and complement the field data that will enable the MMRDA to determine the amount and type of compensation to be offered to the affected individuals.

Coordination with governmental agencies (Fisheries Department, CMFRI, Collector Offices, Police, and Maritime Board etc.) will ensure political and institutional validation and help build confidence among the involved parties.

The entire process will be documented in the form of videos, photographs and written records.

2.6 General Considerations

(a) Social baseline study will be based on the following:

- Review of existing information and interpretation of data that was previously gathered in the field.
- Applying statistical methods involving a census-type survey of fisher-folks in the direct influence area.

- Applying qualitative methods that gauge perceptions about the Project, complementing data from the surveys.
- Identifying gaps in the socio-economic, public opinion and intercultural relations data set.
- Enrolling stakeholders in discussion. Several outputs will be confirmed during a reconnaissance field survey.

(b) The study will be conducted with the help of activities such as:

- Interviews with Community Relations representatives.
- Literature reviews
- Reconnaissance of the study area
- Design of methods
- Field test of methods
- Adjustment of the design
- Field work planning
- Selection and training of personnel used during fieldwork
- Data collection, processing and coding
- Confirmation of impacts
- Preparation of an outline for the Compensation Plan and Negotiation Strategy

(c) Participatory Research

The research is participatory in nature and involves a sample of stakeholders under study to help ensure information can be validated.

The base line study will determine whether social organizations are stakeholders or social actors. Such a distinction will lend a clear understanding during negotiations between the MMRDA and the fisher-folks.

The qualitative study will examine fisher-folk's perceptions and public opinion in the area near the Project.

The fisher-folks have already participated in the following activities:

- Informative meetings that were conducted at the Fisheries Department and the MMRDA office to explain the methods employed, answered their questions to satisfy their queries and to seek their support. A tour was arranged by MMRDA along the

alignment of the bridge for the representatives of the fisher-folks to ensure that they understand the exact bridge alignment.

More such informative meetings are scheduled towards the end of the research to share and validate the results.

2.7 Methods of Survey

2.7.1 Quantitative Methods

The purpose of the surveys is to collect quantitative data about the key socio-economic conditions of the fisher-folks who have the potential to be directly impacted by the Project. A structured questionnaire will be used containing simple questions that are especially sensitive to the economy, culture and psychology of the people from the coast area.

A pilot survey will test the suitability of the instrument and its wording that will help to rectify errors in the questionnaire. Survey takers will be instructed by a supervisor and a field manager. The survey process shall be monitored regularly by the Survey Manager. The proposed draft Survey Form is attached as Annexure I.

2.7.2 Qualitative Methods

Qualitative methods to be used in the survey includes focus groups, in-depth interviews and literature review.

2.8 Validation of Information

Specialists in ichthyology and marine resources and experts on local fishing practices will participate in the study to validate the results obtained from the field interviews and surveys. A validation will be performed with the fisher-folks themselves focusing on those who frequently fish in this area. This will be further validated through the Dept. of Fisheries.

2.9 Compensation Framework

2.9.1 Compensation Dialogue and Agreement

Compensation is one of the most sensitive social issues of the Project as it relates directly and contractually with the population of the area of direct influence, and most specifically with those stakeholders that may be impacted by the construction and operation phases of the Project.

2.9.2 Identifying Impacted Stakeholders

Based on the analysis of the field survey (socio-economic questionnaires), interviews, focus groups, literature review etc., BEIPL is currently identifying individual and organized fisher-folks who will be potentially impacted by the Project, and determine the nature and level of impact. The study will determine the social networks and relations among these groups.

2.9.3 Socio-Economic Evaluation

For reasons of safety, during the construction and operation phases of the bridge, there will be an exclusion area along a corridor of (not more than 250 m) along both sides of the ROW. The total 500 m stretch is a part of a long 16.5 km stretch that runs from Sewri to Chirle that is used by local small-scale artisanal shore fisher-folks and mussel harvesters. Access restrictions will, to some extent, affect various fisher-folks and fisher-folks groups by creating a diversion to continued access along the shoreline. Impacts include:

- No fishing activities will be allowed within the 500 m exclusion zone during the construction phase.
- An inconvenience in having to follow a diversion to continue passage along the navigation route (esp. for Mahul-Trombay).
- It is also possible near shore catch yields could be affected given that fisher-folks typically follow migrating fish and they migrate along the shoreline.

2.9.4 Implementation of Transit Restriction Areas

Transit on the ROW will be temporarily restricted for an approximate period of 60 months; however, after that period it will be restored allowing fisher-folks to transit the trough area.

2.9.5 Stakeholder Eligibility Cut-off Date

The date of approval of the list of beneficiaries by FCC has been determined as the cut-off date for consideration of impacts on stakeholders. This is to determine who will be eligible for compensation and assistance, and to discourage inflow of people who are ineligible for these benefits.

A grievance mechanism is proposed and can be used by individuals to raise concerns about eligibility for compensation.

2.9.7 Dialogue

Impacts on fisher-folks are already described in the ESIA and will be supplemented upon completion of the complementary base line report and impact assessment. The production of the Compensation Plan will be a consultative process; affected stakeholders and potential social impacts will be further validated or refined, impact values estimated and feasible compensation alternatives established, considering possible indemnification values, periods of time to compensate and standards and procedures to regulate dialogue and negotiation.

The dialogue will be carried out through separate workshops for each impacted activity, scheduled to start immediately after the conclusion of BEIPLS's information meetings to validate the conclusions of the research. Impacts on fisher-folks will not be effective until construction starts, when the exclusion zone will be implemented. This will allow the required time for implementing compensation dialogue and negotiation focused to achieve an agreement on compensation with potential PAPs before the impact is effective.

The compensation plan budget will be determined based on the estimated value of the potential impacts.

2.9.8 Compensation Rationale

Compensation is a set of mechanisms which mitigate unavoidable social and environmental impacts in a given area, generated by the implementation of some activities during construction, operation or closure phases of a project. The compensation measures seek to generate a neutral or positive impact that is an alternative and at least equivalent to the negative impacts.

These compensation measures are to be implemented in areas where the effects of the impact cannot be absorbed, as is the case with those people or groups who practice small-scale fishing that will be influenced by the enforcement of a safety exclusion zone that will not permit access along the shore, and by the impacts identified in the ESIA.

2.9.9 Compensation Plan Objectives

(a) General Objective:

Provide compensation to fisher-folks who will be impacted by the proposed MTHL.

(b) Specific Objectives

- To identify a comprehensive list of Project affected Fisher-folks and extent of impacts.
- Maintain a relationship of mutual trust and communication with the fisher-folks in the area of influence.
- Generate a positive perception about the Project among NGOs, opinion makers, government agencies, the press, local federations and confederations, local leaders, and the general public.

2.10 Fisher-folks Compensation Committee:

2.10.1 A Fisher-folks Compensation Committee (FCC) shall be as under

I	Additional Metropolitan Commissioner, MMRDA	Chairman
II	Commissioner, Fisheries (Marine)	Member
III	Chief Executive Officer, Maharashtra Maritime Board	Member
IV	Collector, Mumbai District	Member
V	Collector, Raigad District	Member
VI	Dy. Commissioner of Police, Seweri area	Member
VII	Dy. Commissioner of Police, Navi Mumbai Shivaji Nagar area	Member
VIII	Representative of Fisher-folks Societies from Fishing villages falling in the influence area of MTHL	Invitee
IX	Engineer – in – Chief / Chief Engineer, MMRDA	Member Secretary

2.10.2 Scope of the Committee

The scope of the Committee shall be as under:

1. To monitor and take necessary actions for the implementation of the FCP.
2. To monitor the base line and periodic surveys conducted.
3. To approve the Fisher-folks Compensation plan and recommend to MMRDA for disbursement.
4. To monitor the post implementation evaluation.

2.11 Implementation of Compensation Process

BEIPL shall carry out baseline survey of the affected fisher-folks and detailed list along with category/nature of loss (permanent or temporary), which will be sent to fisheries department for validation. This Compensation Plan will include details of

the beneficiaries such as Name, Amount of compensation, bank details, etc. Fisheries Department shall validate the same and forward to FCC for approval. FCC shall take the decision on compensation payable and forward recommendations to MMRDA for further necessary action. On receipts on comments from FCC, MMRDA shall release the compensation amounts in the names of the beneficiaries through the office of the respective Collector for distribution. Respective Collector office shall make the disbursement to affected fisher-folks and forward the report to Fisheries Department and MMRDA for record. Appropriate record of disbursement shall be maintained by the respective office of the Collector.

The broad time line of process is given in the table below.

Sr no	Activity	Action by	Date	Remarks
2	Approval of Fisher-folks Compensation Policy	FCC	10/12/2015	
3	Approval by MMRDA	MMRDA	14/12/2015	
4	Submission to JICA	MMRDA	25/12/2015	
5	Detailed list of PAP and Compensation Plan	BEIPL	25/03/2016	
6	Validation of Compensation Plan	Fisheries Dept	30/04/2016	
7	Approval of Compensation Plan	FCC	10/05/2016	
8	Approval by MMRDA	MMRDA	20/05/2016	
9	Submission to JICA	MMRDA	25/05/2016	

2.12 Implementation Schedule

The census, augmented baseline survey and collection of livelihood data are currently being finalized. At this point, it will be possible to review and validate the outcomes with the fisher-folks and discuss compensation amount.

The compensation matrix is given below:

3 Compensation matrix

The amount of compensation is based on the NGT order no. 19/2013 dated 27 February 2015. The NGT has considered period of 3 years to switch over to some other vocation to establish livelihood. The impact on fisher-folks due to construction of MTHL also considered similarly. Hence, the compensation base used by NGT has been applied being most recent and most relevant.

The compensation matrix for various compensation codes shall be as follows:

Comp. Code	Type of loss	Nature of Loss	Explanations for loss	Compensation
C1	Permanent	Loss of fishing and livelihood due to removal of fishing stakes ('sus') and nets in the ROW	The fisher-folks practicing 'dol' net fishing have permanent fixtures of stakes ('sus') in the creek that are in vicinity of MTHL piers (ROW) which will have to be displaced permanently from their traditionally owned places. The stakes can neither be re-fixed at the same place or relocated elsewhere as the fishing area is already overcrowded.	Onetime payment of Rs. 5,84,000/- per *Unit as per the survey conducted under Clause nos.2.3 to 2.7
C2	Permanent	Permanent loss of revenue due to decline in fish catches and changed seawater currents.	The dol-net is a passive fishing gear which filters seawater against the ebbing tidal currents and retains fish. The nets are able to operate efficiently at certain current velocities and operate only during spring tides (<i>Udhan</i>) for about 18-20 days in a month but not during neap tides (<i>Bhang</i>).The construction of piers of MTHL would impede the currents and slow them down in some places (10% reduction in the shadow region of piers(CWPRS Report)). Owing to reduced	50% of the amount provided per Unit in Code C1

Comp. Code	Type of loss	Nature of Loss	Explanations for loss	Compensation
			velocity of the current, efficiency of <i>dol</i> -nets would be weakened resulting in reduction of number of days of fishing and reduction in the quantum of fish caught leading to permanent loss of revenue.	
C3	Permanent	Loss due to restricted movement of subsistence level fisher-folks for hand picking of fishery organisms	The subsistence level fisher-folks (mostly women) in inshore or inter-tidal zones hand pick crabs, oysters, bivalves and fish without using boats. Owing to construction of 'land-ward' part of the MTHL, casting yards and labour camp and access roads for transport of materials, equipment, machinery and men would prevent such fisher-folks from having an access to their rightful fishing grounds and thereby depriving them of their livelihood significantly. Similarly, those using 'barrier' nets (' <i>vana</i> ') in such intertidal mudflats will be losing their fishing area for erecting the nets in future.	Onetime payment of 50% amount provided in Code C1
C4	Temporary	Loss of fishing time and increased operating cost (fuel) to reach fishing grounds from their hamlets due to MTHL during construction phase.	The fisher-folks living near the landing part of MTHL would have to travel a long distance and detour to reach their regular fishing grounds as well as marketing at wharfs in Mumbai (New ferry wharf and Sassoon docks).	The compensation shall be based on average travel time as compared to the period before construction and as determined during construction survey at Rs. 500// per hr. for Artisanal and Rs. 1000/- per hr. for commercial.

Comp. Code	Type of loss	Nature of Loss	Explanations for loss	Compensation
C5	Temporary	Loss of fish due to increased turbidity during construction phase	During construction of MTHL drilling and piling works and constant movement of barges carrying heavy machinery and materials would cause disturbances to the sea bottom and thereby increase the turbidity of the ambient water. Most fish species are sensitive to turbidity (suspended solids TSS) due to the fact that they cause irritation to their gills and respiratory system. If the TSS levels in the water are continuously high, it may result in many fish species permanently migrating to clearer waters. This would in turn mean reduction in fish availability to fisher-folks in the affected area during construction phase.	Equal to the loss of average catch as compared to the period before construction and as determined in during construction survey.
C6	Incidental	Damage of fishing boats and nets due to movements of barges, vessels, machinery materials and men along the ROW, jetties, casting yards and labour sites during construction phase.	The gill netter boats have fishing areas close to the MTHL use drift gill nets which are set during high tide at night and allowed to drift along the surface seawater currents for 6-8 hours for catching pelagic fishes. These nets may get damaged due movements of barges and vessels.	The actual cost of damages to Boats, Gear, etc. and for the loss of time as evaluated by the Evaluation Committee with the Office of the Commissioner of Fisheries/MMB

*One Unit is considered for the single or collective families per single DoI Net.

The Compensation shall be availed on following conditions:

1. The Commercial and artisanal Boats need to be Licensed and Registered.
2. For Subsistence fisher-folks documents like proof of residence/identification proof/membership of registered Fisher-folks Society is mandatory.

3. For entitlement of loss of productivity in Code no C3 & C4 will be counter checked by monitoring studies to ensure that the loss has been only due to construction activity of the Bridge.
4. No minors shall be considered as Fisher Folks.
5. Families/Units covered under any one category shall not be covered for compensation under any other category.

The category wise distribution of compensation is given in the table below:

Comp Code	No. of Instalments/year	Year wise disbursement in %				
		Y1	Y2	Y3	Y4	Y5
C1	1	60%	20%	20%	Nil	Nil
C2	1	60%	20%	20%	Nil	Nil
C3	1	60%	20%	20%	Nil	Nil
C4	At the end of every Qtr (4)	Depending on the actual loss				
C5	At the end of every Qtr (4)	On account of Construction phase and indentified impacts				
C6	On account of the incidence	Within 3 months of the occurrence of the incidence				

4 Grievances and Dispute Resolution

The Grievance Procedure is in place to address any concerns of the PAP. The primary objective is to ensure that the Project Authority responds to any complaints made against the Project, and addresses grievances related to eligibility and entitlement for compensation in a timely manner to avoid or minimize any potential for conflict or judicial processes.

4.1 Specific Objectives include:

- Establish a mechanism for responding to complaints in an understanding, transparent and culturally-suitable way.

- Develop an easy-access, no-cost and efficient complaint procedure for the local population involved and/or impacted by the Project.
- Implement effective dialogue and open lines of communication with the public.
- Help to prevent unrealistic expectations and/or negative perceptions from the local population towards the Project.
- Establish a system of investigation, response and quick complaint resolution.
- Reduce gradually the number of local populations' grievances regarding the Project.
- Improve the Project social performance through the analysis of complaints.

4.2 Grievance Redressal Committee

The Grievance Redressal Committee (GRC) shall be as under to address the grievances related to eligibility and entitlement of fisher-folks affected by the project:

I	Chief Social Development Cell, MMRDA	Chairman
II	Assistant Commissioner, Fisheries (Marine) Mumbai Suburb	Member
III	Assistant Commissioner, Fisheries (Marine) Thane and Raigad District	Member
III	Dy. Collector, Mumbai District	Member
IV	Dy. Collector, Raigad District	Member
V	Superintending Engineer, MMRDA	Member Secretary

The role of Grievance Redressal Committee shall be as follows:

- The GRC will consider the written grievances only.
- The GRC shall conduct hearing, scrutinize the documents submitted and issue written orders of decision based on the Fisher-folks Compensation Policy.
- The decision of GRC shall be final and binding on all, PIA shall take action accordingly
- The grievances of individual fisher-folks only shall be considered by GRC.
- The grievances beyond entitlement and eligibility shall be recommended to FCC.

5 Monitoring And Evaluation

5.1 The purpose of resettlement monitoring will be to verify that:

- Actions and commitments described in the FCP are fully implemented on schedule.
- Fisher-folks receive their full compensation entitlements within agreed timeframes.
- FCP actions and compensation measures are effective at restoring or improving the affected fisher-folk's living standards and income levels.

- If necessary, changes in FCP procedures are made to improve delivery of entitlements to project affected fisher-folks.
- Complaints and grievances lodged by project affected fisher-folks PAP are followed up and that where necessary, appropriate corrective actions are implemented

5.2 Fisher-folks Compensation Management Framework Plan

Primary monitoring responsibility will rest with FCC for the Fisher-folks Compensation.

5.3 FCP Monitoring Framework

Monitoring shall be done at two levels during construction of the project

- Monitoring by the FCC shall be done on Monthly/Quarterly basis
- A Completion Audit by the independent consultants shall be done after completion of the construction phase:

A key objective of the audit is that compensation project and mitigation measures should lead to sustainable restoration of the project affected fisher-folks.

MMRDA will consider that livelihood restoration will be a process that needs to be facilitated. A capacity building program has been considered for this purpose. This Capacity building program will be monitored by the Social Development Cell of the MMRDA. An amount up to Rs. One Crore shall be set aside for this program. This funding shall be made available for execution of such programs that will help increasing and developing capacity of Fisher folks not only in fishing but in allied activities and development of skill sets that will enable them for better standards of living.

The scope of each type of monitoring is briefly described in the following sections.

The establishment of appropriate indicators within the FCP is essential since what is measured is what will be deemed important. In keeping with JICA sponsored projects, key performance indicators for monitoring are expected to be divided into four categories:

1. Inputs Indicators may include the resources in terms of people, equipment and materials that go into the FCP.
2. Output Indicators concern the activities that are generated by the inputs such as a database for tracking compensation agreements; and the actual delivery of compensation projects to correct or offset any economic displacement suffered.

3. Process Indicators that represent the change in the quality and/or quantity of the activities aimed at maintaining or improving livelihoods. Examples include creation of a grievance procedure, a means for stakeholder engagement to share information about the project and promote participation in Project activities; or the implementation of community investment projects.

4. Outcome Indicators are expected to include the delivery of compensation, indemnity and other mitigation to avoid economic displacement caused by the Project.

The importance of the four categories of indicators will obviously change over time as plans and compensation projects are implemented. Initially, MMRDA will place greater emphasis on inputs, outputs and processes but over time the emphasis will gradually change to outcomes and impacts.

Building Environment India Pvt Ltd

Mumbai Trans-Harbour Link Project

Socio – Economic Survey for the fisherman community of the areas of MTHL

Village / Place					
Name of fisherman society					
Registration number for the village					
Household no.					
Date					
Person interviewed Name					
Age (years)					
Gender					
Religion					
Caste/Tribe					
Sub caste/sub Tribe					
Marital Status					
How many people live in the family	No	Name	Age	Educa tion	Qualification
Since when have you been residing in the locality? (No. of Years)					
How many people in your household fish?					
Do you have a fishing licence number and registration?	Licence number	Registration number			

Do you fish alone or with a group of fisher-folks? (If in a group, how many in a group?)	Alone	With a group	How many									
Does this household own a boat?	Yes	No										
What type of boat is it?												
Do you own the boat you use for fishing?												
Do you pay a rental for using the boat?												
How much is the rental												
What gear do you use? (types of nets)												
What is the cost of the gear? (nets)												
How often do you change your gear?												
Sources of income for the whole household for the last year?												
Which areas do you fish?												
How many hours does the average fishing trip take	Distance km &	Time hours/mins	Type of boat	Engine of the boat used for travelling								
How many months in a year do you fish												
When do you go fishing?	During the day	During the night	Day and night									
How much do you catch during a normal fishing trip (your catch or share of catch only)?	Size class Cm	A	B	C	D	E	F	G	H	I	J	
	Type of fish											
	No of fish											
	Cost of fish											
Where do you sell your fish?	Outside the community							Within the community				
How do you sell?	Unit of measurement(e.g. kg/basket/bundle)											
Quantity of product sold in last year												
Total Costs (e.g. transport, labour,)												
Total income												

Amount of profit earned from this source in last year (profit = income – costs)			
Is your income enough to cover monthly expenses?			
How much is your household expenses per month?			
Do you usually go to the same place to fish?			
If no, then why did you change the place of fishing?	Tourists	No more fish	Difficult to catch fish
	Fisherman moved his place of stay	Better prices for fish in the deeper regions	Any other reason
Do you fish at different places during different seasons? (north-east and south-west monsoon)			
How has the fishing been in the last ten years?			
Has it declined or increased?			
If they say declined. Then what are the reasons for decline?			
Are you happy with the fishing activity of this region?			
What are the existing Boats that you can rent?	Type of Boat: Size of Boat: Capacity to carry cargo: Capacity to carry people		
What are the existing human skills in the house available	Carpenter: Plumber: Mason: Electrician: Turner & Fitter: Mechanic: Other:		
What kind of training do you and your household members desire to increase your capacity of earning?			

Annexure B

Broad Range of Costs Involved as Fisher-folks Compensation

Comp Code	Nature of Impacts	Comp basic Amount	No. of PAP	Type of PAP			Compensation Amount
				Comme rcial	Artisa nal	Subsist ence	
C1	P	5,84,000	48		48		2,80,32,000
C2	P	2,92,000	34		34		99,28,000
C3	P	2,92,000	512			512	14,95,04,000
C4	T			300	175		13,00,00,000
C5	T	2,92,000 for S 5,84,000 for A			150	400	10,00,00,000
C6	I						3,00,00,000
Capacity Building Funds							1,00,00,000
Sub Total							45,74,64,000
Contingency @ 20%							9,14,92,800
Sub Total							54,89,56,800
Inflation @ 20%							10,97,91,360
Total							65,87,48,160