

CONVENTION ON WETLANDS (Ramsar, Iran, 1971)

Rue Mauverney 28, CH-1196 Gland, Switzerland

Tel. +41-22-999-0170, Fax +41-22-999-0169

E-mail: [asia.oceania@ramsar.org](mailto:asia.oceania@ramsar.org)

Web: [www.ramsar.org/](http://www.ramsar.org/)

## Nagao Wetland Fund (NWF)

### Section B “Request for Funding” Form

**Note.** Please complete and enclose both Section B.1 “Project Summary and Endorsement Form” and Section B.2 “Detailed Project Proposal”, following the section structure and guidance provided below on what to include in each section of the proposal. Thank you.

#### Section B.1 Project Summary and Endorsement Form

Please fill in sections a, b, c, f, g, h and i, and either section d or section e.

a. Country requesting support: **Malaysia**

b. Title of project proposal:

**Conserving Irrawaddy Dolphins at the Rajang-Belawai Delta Wetlands**

c. Category of assistance requested (please consult the Operational Guidelines and indicate one option only):

Contracting Parties:

Implementation of the Ramsar Strategic Plan 2016-2024. Please indicate relevant Goals and Targets (s):

**Goal 1: Addressing the drivers of wetland loss and degradation**

Target 3: The public and private sectors have increased their efforts to apply guidelines and good practices for the wise use of water and wetlands.

**Goal 3: Wisely using all wetlands.**

Target 9: The wise use of wetlands is strengthened through integrated resource management at the appropriate scale, *inter alia*, within a river basin or along a coastal zone.

Please fill in **either** section **d** or section **e** below:

d. If the financial support sought from the NWF is requested to carry out part of a larger project, please indicate:

- Title of the main project: **Integrated Watershed Management in Rajang Basin**

- Duration of the main project: **July 2017 – July 2020**
  - Total cost of the main project: **RM750,000**
  - Amount requested from the NWF: **USD 17,963.72**
  - Have the main project and the other funds been approved:  Yes  No (partial for one year).
  - If yes, please indicate the sources of these funds, showing whether the source is in-country or external: **In-country. WWF-Malaysia funds.**
- e. If the proposed project is a stand-alone activity, please indicate:
- Duration of the activities to be covered by NWF grant:
  - Amount requested from the Ramsar NWF:
  - Other financial contributions (including in-kind) – indicate whether these are from in-country or external sources:
- f. Name, address (including phone/fax numbers and e-mail address) and website of the recipient agency, i.e. the institution responsible for the project, specifying the name and contact details of the person responsible for preparing and executing the project.

**Organization: WWF-Malaysia (Sarawak Conservation Program)**

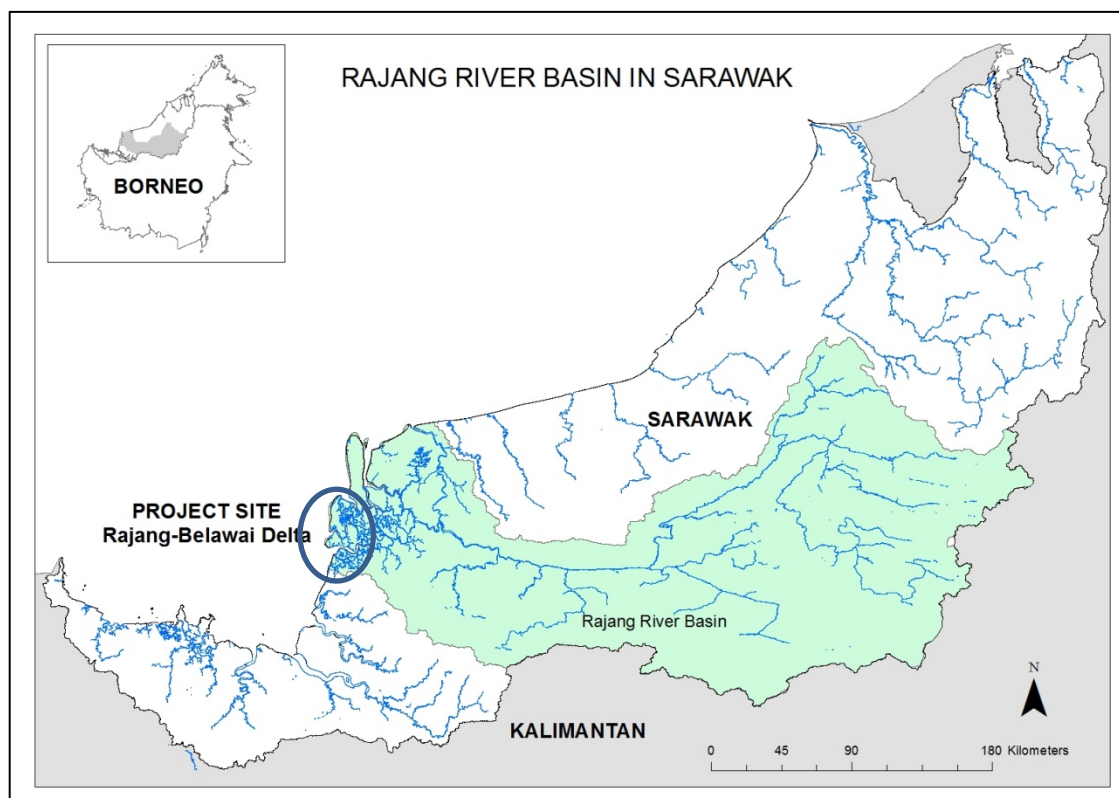
Address: 7<sup>th</sup> Floor, Bangunan Binamas,  
Lot 138, Section 54  
Jalan Padungan, 93100 Kuching  
Tel: +6082-247420  
Fax: +6082-241531  
Website: [wwf.org.my](http://wwf.org.my)

**Contact person & person responsible for project:**

Ms. Belinda Lip Hun Mei  
Manager (Freshwater management & water security)  
[blip@wwf.org.my](mailto:blip@wwf.org.my)

- g. Summary (maximum 500 words)  
Describe background, justification, objectives and intended follow-up. Indicate if the project will be carried out in a Ramsar site(s) or how it otherwise contributes to the implementation of the Ramsar Strategic Plan 2016-2024 and the fulfillment of its objectives:

**Project site:** Rajang-Belawai Delta wetlands (not a Ramsar site)



### **Background:**

At the Rajang-Belawai delta, there are large tracts of mangrove and peat ecosystems in Sarawak. There is an estimated 93,852 ha of remaining mangroves in the Rajang delta complex. Some high conservation value areas have been identified in the delta area through a rapid ecosystem assessment that was conducted in July 2015. Key species of significance include the Irrawaddy dolphins, silver leaf monkeys, hornbills (Black hornbill, Bushy-crested and Oriental Pied), Chinese egrets (migratory), lesser adjutant storks, proboscis monkeys and estuarine crocodiles and other migratory birds. Previous studies from the Sarawak Forestry Corporation in 2009 indicate that this delta could potentially contain the highest population of Irrawaddy dolphins in Sarawak. The area is also an important bird area and regarded as important breeding ground for fish, where local people are mostly engaged in fishing activities for their livelihood.

The delta has also been earmarked for development into a Halal Hub <sup>1</sup> as part of the Tanjung Manis Economic Growth Area (T-Mega) by Sarawak Timber Industry Development Corporation (STIDC) where a Master Plan has already been drafted. Among the industries earmarked for development are aquaculture, fisheries, food processing, palm oil clusters.

<sup>1</sup> Halal is an Arabic term designating any object or an action which is permissible to use or engage in, according to Islamic Syariah Law. In Malaysia, the definition of Halal food and its guidelines are provided by the Malaysian Standard MS1500:2009 Halal Food – Production, Preparation, Handling and Storage – General Guidelines (Second Revision). The Halal Hub in Tanjung Manis is an intended investment and economic development area for Halal food production centre with a ‘farm-to-table’ concept, integrating the entire supply chain from production of raw material (upstream processes) to finished product (downstream processing processes).

Alongside these industries are considerations to set aside mangrove sanctuaries and a biodiversity park. Sustainable development is crucial in this area to minimize the loss of species and their habitats. There are opportunities to facilitate the development of the halal hub to be more sustainable, integrating considerations for the conservation of key habitats and ecosystems but detailed ecological assessments are required to provide good supporting information.

**Objective:**

To conduct a detailed ecological assessment and provide credible, science-based ecological information to guide management of the mangrove wetlands in the Rajang-Belawai delta to ensure conservation of the high conservation value areas in particular for the Irrawaddy dolphins and fish breeding areas.

**Intended follow up:**

Results of the survey is planned to be further translated into a management plan, with a potential ecotourism action plan supported by conservation finance scheme of the area to detail out responsibilities and action plans for managing the area for its the ecological resilience amidst development in the delta. Results from the surveys will also be fed into a watershed management plan which is aimed to be developed to guide management of flows downstream of dams for ecological resilience of the delta ecosystems.

**Contribution to the Ramsar Strategic Plan 2016-2024:**

By using the results of the detailed ecological survey to advise management prescriptions of the area for the dolphins and fish breeding grounds within the wetlands at the Project Site, and integrating this into the Halal Hub Development Master Plan, it should result in wise use of wetlands along the coastal zone, provide a guide to the industries sector in the Halal Hub to apply good practices, prevent degradation that could lead to threats to the species and ecosystem and support sustainable use of the resources in the area.

The project will contribute to Goal 1 Target 3; and Goal 3, Target 9 of the Ramsar Strategic Plan 2016-2024.

- h. Endorsement of this project application by the Ramsar Administrative Authority:**  
 Please confirm the importance of this proposed project in relation to your national Ramsar Convention implementation priorities. **Please tick (✓) only one of the following statements:**

1. The project's outcomes will deliver significantly increased implementation capacity for a high national priority. OR	<input type="checkbox"/>
2. The project's outcomes will deliver increased implementation capacity for a lower national priority. OR	<input type="checkbox"/>
3. The project's outcomes will not directly lead to increased implementation capacity.	<input type="checkbox"/>

Institution/Agency:

**INTAN NURUL AZLINA AHMAD KAMIL**  
 Principal Assistant Secretary  
 Biodiversity and Forestry Management Division  
 Ministry Of Natural Resources And Environment

Name/Title:

Date: 29 March 2017

Signature:



Please return this form along with the Detailed Project Proposal to:  
 Nagao Wetland Fund (NWF), Ramsar Convention Secretariat,

Rue Mauverney 28, CH-1196 Gland, Switzerland  
Tel. +41-22-999-0170, Fax +41-22-999-0169  
E-mail: [asia.oceania@ramsar.org](mailto:asia.oceania@ramsar.org)  
Web: [www.ramsar.org/](http://www.ramsar.org/)

## Section B.2

### Structure and contents of Detailed Project Proposal

#### Notes:

- i) Please follow the section headings and sequence and the guidance for what to include in each section.
- ii) Please use a maximum of **five (5) pages** (A4 size paper) to provide detailed information on your proposal, following the headings and instructions given below. Please do not use margins of less than 1.5 cm, and do not use letters smaller than 10-point font size.

#### Details of proposal

##### A. Background and justification

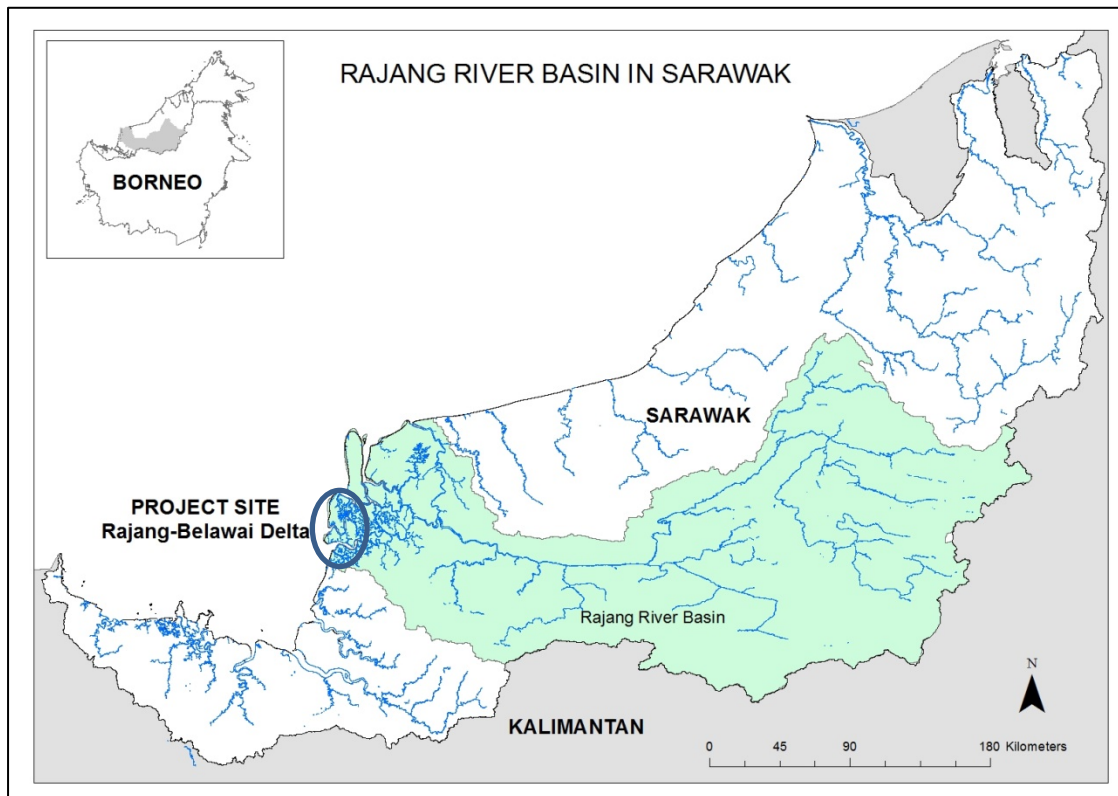


Figure 1: Rajang river basin and location of the Project Site

There are large tracts of mangrove and peat ecosystems at the Rajang delta in Sarawak with an estimated 93,852 ha of remaining mangrove wetland areas. It is one of the two large mangrove complexes left in Sarawak. The Kuching Wetlands is a gazetted Ramsar site. Some high conservation value areas have been identified in the Rajang delta area through a rapid ecosystem assessment that was conducted in July 2015. Key species of significance include the Irrawaddy dolphins, silver leaf monkeys, hornbills (Black hornbill, Bushy-crested and Oriental Pied), Chinese egrets (migratory), lesser adjutant storks, proboscis monkeys, estuarine crocodiles and other water birds. Previous studies from the Sarawak Forestry Corporation in 2009 indicate that this delta could potentially contain the highest population of Irrawaddy dolphins in Sarawak. The area is also an important bird area.

The delta has also been earmarked for development into a Halal Hub<sup>2</sup> as part of the Tanjung Manis Economic Growth Area (T-Mega by Sarawak Timber Industry Development Corporation (STIDC) where a Master Plan has already been drafted. Among the industries earmarked for development are aquaculture, fisheries, food processing, palm oil clusters. Alongside these industries are considerations to set aside mangrove sanctuaries and a biodiversity park. The entire T-Mega complex (Figure 2) takes up 124,517 ha, with 89,753 ha of total developable area. A total of 235.3 ha of mangrove sanctuary and 198.1 ha of Wildlife Park/Sanctuary were identified in its land use plan for Package C, which is currently being developed. Package B is due for development in 2030.

There are opportunities to facilitate the development of the halal hub to be more sustainable, integrating considerations for the conservation of key habitats and ecosystems e.g habitat for Irrawaddy dolphins. Sustainable development is crucial in this area to minimize the loss of species and their habitats. However, the identification of areas for wildlife and mangrove sanctuaries must coincide with on the ground conditions to ensure effective and meaningful conservation efforts. Detailed assessments are needed to provide good ecological information on where the high conservation value areas are, and how they need to be managed to ensure it can be resilient in the long term. This is especially true for wetland ecosystems which are connected through the waterways and flows, and which would be impacted if changes or degradation of this connected system is not managed as a whole. This information is currently not present and not able to be provided by the Environmental Impact Assessment (EIA) process. The EIA is done only at a project-specific scale for each of the company which plans to have its business in the area. It does not take a landscape and cumulative view of the broader landscape.

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<sup>2</sup> Halal is an Arabic term designating any object or an action which is permissible to use or engage in, according to Islamic Syariah Law. In Malaysia, the definition of Halal food and its guidelines are provided by the Malaysian Standard MS1500:2009 Halal Food – Production, Preparation, Handling and Storage – General Guidelines (Second Revision). The Halal Hub in Tanjung Manis is an intended investment and economic development area for Halal food production centre with a ‘farm-to-table’ concept, integrating the entire supply chain from production of raw material (upstream processes) to finished product (downstream processing processes).





Figure 2: Tanjung Manis Economic Growth Area

There are fishing communities around the delta area, consisting mostly of Melanau and Malays who depend on the ecosystems here for their livelihoods. An important industry is the production of smoked prawns and fish in Kampung Rajang. Loss of mangroves wetlands and its function as fish spawning or breeding areas may impact on the income of the fishing communities.

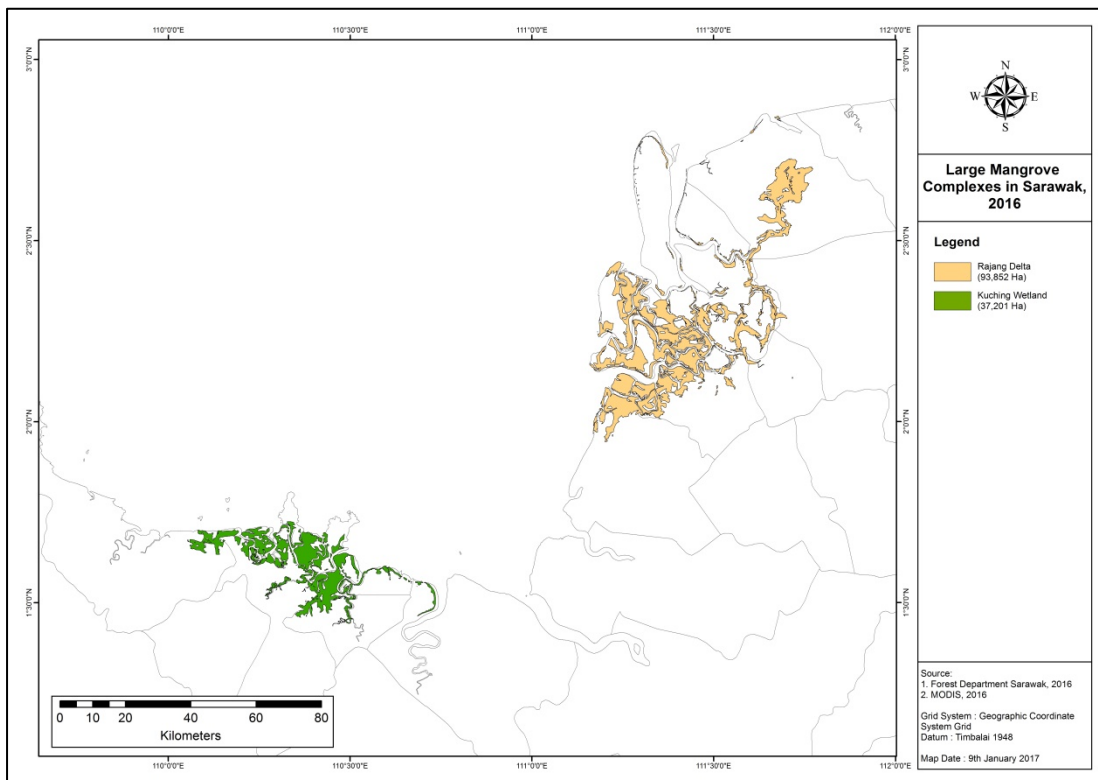


Figure 3: Large mangrove complexes left in Sarawak



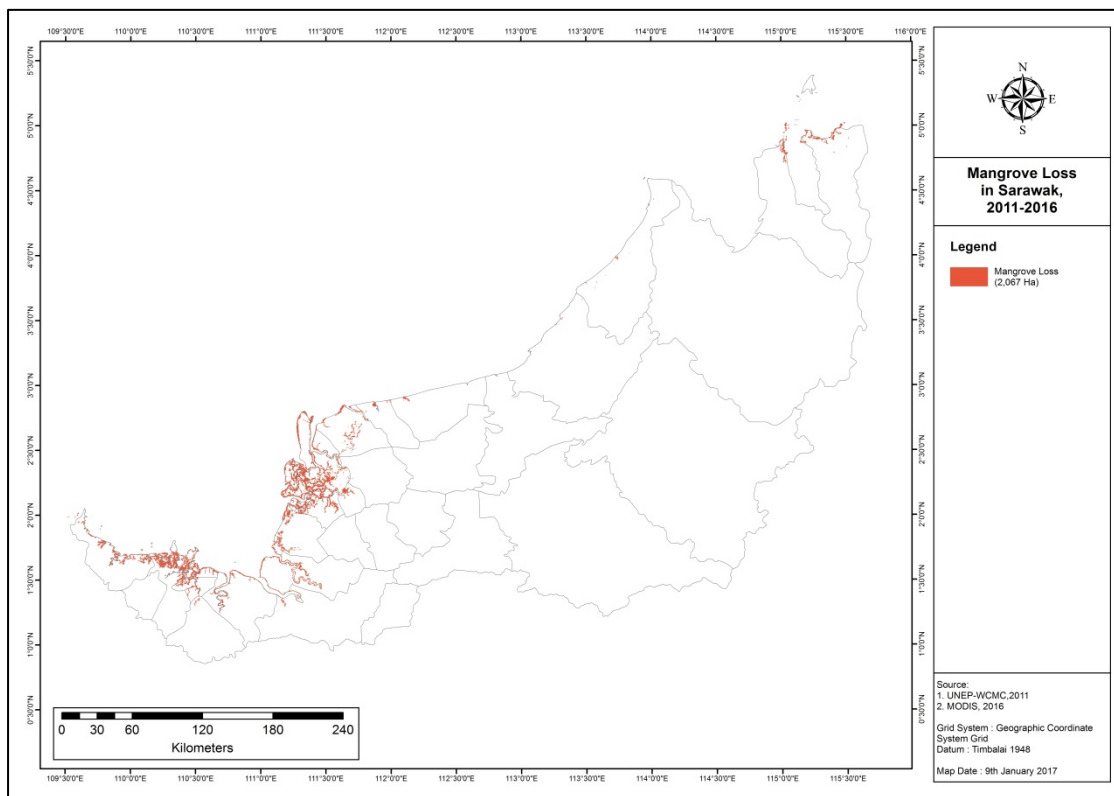


Figure 4: Mangrove loss in Sarawak 2011-2016

## B. The problem(s) to be addressed

There is a lack of landscape based ecological information to guide sustainable development and management of the Rajang-Belawai delta wetlands which contain high conservation value areas.

Irrawaddy dolphins have been identified as a significant species present and using the inland delta areas which are protected from wind and waves by the mangrove systems. They are easily sighted and generally live in harmony with the fishermen there. With large clearing of mangrove wetland areas for industrial and plantation development, potential increase in pollution influx from upcoming industries in the Halal Hub and hydrological changes exerted by dams upstream of the delta, the ecological resilience of this delta wetlands ecosystem and its high conservation value areas are at risk. The resilience of the ecosystem here is very much influenced by flows and connectivity of flows which carries nutrients as well as disperses pollution and the interconnection of the food chain. Irrawaddy dolphins which are currently abundant here may be impacted if pollution levels increase to a level where their food source is affected. A detailed ecological assessment, focusing on the prominent Irrawaddy dolphins and fish breeding areas could serve to provide guidance on thresholds and limits for operating in the area to guide their protection.

### C. Objective(s)

General Objective(s):

To provide credible, science-based ecological information to guide management of the mangrove wetlands in the Rajang-Belawai delta area to ensure conservation of the high conservation values areas and its long term persistence for species survival, in particular the Irrawaddy dolphins and fish breeding areas. The information is intended for STIDC who facilitates the development of the Halal Hub in the area and for the relevant agencies involved in wetlands and biodiversity protection in Sarawak. With integration of good ecological information into management and development of the area, it is hoped that it will facilitate wiser use of the wetlands and guide good practices for conservation and environmental protection by industries and agencies operating in the area. Mangrove clearing in high conservation value areas is avoided, pollution from industries are managed vis-à-vis the protection of the ecosystems e.g. food source for the dolphins, and loss of important species are minimized as much as possible.

Specific Objective(s):

- Objective 1:** To determine the distribution of the Irrawaddy dolphins and their habitats use and important fish spawning areas in the Rajang-Belawai delta.
- Objective 2:** To provide supporting ecological information for a more sustainable development of the Halal Hub which incorporates considerations for protection of biodiversity and ecosystems services in the Rajang-Belawai delta.
- Objective 3:** To establish the community's perception on the Irrawaddy dolphins, fisheries and mangroves and conservation of HCV areas.

### D. Outputs

At the end of this funded Project period, the following outputs for the activities that are funded are:-

- i. A collaborative platform established between Sarawak Forestry Corporation, Forest Department Sarawak, Inland Fisheries Division, Institute of Biodiversity and Environmental Conservation University of Malaysia Sarawak and WWF-Malaysia for the joint survey and recommendations for protection/management of the Rajang Belawai high conservation value areas.
- ii. A report with maps showing the spatial distribution of Irrawaddy dolphins and fish breeding/spawning areas & recommendations for its protection presented to STIDC and Ministry of Resource Planning and Environment (MRPE).
- iii. Perception of the local communities for the identified protection areas is obtained and their awareness on the importance of the areas is improved to encourage joint efforts in managing the HCV areas.

## **E. Activities**

Main activities to be funded by this Project can be divided broadly into 3:

### **a) Formation of a collaborative platform with partners**

To ensure a coordinated and consensus based approach, agencies responsible for the protection of biodiversity and environment will be engaged as partners to collaborate in the survey and present a joint recommendations report to the MRPE and STIDC. STIDC is also an agency under MRPE. WWF-Malaysia engages with the above partners at the early phase of the survey planning to secure their commitments, so that survey results could be integrated into action plans and hence ensuring sustainability of actions following the completion of the studies

### **b) Detailed field surveys**

Activities for field surveys include developing a survey plan that would meet our objectives and conducting the surveys to collect the ecological information needed. Surveys are planned to be collected at different seasonal conditions with the first survey (not covered in this funding) starting end of April, coinciding with the abundance of the 'lumek' fish, which locals say are a food source for the dolphins. The survey would focus on identifying the habitat use areas of the Irrawaddy dolphins and fish breeding areas and to also spatially map these use areas based on analysis of the abundance or frequency of sighting to enable management actions to be planned from a landscape perspective.

### **c) Community perception survey**

It is important that activities and future protection of the area is done with consensus and as far as possible, with participation from the community in the area as it may have positive or negative impacts to their activities and livelihoods in that area. Hence a survey to gauge community's perspectives on the dolphins and thoughts on their conservation and ecotourism initiatives is needed to understand their position with respect to conservation of the HCV areas. Awareness building on dolphins and mangroves importance using awareness package already developed and implemented by UNIMAS is also necessary as part of education on the ecological importance of the areas.

## F. Logical frame of the project

Problems	Objectives	Outputs	Activities
<p><i>Lack of ecological information and hence lack of its integration in development planning of the Halal Hub to guide sustainable development and management of the Rajang-Belawai delta wetlands.</i></p>	<p><b>Objective 1:</b> <i>To determine the distribution of the Irrawaddy dolphins and their habitats use and important fish breeding or spawning area in the Rajang-Belawai delta.</i></p> <p><b>Objective 2:</b> <i>To provide supporting ecological information for a more sustainable development of the Halal Hub which incorporates considerations for protection of biodiversity and ecosystems services in the Rajang-Belawai delta.</i></p> <p><b>Objective 3:</b> <i>To establish the community's perception on the Irrawaddy dolphins, fisheries and mangroves and conservation of HCV areas.</i></p>	<p><i>1.1 A collaborative platform is established with partners</i></p> <p><i>1.2 A report with maps showing the spatial distribution of Irrawaddy dolphins and fish breeding/ spawning areas &amp; recommendations for its protection.</i></p> <p><i>1.3 Support and joint efforts from the local communities for the identified protection areas and protection of the dolphins.</i></p>	<p>Activity 1: Formation of working committee with partner stakeholders (WWF, STIDC, SFC, IF, FDS)</p> <p>Activity 2: Formalization of collaboration through MoU, MoA and other means according to respective agency's requirements.</p> <p>Activity 3: Develop the Irrawaddy dolphin &amp; fish spawning areas field survey plan</p> <p>Activity 4: Training of field support team for the surveys</p> <p>Activity 5: Conduct at least 2 field surveys at different seasonal conditions (July &amp; November).</p> <p>Activity 6: Analysis of field survey data</p> <p>Activity 7: Preparation of zonation map</p> <p>Activity 8: Joint preparation of Report presenting results of the detailed assessments of Irrawaddy dolphins and fish spawning areas in Rajang-Belawai delta, with recommendations for management of the area.</p> <p>Activity 9: Presentation of results and Report to STIDC and the Ministry of Resource Planning and Environment Sarawak.</p> <p>Activity 10: Survey to gauge community's perspectives on the dolphins and thoughts on their conservation and ecotourism initiatives.</p> <p>Activity 11: Awareness building on dolphins and mangroves importance using awareness package already developed and implemented by UNIMAS.</p>

## G. Project management arrangements and stakeholders

No	Agency	Functions	Expected Commitment
1	Inland Fisheries Division Sarawak	R&D for Inland Fisheries Establishment of Tagang Systems Identification of fish sanctuaries	Provide expertise to identify fish spawning areas in the delta.
2	Sarawak Timber Industry Development Corporation (STIDC)	Main authority to develop the World Class Halal Hub in the Rajang delta	Adopt and implement management actions for the dolphins protection Provide on-ground logistics support in Rajang-Belawai.
3	Sarawak Forestry Corporation	Experience with HCV assessments Conducted dolphin studies in the Rajang system Management of Gazetted National Parks	Provide expertise and technical support to develop and implement the Irrawaddy dolphin habitat assessment and recommendations for its protection and management as an ecotourism product in the delta.
4	Forest Department Sarawak	Protection of Wildlife under the Wild Life Protection Ordinance, 1998 (Dolphins are listed as Totally Protected species). Gazettement of National Parks Enforcement for National Parks Conducted studies on crocodiles and proboscis monkeys in Rajang in the past.	Provide the institutional support and platform to convene multi-stakeholder discussions and joint reporting to MRPE.  Provide supporting expertise for other wildlife survey (Adjutant storks, crocodiles, silver leaf and proboscis monkeys).
5	WWF-Malaysia	Initiated ecosystems assessments & hydrological studies for eflows assessments in the Rajang Delta. Conducted studies for the mapping of important fish & crustacean distribution, eco-hydrological riverine systems distribution and Priority Conservation Area distribution in Sarawak.	<b><i>Support stakeholders coordination, funding support and guide integration with watershed management.</i></b>  Provide biodiversity & hydrological information collected for Rajang Delta  Provide spatial planning and mapping expertise for the zonation of the HCV areas.
6	UNIMAS (IBEC)	Marine mammals study Research for biodiversity and environmental protection.	Provide support and technical expertise for the dolphin habitat assessment, community engagement and awareness building.  Provide support and technical expertise for other ecological survey e.g. birds and mammals.
7	Ministry of Natural Resources and Environment Malaysia	Administrative Authority for Ramsar Convention, Malaysia  Ministry in charge of environmental conservation in Malaysia	Provide institutional support and guidance for the implementation of the Project.  Support the monitoring of this Project implementation for the NWF reporting.







## I. Budget

### i) *Budget summary*

This proposal is a sample for your reference and budget information has been removed from this version of the proposal.

### ii) *Overall itemized budget*

## J. Follow Up

- a) The results of the survey is planned to be further translated into a management plan of the area to detail out responsibilities and action plans for managing the area for its the ecological resilience amidst development in the delta.
- b) Potentially, ecotourism based action plan and other conservation finance schemes may be pursued as part of the structure of the management plan to ensure that financial income is also a benefit of the conservation actions in the long term.
- c) While this Project is focused in the delta, it was actually initiated as part of bigger project for an integrated watershed management initiative for Rajang river basin. The integrated watershed management initiative is being pursued collaboratively by the Natural Resources and Environment Board, Forest Department Sarawak (HoB), Sarawak Energy Berhad and WWF-Malaysia. The result from surveys would also be fed into the watershed management plan which is aimed to be developed, to guide management of flows downstream of dams to support the ecological resilience of ecosystems in the delta.

## K. Bibliography

Draft Code of Conduct for the Sustainable Management of Mangrove Ecosystems

<http://www.fao.org/sustainable-forest-management/toolbox/tools/tool-detail/en/c/450036/>

Chai, P. K. (1974). *The potential of mangrove forests in Sarawak*. 37(4): 284-288.

Giri C, Ochieng E, Tieszen LL, Zhu Z, Singh A, Loveland T, Masek J, Duke N (2011). *Status and distribution of mangrove forests of the world using earth observation satellite data*.

James Bali et.al (2014). *Distributions, densities and abundances of irrawaddy dolphins (Orcaella brevirostris) in Batang Rajang & Batang Saribas of Sarawak, Malaysian Borneo*. In: Proceedings of the International Conference on Marine Science & Aquaculture (ICOMSA), 18-20 March, Kota Kinabalu, Sabah.

Minton, G., Peter, C., Zulkifli Poh, A. N. and Ngeian, J. 2011 *Conservation-based Research on Coastal Dolphins in Sarawak: Report on 2011 Activities*. December 2011. 23p.

<http://www.ibec.unimas.my/SDP2008> .

Shabdin Mohd. Long. 2014. *Sarawak Coastal Biodiversity: A Current Status*. Kuroshio Science 8-1, 71-84.

Spalding, M. D., Blasco, F., Field, C. D. (Eds.) (1997). *World Mangrove Atlas*. Okinawa (Japan): International Society for Mangrove Ecosystems. 178 pp. Compiled by UNEP-WCMC, in collaboration with the International Society for Mangrove Ecosystems (ISME). (version 3).

URL: <https://archive.org/details/worldmangroveat197spal> ; <http://data.unepwcmc.org/datasets/6>

Spalding M, Kainuma M, Collins L (2010). *World Atlas of Mangroves (version 1.1)*. A collaborative project of ITTO, ISME, FAO, UNEP-WCMC, UNESCO-MAB, UNU-INWEH and TNC. London (UK): Earthscan, London. 319 pp.

The Tanjung Manis New Township Plans Brochure

The Tanjung Manis Halal Hub Development Brochure provided by Bahagian Pembangunan Usahawan Industri Halal, Chief Minister's Office.