



GCF
FUNDED ACTIVITY AGREEMENT
(GRANTS)

between

PALLI KARMA-SAHAYAK FOUNDATION

and

GREEN CLIMATE FUND

FUNDED ACTIVITY: FP206
“Project Name: Resilient Homestead and
Livelihood Support to the Vulnerable Coastal
People of Bangladesh (RHL)”

Dated _____ 2023



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Funded Activity Agreement (Grants)

This FUNDED ACTIVITY AGREEMENT (the “**FAA**” or this “**Agreement**”) is entered into on _____ 2023 between:

PALLI KARMA-SAHAYAK FOUNDATION, a non-profit organization established by the Peoples’ Republic of Bangladesh under the Companies Act, 1913 (as replaced by the Companies Act, 1994) and having its office at PKSF Bhaban, Plot-E-4/B, Agargaon Administrative Area, Sher-E-Bangla Nagar, Dhaka-1207, Bangladesh (the “**Accredited Entity**” or “**PKSF**”); and

The **GREEN CLIMATE FUND**, designated as an operating entity of the financial mechanism under Article 11 of the United Nations Framework Convention on Climate Change and established pursuant to the Governing Instrument for the Green Climate Fund, approved by the COP at its seventeenth session on 11 December 2011 and is annexed to Decision 3/CP.17, possessing juridical personality in order to operate effectively internationally, having such legal capacity as is necessary for the exercise of its functions and the protection of its interests and having its headquarters at Songdo, Incheon, Republic of Korea (“**GCF**” or the “**Fund**”),

each a “**Party**” and together the “**Parties**”.

WHEREAS

- (A) The Accredited Entity and the GCF entered into an accreditation master agreement on 19 November 2018, which became effective on 21 December 2018 (the “**AMA**”), which sets forth, amongst others, the general terms and conditions applicable between the Parties in connection with a funded activity;
- (B) In accordance with clause 4.11 of the AMA, the Accredited Entity has submitted to the Fund a funding proposal which is attached to this Agreement as Annex 1 (the “**Funding Proposal**”) requesting funding for the activity described therein (the “**Funded Activity**” or “**Project**”);
- (C) The NDA of the Host Country has issued the No-Objection Letter with respect to the Project, as described in the Funding Proposal;
- (D) The Board of the Fund, by its decision B.36/___ (“**Approval Decision**”), approved the Funding Proposal in the amount of forty-two million, two hundred and one thousand and two hundred US Dollars (USD 42,201,200) (the “**GCF Proceeds**”), subject to the conditions set out annex ___ “List of conditions and recommendations” of the Approval Decision; and
- (E) In accordance with clause 6.02 of the AMA, the Parties now wish to enter into this Agreement in order to set out the agreed terms for the implementation of the Funded Activity.

NOW THEREFORE, THE PARTIES HERETO AGREE AS FOLLOWS:

Clause 1. Definitions; AMA

- 1.01 The terms of the AMA are incorporated in its entirety, and form an integral part of, this Agreement and pursuant to clauses 1.02 and 1.03 of the AMA, any derogations from, deviations or modifications to the AMA in relation to the Funded Activity are set forth in this Agreement. In case of termination of the AMA, its terms as incorporated in this Agreement shall continue to apply.



- 1.02 In the event of a conflict between:
- (a) The terms and conditions in the Clauses of this Agreement and the terms and conditions of any of its Schedules or Annex(es), the terms and conditions in the Clauses of the Agreement shall prevail; and
 - (b) The terms and conditions in the Schedules to this Agreement and the terms and conditions in the Annex(es) to this Agreement, the terms and conditions in the Schedules shall prevail.
- 1.03 Any references in this Agreement to “Clause”, “Schedule” or “Annex” shall refer to a clause of, a schedule to or an annex to, this Agreement, unless otherwise specified or if the context requires otherwise.
- 1.04 Wherever used in this Agreement, terms defined in the AMA shall have the respective meanings therein set forth unless modified herein or the context otherwise requires. Additional capitalized terms used in this Agreement shall have the following meanings:
- (a) “**Accredited Entity Fee**” shall have the meaning ascribed to it in Clause 4.01;
 - (b) “**Activity(ies)**” shall have the meaning ascribed to it in Schedule 1;
 - (c) “**Budget**” means the costs of the Funded Activity and the breakdown thereof, as set out in Part A of Schedule 2;
 - (d) “**Closing Date**” means the date which is four (4) years and six (6) months after the Effective Date, on which the Accredited Entity’s right to receive Disbursements in respect of the Funded Activity will terminate, unless extended by the Fund in writing;
 - (e) “**Co-financier**” means the following co-financier of the Project:
 - (i) The Accredited Entity for an amount of seven million, seven hundred and eighty-eight thousand US Dollars (USD 7,788,000), of which (1) six million and six hundred thousand US Dollars (USD 6,600,000) will be provided in the form of a loan for Outputs 2.1 and 2.2, and (2) one million, one hundred and eighty-eight thousand US Dollars (USD 1,188,000) will be provided in the form of in-kind contributions for Output 3.1 and project management cost, in accordance with the Budget;
 - (f) “**Co-financing**” means any and all of the funding to be provided by the Co-financier to finance the Project;
 - (g) “**Co-financing Agreement(s)**” means the legal agreement(s) and/or arrangement(s) under which the Co-financier will provide its Co-financing to assist in the Project implementation;
 - (h) “**Completion Date**” means the date which is no later than six (6) months after the Closing Date, except if otherwise agreed with the Fund, upon which the Accredited Entity shall finalize the implementation of all Activities set out under the Funded Activity;
 - (i) “**Disbursement(s)**” means a disbursement of all or part of the Grant made, or to be made, available by the Fund to the Accredited Entity, upon the receipt of a Request for Disbursement and pursuant to the terms and conditions set out in this Agreement;
 - (j) “**Disbursement Plan**” means the disbursement plan included in Part B of Schedule 2;



- (k) **“Disbursement Schedule”** means the disbursement schedule to be provided in accordance with Clause 7.01(e);
- (l) **“Effective Date”** shall have the meaning ascribed to it in Clause 7.01;
- (m) **“Eligibility Criteria for Selection of Implementing Entities”** means the set of criteria, set out in Schedule 9, used by the Accredited Entity acting as the Executing Entity for selection of the Implementing Entities;
- (n) **“Eligible Expenditures”** means any reasonable costs of Goods, Services or Works required for the implementation of the Funded Activity to be financed with the Grant, in accordance with this Agreement, the AMA and the Funding Proposal;
- (o) **“Evaluation Policy”** means the Fund’s evaluation policy adopted in Decision B.BM 2021/07;
- (p) **“Event of Default”** means, in addition to those set forth in clause 19.01 of the AMA, any event or circumstance set forth in Clause 11.01;
- (q) **“Exclusion List”** means the persons or activities prohibited from receiving any funding under the Project, as contained in Schedule 10;
- (r) **“Executing Entity”** means the entity specified in Clause 2.02;
- (s) **“Final Beneficiaries”** means the persons (either individuals and/or legal entities) to which the Accredited Entity acting as the Executing Entity shall make available the GCF Proceeds and/or which will benefit from the implementation of the Project, as described in the Funding Proposal;
- (t) **“Final Eligibility Criteria”** means the set of criteria, which shall be consistent with the Initial Eligibility Criteria and which the Implementing Entities shall apply in screening the Final Beneficiaries of the Project and the Accredited Entity acting as the Executing Entity shall apply in the selection of the Final Beneficiaries;
- (u) **“Funded Activity”** or **“Project”** shall have the meaning ascribed thereto in Recital (B) of this Agreement;
- (v) **“Funding Proposal”** shall have the meaning ascribed thereto in Recital (B) of this Agreement;
- (w) **“GCF Account”** means the bank account to be opened and held by the Accredited Entity in accordance with the AMA, for the purpose of the Funded Activity, and to be notified to the Fund in the Request for Disbursement;
- (x) **“Gender Action Plan”** means the project-level gender action plan prepared by the Accredited Entity for the Project in accordance with the Updated Gender Policy, which was provided by the Accredited Entity as part of the Funding Proposal approved by the Fund;
- (y) **“Grant”** means the GCF Proceeds in the amount specified in Clause 3.01, which the Fund has decided to make available, in the form of a non-reimbursable grant, to be used by the Accredited Entity for the financing of the Funded Activity, which shall be exclusive of the Accredited Entity Fee;
- (z) **“Host Country”** means the People’s Republic of Bangladesh;
- (aa) **“Implementation Arrangements”** mean the contractual arrangements to be entered into and/or the administrative arrangements to be established by the different parties involved in the implementation of the Funded Activity as set out in Schedule 3;



- (bb) **“Implementation Plan”** means the calendar for the implementation of the Funded Activity set forth in Schedule 5;
- (cc) **“Implementing Entities”** shall have the meaning ascribed to it in Schedule 3;
- (dd) **“Indigenous Peoples Policy”** means the Fund’s indigenous peoples policy adopted in Decision B.19/11;
- (ee) **“Initial Eligibility Criteria”** means the minimum criteria contained in Schedule 8 for the selection of the Final Beneficiaries on which Final Eligibility Criteria shall be based;
- (ff) **“Integrated Results Management Framework”** means the Fund’s integrated results management framework adopted in Decision B.29/01;
- (gg) **“Notice of Payment”** means a written notice to be provided by the Accredited Entity to the GCF, in the form of the template contained in Schedule 7, for the transfer of any Unused Funds or Investment Income to the Fund;
- (hh) **“Outcome(s)”** shall have the meaning ascribed to it in Schedule 1;
- (ii) **“Output(s)”** shall have the meaning ascribed to it in Schedule 1;
- (jj) **“Project Area”** means the following seven (7) districts of Bangladesh coastal zone: Satkhira, Khulna, Bagerhat, Barguna, Patuakhali, Bhola and Cox’s Bazar;
- (kk) **“Project Documents”** means all documents, in particular agreements, delivered or executed by the Accredited Entity in relation to the implementation of the Funded Activity, including but not limited to: (i) this Agreement; and (ii) the Implementation Arrangements; and (iii) the Co-financing Agreements;
- (ll) **“Reporting Period”** means the period starting on the Effective Date and ending on the Completion Date;
- (mm) **“Request for Disbursement”** means a request for disbursement substantially in the form set forth in Schedule 6;
- (nn) **“Revised Environmental and Social Policy”** means the Fund’s revised environmental and social policy adopted in Decision B.BM-2021/18;
- (oo) **“SEAH”** means Sexual Exploitation, Sexual Abuse, and Sexual Harassment;
- (pp) **“Sexual Abuse”** means the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions;
- (qq) **“Sexual Exploitation”** means any actual or attempted abuse of a position of vulnerability, differential power, or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially, or politically from the sexual exploitation of another;
- (rr) **“Sexual Harassment”** includes unwelcome sexual advances, requests for sexual favours, or other verbal or physical conduct of a sexual nature, that interferes with work, is made a condition of employment, or creates an intimidating, hostile, or offensive environment in connection with a GCF-financed activity;
- (ss) **“Sub-Project”** has the meaning ascribed to it in Clause 10.02(I) of this Agreement;
- (tt) **“Sub-Project Disclosure Package”** has the meaning ascribed to it in Clause 10.02(I) of this Agreement;
- (uu) **“Taxes”** means any tax, levy, impost, fee, duty or other charge or withholding of a similar nature (including any penalty or interest payable in connection with a



- failure to pay or any delay in the payment of any such amounts) imposed, assessed, levied or collected by any authority or in any jurisdiction, whether in effect at the date of execution of this Agreement or imposed thereafter;
- (vv) **“Unused Funds”** means any undisbursed or unused funds from the GCF Proceeds, for which no further disbursements, liabilities or costs are due to be made or paid by the Accredited Entity for a Funded Activity; and
- (ww) **“Updated Gender Policy”** means the Fund’s updated gender policy adopted in Decision B.24/12, as contained in annex XXIII to that Decision;
- 1.05 For the purposes of this Agreement, the following provisions of the AMA are modified as follows:
- (a) The definition of “Policy on Prohibited Practices” shall mean the Policy on Prohibited Practices of the Fund adopted in Decision B.22/19;
- (b) The definition of “Prohibited Practices” shall mean the prohibited practices set forth in the Policy on Prohibited Practices;
- (c) Exhibit A of the AMA shall be considered null and void;
- (d) Clause 28.01 of the AMA shall be deleted in its entirety and replaced with: *“This Agreement and any non-contractual obligations arising out of or in connection with it shall be governed by and construed in accordance with English law.”*;
- (e) Clause 28.02 of the AMA shall be deleted in its entirety and replaced with: *“Not used”*;
- (f) Clause 29.01 of the AMA and its accompanying header shall be deleted in their entirety and replaced with: *“Not used”*; and
- (g) Clause 29.03 of the AMA shall be deleted in its entirety and replaced with:
- “Any dispute, controversy or claim arising out of or relating to this Agreement, or the breach, termination or invalidity thereof, that has not been resolved through negotiation pursuant to Clause 29.02 above, shall be settled by arbitration in accordance with the ICC Arbitration Rules, and:*
- (a) *The appointing authority shall be in accordance with the ICC Arbitration Rules;*
- (b) *The number of arbitrators shall be three;*
- (c) *The place of arbitration shall be Singapore;*
- (d) *The language to be used in the arbitral proceedings shall be English; and*
- (e) *The arbitration decision shall be final and binding on the Parties and there shall be no appeal.”*
- 1.06 For the purposes of this Agreement, the following definitions are inserted in clause 1.01 of the AMA in alphabetical order:
- (a) **“Arbitration Rules”** means the arbitration rules of the arbitral body or organization specified in Clause 29.03 of this Agreement in force as at the date of this Agreement; and
- (b) **“ICC”** means the International Chamber of Commerce.



Clause 2. The Funded Activity

- 2.01 The Accredited Entity shall carry out the Funded Activity with due diligence and efficiency, and in conformity with sound financial, economic, technical, social, environmental and administrative practices, and shall provide, promptly as needed, the funds, facilities, services and other resources required for the Funded Activity.
- 2.02 The Accredited Entity shall act as the Executing Entity for this Funded Activity, as further described in Schedules 1 and 3.
- 2.03 The Accredited Entity shall carry out its obligations pursuant to the AMA and this Agreement when entering into the relevant contractual arrangements and selecting the Implementing Entities and Final Beneficiaries, for the implementation of the Funded Activity.
- 2.04 Except as the Parties may otherwise agree, the Funded Activity shall be carried out in accordance with the Implementation Arrangements and within the timeframe set out in the Implementation Plan.
- 2.05 The implementation of all the Activities of the Funded Activity shall be completed no later than the Completion Date and shall be subject to confirmation by the Fund based on the completion report (final APR) to be provided in accordance with Schedule 4.
- 2.06 The Accredited Entity may request in writing to the Fund an extension of the Closing Date and/or the Completion Date setting forth its justification for such an extension request, which shall approve or deny such request within thirty (30) calendar days following the Accredited Entity's request, except in case such extension needs the GCF Board approval, which may require a longer period to respond to the Accredited Entity's request.
- 2.07 The financial reporting and accounting currency for the Funded Activity shall be US Dollars.
- 2.08 The Accredited Entity shall open and maintain, under its exclusive name and control, the GCF Account, and shall take adequate measures to ensure that the GCF Proceeds are not commingled with any other funds.
- 2.09 In accordance with the Funding Proposal, the total funding for the implementation of the Funded Activity is estimated to be the equivalent of forty-nine million, nine hundred and eighty-nine thousand and two hundred US Dollars (USD 49,989,200), which includes the GCF Proceeds and the Co-financing.

Clause 3. The Grant; Disbursements

- 3.01 **Amount of the Grant.** Subject to the terms and conditions of this Agreement, the Fund agrees to make available to the Accredited Entity by or before the Closing Date, an amount up to forty-two million, two hundred and one thousand and two hundred US Dollars (USD 42,201,200) of GCF Proceeds in the form of a non-reimbursable grant for the purposes of, and to assist in, financing the implementation of the Funded Activity.
- 3.02 **Disbursements.** The Grant shall be transferred, in accordance with the Disbursement Plan, to the Accredited Entity upon the fulfillment by the Accredited Entity, to the satisfaction of the Fund, of the relevant conditions precedent to Disbursement set forth in Clause 9 below. In accordance with this Clause 3.02, the Grant shall be transferred to the bank account to be notified by the Accredited Entity to the Fund in writing in the Request for Disbursement ("**GCF Account**").



- 3.03 **Grant Currency.** The GCF Holding Currency for the Disbursements shall be US Dollars, and the transfers of Unused Funds and Other GCF Funds to the GCF shall be exclusively made in US Dollars, unless otherwise agreed by the Fund.
- 3.04 For the implementation of the Funded Activity, the Accredited Entity shall make the GCF Proceeds available for the implementation of the Project under terms and conditions consistent with the AMA and this Agreement.
- 3.05 For the implementation of the Funded Activity, the Accredited Entity shall ensure that: (a) the GCF Proceeds are exclusively used to finance the Eligible Expenditures in accordance with the AMA and this Agreement, as set out in the Funding Proposal, and as further specified in the Budget; and (b) all Eligible Expenditures shall be accrued before the Completion Date.
- 3.06 Any Investment Income as well as any other income, interest or gains earned on the balances held in the GCF Account shall be for the benefit of the GCF Account, and shall be transferred, together with any Unused Funds, on an annual basis to the GCF to the account notified to the Accredited Entity following the Effective Date. The Accredited Entity shall deliver to the GCF a Notice of Payment in respect of such Investment Income and Unused Funds no later than fifteen (15) calendar days after the end of each December, and shall transfer the relevant Unused Funds or Investment Income to the GCF within fifteen (15) calendar days of such Notice of Payment. The GCF may, upon written notice to the Accredited Entity, change the instructions for the transfer of Investment Income or Unused Funds.
- 3.07 The Fund shall not accept any payments made by a third party on behalf of the Accredited Entity.

Clause 4. Accredited Entity Fee

- 4.01 The Accredited Entity's fee in relation to the GCF Proceeds for the Funded Activity shall be amount equal to six and ninety-eight hundredths per cent (6.98%) of the aggregate amount of GCF Proceeds used to finance the Funded Activity (the "**Accredited Entity Fee**").
- 4.02 **Disbursement of the Accredited Entity Fee.** Ninety per cent (90%) of the Accredited Entity Fee shall be disbursed by the GCF to the Accredited Entity in instalments at the time of each Disbursement. The amount of each instalment shall be proportionate to the amount of the relevant Disbursement, and such instalments shall be transferred to the bank account of the Accredited Entity indicated in the Request for Disbursement.
- 4.03 If, as at the Completion Date:
- (a) The aggregate amount of GCF Proceeds used to finance the Funded Activity was less than ninety per cent (90%) of the GCF Proceeds, then the Accredited Entity shall, within thirty (30) calendar days' written notice from the Fund, refund to the GCF, the portion of the disbursed Accredited Entity Fee in relation to the unutilized portion of the GCF Proceeds; or
 - (b) The aggregate amount of GCF Proceeds used to finance the Funded Activity was ninety per cent (90%) of the GCF Proceeds, then the GCF shall pay no further amount in respect of the Accredited Entity Fee to the Accredited Entity; or
 - (c) The aggregate amount of GCF Proceeds used to finance the Funded Activity was greater than ninety per cent (90%) of the GCF Proceeds, then, within 60 calendar days after the Accredited Entity submits to the GCF the Project completion report



(final APR) to the satisfaction of the GCF, the GCF shall disburse to the Accredited Entity an amount, up to and including ten per cent (10%) of the Accredited Entity Fee.

- 4.04 The aggregate Accredited Entity Fee received and retained by the Accredited Entity shall not exceed six and ninety-eight hundredths per cent (6.98%) of the total GCF Proceeds used to finance the Funded Activity, unless otherwise agreed by the Fund.
- 4.05 The Accredited Entity Fee will be disbursed to the Accredited Entity in addition to the GCF Proceeds.
- 4.06 If the Fund decides to suspend Disbursements, the Fund may also, at its own discretion, suspend the payment of Accredited Entity Fee.
- 4.07 **Reporting on the Accredited Entity Fee.** The Accredited Entity shall report on the usage of the Accredited Entity Fee in each APR to be submitted in accordance with the AMA.

Clause 5. Funded Activity Implementation

- 5.01 **Modifications to the Funded Activity.** For the purposes of clause 11.03 of the AMA, the Accredited Entity shall inform the Fund as soon as possible of any proposed modification to the Funded Activity which could reasonably constitute a Major Change, and seek the Fund's instructions on the necessary steps to be taken to address such event or to effect such proposed modification, which may involve seeking a new No-Objection Letter and/or new Board approval.
- 5.02 For purposes of Clause 5.01 above, a Major Change may include:
 - (a) A change in the scope of the Funded Activity or use of the GCF Proceeds which would result in a substantial deviation from the intended Outcomes that the Accredited Entity seeks to achieve from the implementation of the Funded Activity, including its climate and/or environmental impacts;
 - (b) An adverse impact on the ability of the Accredited Entity to operate the Funded Activity;
 - (c) The requirement for an additional financial commitment from the GCF;
 - (d) A change of the Executing Entity or an adverse change in the legal status of the Executing Entity or any third party involved in the implementation of the Funded Activity that materially and adversely impacts implementation of the Funded Activity;
 - (e) A material shortfall resulting from the suspension, cancellation, termination or not coming into effect, in whole or in part, of any Co-financing or a Co-financing Agreement, unless adequate funds for the Project are available from other sources on terms and conditions consistent with the affected Co-financing or Co-financing Agreement;
 - (f) Any changes that would render the Funded Activity inconsistent with the GCF's mandate or its rules, policies and procedures;
 - (g) The assignment or transfer of all or a material part of the Accredited Entity's responsibilities to another party;
 - (h) Any material and adverse change in the pricing and financial structure of the Funded Activity;



- (i) Any change in the Funded Activity that results in a change of the environmental and social safeguards from a lower to a higher environmental and social risk category, or changes within such category that would cause additional safeguards to be applied or require additional due diligence by either Party and/or;
- (j) A delay in the completion of the Funded Activity or any of its major components that materially and adversely affects the achievement of the intended Outcomes.

Clause 6. Administration of Grant by the Accredited Entity

6.01 **Permitted Reallocation.** Any reallocation of the GCF Proceeds among the Project Activities as described in the Budget resulting in a variation of more than ten per cent (10%) of the previously agreed Budget for the relevant Activities from which and/or to which the funds are to be reallocated, must be approved in writing by the Fund in advance. For avoidance of doubt, the GCF Proceeds shall not be reallocated to, or used to finance, any Activities (or part thereof) which will be financed with Co-financing pursuant to the Budget, unless otherwise agreed in writing by the Fund in advance.

Notwithstanding the above, any increase in the amount allocated to project management costs, when compared with the Budget, must be communicated by the Accredited Entity to the Fund, and approved in writing by the Fund in advance.

6.02 **Retroactive financing.** The GCF Proceeds shall not be used to finance any commitments, expenditures or costs incurred prior to the Effective Date.

6.03 **Taxation.**

- (a) All applicable Taxes shall be borne by the Project and the Fund shall not be required to make any additional contribution, including for the payment of Taxes, for and during the implementation of the Project.
- (b) The Accredited Entity shall not withhold any Taxes or other deductions from any amounts to be transferred by the Accredited Entity to the Fund, including Investment Income, Unused Funds or any assets held in the GCF Account, save for withholding tax required by Bangladeshi law to be applied on the interest accrued on the amounts in the GCF Account, which shall be deducted from the payment of such Investment Income to the GCF.
- (c) **Registration costs.** The Accredited Entity shall pay directly, or, if applicable, reimburse the Fund in case of an advance made by the Fund, the costs of all stamp duty, registration and other similar Taxes payable in respect of this Agreement or any potential amendment thereto.

Clause 7. Effectiveness

7.01 Subject to clause 6.02 of the AMA and except for Clauses 7.02 and 7.03 below, this Agreement shall enter into effect on the date upon which the Fund dispatches to the Accredited Entity a notice of its acceptance of the evidences specified below ("**Effective Date**"):

- (a) A duly authorized and executed copy of this Agreement;
- (b) A legal opinion or certificate, which has been signed by the most senior legal officer of the Accredited Entity who is qualified to practice the laws of Bangladesh or which has been issued by a lawyer qualified to practice the laws of Bangladesh, in a form and substance satisfactory to the Fund, confirming that this Agreement entered into by the Accredited Entity has been duly authorized or ratified by all



necessary corporate actions, duly executed and delivered on behalf of the Accredited Entity;

- (c) A legal opinion as to English law, issued by a reputable and nationally recognised law firm, confirming that, under the governing law of this Agreement, this Agreement is legally binding upon and enforceable against the Accredited Entity in accordance with its governing law;
 - (d) A legal opinion or certificate, which has been signed by the most senior legal officer of the Accredited Entity, in form and substance satisfactory to the Fund, confirming that the Co-financing has been duly authorized by all necessary corporate actions of the Accredited Entity;
 - (e) An indicative Disbursement Schedule, in form and substance satisfactory to the Fund, indicating month and year for the disbursement of the GCF Proceeds by the Fund to the GCF Account for the implementation of the Funded Activity; and
 - (f) A detailed procurement plan for the Project, in a form and substance satisfactory to the Fund.
- 7.02 If, before the Effective Date, any event has occurred which would entitle the Fund to suspend the right of the Accredited Entity to receive Disbursements if this Agreement had been effective, the Fund may postpone the dispatch of the notice referred to in Clause 7.01 until such event (or events) has (or have) ceased to exist.
- 7.03 ***Termination for Failure to Become Effective.*** This Agreement and all obligations of the Parties under it shall terminate if it has not entered into effect by the date which falls ninety (90) calendar days after the date of execution of this Agreement, unless the Fund, after consideration of the reasons for the delay and following consultations with the Accredited Entity, establishes a later date for the purpose of this Clause 7.03 by notice to the Accredited Entity.

Clause 8. Reporting, Monitoring and Evaluation Schedule

- 8.01 The reporting and monitoring of the Funded Activity shall be done in accordance with Schedule 4 and consistent with the Integrated Results Management Framework.
- 8.02 The interim and final evaluations shall be submitted to the Fund within the timelines set out in Schedule 4 and conducted in line with the Evaluation Policy and contain the assessments of paradigm shift potential and enabling environment as outlined in the Integrated Results Management Framework.

Clause 9. Conditions Precedent to Disbursement

- 9.01 The obligation of the Fund to make any Disbursements under this Agreement shall be subject to the following conditions having been fulfilled to the satisfaction, in form and substance, of the Fund:
- (a) *Conditions precedent to first Disbursement:*
 - (i) Effectiveness of this Agreement;
 - (ii) Delivery to the Fund by the Accredited Entity of evidence of the authority of the person or persons authorized to sign each Request for Disbursement (with respect to the GCF Proceeds and the Accredited Entity Fees) under this Agreement, and the authenticated specimen signature of each such persons; and



- (iii) Delivery to the Fund by the Accredited Entity of a written confirmation issued by an authorized officer of the Accredited Entity, that the GCF Account has been established, together with a copy of the SWIFT message issued by the relevant bank(s) to the Accredited Entity or a letter from such bank(s), addressed to the GCF, confirming and indicating the owner of the accounts indicated in the Request for Disbursement, name of the bank and the bank account number;
 - (b) Conditions precedent for second disbursement
 - (i) Delivery to the Fund by the Accredited Entity, within three (3) months after first Disbursement, of the Final Eligibility Criteria in the form of a report containing a detailed methodology, consultation reports and the detailed socio-economic profile of the selected households;
 - (c) General conditions precedent for all Disbursements:
 - (i) Other than in relation to the first Disbursement, delivery to the Fund by the Accredited Entity of evidence that at least seventy per cent (70%) of the GCF Proceeds previously disbursed by the Fund under this Agreement have been cumulatively spent by the Accredited Entity for the implementation of the Funded Activity;
 - (ii) Other than in relation to the first Disbursement, delivery to the Fund by the Accredited Entity of APRs and Financial Information in accordance with the AMA and this Agreement;
 - (iii) Delivery to the Fund by the Accredited Entity of a Request for Disbursement, signed by the person or persons authorized to do so, no later than thirty (30) calendar days prior to the date on which the Disbursement is requested to be made, which shall not be later than the Closing Date;
 - (iv) Confirmation to the Fund by the Accredited Entity that there is no event of default occurring with respect to this Agreement; and
 - (v) Delivery to the Fund by the Accredited Entity of evidence indicating the status and amount of Co-financing disbursed and applied to the implementation of the Funded Activity up to the date of the request for funds made by the Accredited Entity;
- 9.02 If within thirty (30) calendar days from the Effective Date, or such longer period established by the Fund in writing, the Accredited Entity has not requested the first Disbursement or the conditions precedent for the first Disbursement established in Clause 9.01 have not been fulfilled, the Fund may terminate this Agreement by giving notice to the Accredited Entity.
- 9.03 If, at the Closing Date, the Accredited Entity has not requested the Disbursement of the full amount of the GCF Proceeds at least thirty (30) calendar days prior to such date, or the Fund has not otherwise disbursed the full amount of the GCF Proceeds, the undisbursed portion of the GCF Proceeds shall automatically be cancelled and no longer available for Disbursement.



Clause 10. Additional Representations, Warranties and Covenants of the Accredited Entity

- 10.01 In addition to clause 18.01 of the AMA, and in the manner described therein, the Accredited Entity, as of the date of execution, on the Effective Date, on the date of each Request for Disbursement and the date of each Disbursement, represents and warrants that:
- (a) The Accredited Entity is a non-profit organisation, duly incorporated and validly existing under the laws of the People's Republic of Bangladesh and it has the power to own its assets and a license to carry on its business in the People's Republic of Bangladesh as it is being conducted;
 - (b) There are no events or circumstances of which the Accredited Entity is or should reasonably have been aware that may substantially interfere with the performance of its obligations under this Agreement, the AMA or with the implementation of the Funded Activity, or jeopardize the achievements of any objectives of the Funded Activity, or that might otherwise be reasonably expected to constitute a Major Change;
 - (c) No event of default is occurring with respect to this Agreement or the Funded Activity;
 - (d) Under the laws of the applicable jurisdiction of the Accredited Entity, it is not necessary that (i) this Agreement or any of the Project Documents to which the Fund is a party be filed, recorded or enrolled with any court or other authority in that jurisdiction; or (ii) any stamp, registration or similar Taxes be paid or imposed on or in relation to this Agreement, any other Project Documents to which the Fund is a party or the transactions contemplated therein, to ensure the legality, validity, enforceability or admissibility in evidence of this Agreement and such Project Documents;
 - (e) The Accredited Entity has carried out all due diligence as necessary to ensure that the Funded Activity is at all times in compliance with the applicable requirements under the Updated Gender Policy and Indigenous Peoples Policy; and
 - (f) Neither the Accredited Entity nor any officers, directors, authorized employees, agents or representatives of the Accredited Entity has committed or engaged in any Prohibited Practice, as defined in the AMA, with respect to any transactions contemplated by this Agreement.
- 10.02 In addition to clause 18.02 of the AMA and other relevant clauses of this Agreement, the Accredited Entity covenants that as from the Effective Date it shall:
- (a) Inform the Fund, in the unaudited financial reports, semi-annual financial information, and in the APRs to be submitted in accordance with clauses 15.02(b), 17.02(a) and 17.02(b) of the AMA, on the status and amount of the Co-financing that has been disbursed and applied for the implementation of the Funded Activity;
 - (b) Not amend or alter any of the Co-financing Agreements in such way that the Co-financing is reduced or delayed, unless it is previously consulted with, and consented by, the Fund;
 - (c) Promptly inform the Fund of any cancellation or reduction or prepayment (whether in whole or in part) of the Co-financing;



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- (d) Provide its Co-financing in a timely manner for the complete and uninterrupted execution of the Funded Activity, as described in the Funding Proposal;
 - (e) Take appropriate measures to ensure that the Co-financing and the GCF Proceeds are disbursed and/or applied proportionally and simultaneously for the implementation of the Funded Activity;
 - (f) Not assign, sell or transfer any portion of, or participation over, its Co-financing to any third party, unless otherwise agreed by the Fund in writing;
 - (g) Ensure that the GCF Proceeds will not support or finance, directly or indirectly, any activities with potential environmental and social risks that are equivalent to category A pursuant to the Environmental and Social Risks Categories to be conducted as part of the Project;
 - (h) Undertake and/or put in place any adequate measures in order to ensure that the management of the environmental and social risks and impacts arising from the Funded Activity complies at all times with the recommendations, requirements and procedures set forth in the Environmental and Social Management Framework, which was provided by the Accredited Entity to the Fund before the Approval Decision and which shall not be amended, abrogated or waived without prior written approval of the Fund;
 - (i) Obtain, or ensure that the Implementing Entities and the Final Beneficiaries shall obtain, all land and rights in respect of land that are required to carry out the Funded Activity and shall promptly furnish to the Fund, upon its request, evidence satisfactory to the Fund that such land and rights in respect of the land are available for the purposes of the Funded Activity;
 - (j) Prior to commencing any construction works or activities for the implementation of the Project, submit to the Fund a detailed Environmental and Social Management Plan ("ESMP") related to the relevant construction works or activities to be executed, in a form and substance satisfactory to the Fund;
 - (k) Ensure that (i) the infrastructure civil works to be implemented as part of the Funded Activity are designed, constructed, operated and decommissioned in accordance with good international industry practices and any other applicable standards, and the Environmental and Social Management Framework, taking into consideration health and safety risks to workers and third parties or affected communities, and (ii) the quality of such infrastructure civil works is in accordance with international best practices;
 - (l) In relation to each Category B Sub-Project (pursuant to the Environmental and Social Risk Categories, and for the purposes of this covenant, "**Sub-Project**" shall mean activities generally grouped for execution in close geographic proximity), disclose the Environmental and Social Impact Assessment (ESIA) (including a Conflict Sensitivity Assessment) and ESMP and, any other associated information including those relevant to indigenous peoples required to be disclosed pursuant to the Information Disclosure Policy and the Revised Environmental and Social Policy (each, the "**Sub-Project Disclosure Package**"). The Accredited Entity shall, for a period of at least thirty (30) calendar days prior to its approval of the relevant Category B Sub-Project, disclose the Sub-Project Disclosure Package in English and in local language (if not English), on its website and in locations convenient to the affected peoples, and submit the Sub-Project Disclosure



- Package to the Fund for subsequent distribution to the GCF Board and the Fund's active observers and for publishing in the GCF website;
- (m) Pursuant to the procedure set out in Schedule 11, prior to the finalization of each Sub-Project Disclosure Package, deliver such documentation for the review and comment by the Fund and take into account such comments in the finalization of the Sub-Project Disclosure Packages;
 - (n) Undertake and/or put in place any adequate measures in order to ensure that the Funded Activity complies at all times with the recommendations and requirements of the Gender Action Plan, which shall not be amended, abrogated or waived without prior written approval of the Fund;
 - (o) Dedicate the necessary financial, human and other resources, as appropriate, to comply with the principles and requirements of the Updated Gender Policy;
 - (p) Not directly or indirectly condone, encourage, or tolerate participation, or engagement in any conduct substantially equivalent to SEAH in the Funded Activity;
 - (q) Undertake and/or put in place all necessary measures, including as relevant incorporation into the agreements with Implementing Entities, tendering documents and contracts, to ensure that (i) the management of the risks and impacts of SEAH including, as relevant, information disclosure, stakeholder engagement, and grievance redress (or similar terms employed by the Accredited Entity that are equivalent to those of the GCF in all material respects) arising from the Funded Activity complies at all times with the recommendations, requirements and procedures set forth in the Environmental and Social Management Framework, which was provided by the Accredited Entity to the Fund before the Approval Decision and which shall not be amended, abrogated or waived without prior written approval of the Fund; and (ii) the grievance redress mechanisms established by the Accredited Entity for the Funded Activity are, in addition to the requirements set out in clause 13.04 of the AMA, accessible, inclusive, survivor-centred and gender-responsive in the case of SEAH (or similar terms employed by the Accredited Entity that are equivalent to those of the GCF in all material respects);
 - (r) Prior to commencing any activities that have potential risks and impacts to indigenous peoples and cultural heritage, submit to the GCF the relevant indigenous peoples plan, social inclusion management plan and any associated management plans required for such activities that includes a culturally-appropriate project-level grievance mechanism, and shall also furnish to the GCF evidence, satisfactory to the GCF, that free, prior and informed consent from the indigenous and/or ethnic minority communities has been obtained for the purposes of the relevant activities;
 - (s) Undertake all adequate measures to ensure that none of the persons or activities included in the Exclusion List set out in Schedule 10 is funded or otherwise receives, directly or indirectly, any GCF Proceeds under the Funded Activity;
 - (t) Ensure that the Implementing Entities are selected and approved in accordance with the Eligibility Criteria for Selection of Implementing Entities set out in Schedule 9 of this Agreement, pursuant to the processes set out in this Agreement and as further described in the Funding Proposal;



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- (u) Ensure that the Final Beneficiaries are selected and approved in accordance with the Final Eligibility Criteria provided by the Accredited Entity to the Fund in accordance with and pursuant to the processes set out in this Agreement, and as further described in the Funding Proposal;
 - (v) Ensure that the GCF Proceeds shall be applied for Eligible Expenditures only, at all times during the implementation of the Funded Activity;
 - (w) Ensure that the GCF Account is operational during the term of this Agreement;
 - (x) Apply its own fiduciary principles and standards relating to any "know your customer" checks, AML/CFT, financial sanctions imposed by the United Nations Security Council which should enable it to comply with the Policy on Prohibited Practices and the principles of the AML/CFT Policy;
 - (y) In case of a change of the authorized signatory(ies) for the Request for Disbursement previously notified to the Fund, deliver to the Fund evidence, satisfactory to the Fund, of the authority of such person to sign each Request for Disbursement under this Agreement and the relevant authenticated specimen signature of each such person;
 - (z) In case of a change in the GCF Account as previously informed to the Fund pursuant to Clause 9.01(a)(iii), (i) notify the Fund in writing prior to requesting any subsequent Disbursement under this Agreement and provide the details of the substitute account, in form and substance satisfactory to the Fund; and (ii) transfer all funds in respect of the Funded Activity from the prior account into the substitute account. The substitute account shall be treated in all respects by the Accredited Entity as the GCF Account for the purposes of this Agreement; and
 - (aa) Consistent with the Evaluation Policy:
 - (i) Undertake and/or put in place all adequate measures including the capacities and systems to ensure that the Accredited Entity can implement the requirements of the Evaluation Policy;
 - (ii) Maintain high-quality data and information related to the progress and performance of the Funded Activity;
 - (iii) Cooperate with the Fund in carrying out its evaluation functions as may be reasonably requested by the Fund;
 - (iv) Submit to the Fund a management response and action plan to address recommendations from the interim and final evaluations within thirty (30) calendar days of receiving comments from the Secretariat in relation such interim and final evaluations; and
 - (v) Make publicly available the information relating to Funded Activities required by the Evaluation Policy.
- 10.03 With due observance of clause 23.04 of the AMA, the Accredited Entity shall inform and, as appropriate, consult with the Fund on steps to be taken in relation to the durable assets and/or equipment purchased with the GCF Proceeds to implement the Funded Activity.



Clause 11 Additional Remedies to the Fund

- 11.01 **Events of Default.** In addition to clause 19 of the AMA, the following events shall constitute an event of default under this Agreement (each, an “**Event of Default**”):
- (a) The Accredited Entity has failed to comply, in any material respect with, or has failed to perform in any material respects, any of its obligations under this Agreement (including, but not limited to, non-performance of any covenants);
 - (b) Any of the Project Documents, or any of the rights and obligations set out herein, either: (i) ceases to be in full force and effect; (ii) is subject to a notice of termination; or (iii) its validity, legality or enforceability is challenged; provided that no Event of Default will occur pursuant to this paragraph (b) if: (1) the challenge or notice of termination is withdrawn within thirty (30) calendar days after the date on which the Accredited Entity became aware of such challenge or notice; or (2) if, in the opinion of the Fund, after consultations with the Accredited Entity, the aforementioned events do not constitute a Major Change;
 - (c) Any of the following events occur with respect to a Co-financing Agreement:
 - (i) Such Co-financing Agreement does not become effective pursuant to its terms; or
 - (ii) The Co-financier has suspended, cancelled or terminated, in whole or in part, its commitment; or
 - (iii) The Co-financing has become due and payable prior to its agreed maturity; provided that these events shall not be deemed as an Event of Default if the Accredited Entity establishes, to the satisfaction of the Fund, that: (1) such suspension, cancellation, termination or prematuring was not caused by the failure of the Accredited Entity to comply with its obligations under the relevant Co-financing Agreement; and (2) adequate funds for the Project are available from other sources on terms and conditions consistent with the relevant Co-financing Agreement;
 - (d) If an event of default has occurred under: (i) the AMA; or (ii) any other funded activity agreement entered between the Parties;
 - (e) The Accredited Entity has failed to take in a timely manner the necessary steps instructed by the Fund, in accordance with Clause 5.01 of this Agreement and clause 11.03 of the AMA; and/or
 - (f) A representation or warranty made or repeated by the Accredited Entity pursuant to clause 18.01 of the AMA or Clause 10.01 of this Agreement proves to have been incorrect or misleading in any material respect when made or repeated or deemed to have been made or repeated.
- 11.02 **Remedies and consequences of default.** In addition to clause 20 of the AMA, and notwithstanding any other right or remedy available to the Fund, upon an Event of Default described under Clause 11.01 above, the Fund will be entitled to exercise one or more of the following remedies:
- (a) Require the Accredited Entity to remedy such Event of Default within a reasonable period of time set by the Fund at its sole discretion; or
 - (b) If such Event of Default is not remedied pursuant to paragraph (a) of this Clause 11.02, the Fund may, by notice to the Accredited Entity:



- (i) Exercise one or more of the rights specified in paragraphs (b) and (c) of clause 20.01 of the AMA; and/or
- (ii) (1) Suspend the right of the Accredited Entity to request and/or receive a Disbursement, including the payment of the Accredited Entity Fee, provided that such suspension shall continue until the Fund has notified the Accredited Entity that such right has been restored; and/or (2) cancel any Accredited Entity Fee which remains unpaid to the Accredited Entity, and request the refund of the amount of Accredited Entity Fee paid to the Accredited Entity that is in excess of the amount due pursuant to Clause 4.01; and/or
- (iii) (1) Cease or postpone the consideration or approval of any other funding proposals or the finalization of any agreements relating to other funding proposals being discussed between the Parties; and/or (2) suspend or postpone the effectiveness of any other funded activity agreement entered between the Parties or any Disbursements thereunder; and/or
- (iv) Terminate this Agreement.

Clause 12. Step-in Rights

- 12.01 In the event the Fund exercises its rights under clauses 20.01(c), 22.01 and 22.03 of the AMA, the Accredited Entity shall execute such documents and take such steps as are reasonably necessary to enable the Fund to give effect to such provisions.
- 12.02 Notwithstanding the exercise of any of the options established in Clause 12.01, the Accredited Entity shall continue to observe and comply with its obligations under this Agreement, until all agreements to give effect to the assumption of contractual position by the Fund or a third party appointed by the Fund are duly executed by all the relevant parties thereto and become effective.

Clause 13. Applicable Law; Dispute Resolution

- 13.01 This Agreement and any non-contractual obligations arising out of or in connection with it and this arbitration clause shall be governed by and construed in accordance with English law. All disputes arising out of or in connection with this Agreement shall be finally settled under the ICC Arbitration Rules, and:
 - (a) The appointing authority shall be in accordance with the ICC Arbitration Rules;
 - (b) The number of arbitrators shall be three;
 - (c) The place of arbitration shall be Singapore;
 - (d) the language to be used in the arbitral proceedings shall be English; and
 - (e) The arbitration decision shall be final and binding on the Parties and there shall be no appeal.

Clause 14. Designated Authority; Notices

- 14.01 Any notice, request, document, report, or other communication submitted by either the Accredited Entity or the Fund, shall unless expressly specified in this Agreement, be in English and delivered by hand or by facsimile or email to the Party to which it is required or permitted to be given or made to the following addresses:



For the Accredited Entity:

Attn: Additional Managing Director, Palli Karma-Sahayak Foundation (PKSF)
 Address: PKSF Bhaban, Plot-E-4/B, Agargaon Administrative Area
 Sher-e-Bangla Nagar, Dhaka-1207, Bangladesh
 Fax: +88-02-222218341
 Email: fazlulkader@gmail.com
fazlulkader@pksf.org.bd

With copy to:

Attn: Deputy Managing Director (Environment and Climate Change)
 Fax: +88-02-222218341
 Email: frsa1962@yahoo.co.uk

For the Fund:

Attn: Division of Mitigation and Adaptation
 Address: G-Tower, 175, Art Center-daero
 Yeonsu-gu, Incheon 22004
 Republic of Korea
 Fax: +82 32 458 6098
 Email: dma.postapproval@gcfund.org

With copy to:

Attn: Division of Portfolio Management (DPM)
 Email: DPM@gcfund.org

- 14.02 A Party may change the information set forth in Clause 14.01 by delivery to the other Party of a written notice signed by an authorized representative, provided that such changes will become effective only after five (5) calendar days from the receipt of such notice by the other Party.

Clause 15. Miscellaneous

- 15.01 **Assignment; Novation.** The Accredited Entity may not assign or transfer, in any manner whatsoever, its rights and obligations under this Agreement, without the prior written consent of the Fund, which consent may be granted or not granted at the Fund's absolute discretion.
- The Fund may assign or transfer, in full or in part, any of its rights or obligations under this Agreement.
- 15.02 **Execution in Counterparts.** This Agreement may be executed in two counterparts, each of which shall be an original.
- 15.03 **Rights of Third Parties.** This Agreement is intended solely for the benefit of the Parties and is not intended to be for the benefit of, nor may any provision be enforced by, any person or entity that is not a Party to this Agreement. Any other statute or law to the contrary is hereby excluded or disappplied.
- 15.04 **Entire Agreement.** This Agreement constitutes the entire agreement and understanding of the Parties with respect to its subject matter and supersedes all oral communication and prior writings with respect thereto, other than those writings expressly referred to or incorporated into this Agreement, including the AMA.



- 15.05 **Modification or Amendment.** No modification or amendment of this Agreement shall be valid unless in writing and signed by an authorized representative of each Party.
- 15.06 **No waiver.** Failure to exercise, or a delay in exercising, any right, power or remedy by a Party under this Agreement shall not operate or be construed as a waiver of such right, power or remedy. No action by a Party in respect to any default, or any acquiescence by it in any default, shall affect or impair any right, power or remedy of such Party in respect to any other or subsequent default.
- Partial exercise of any right shall not prevent any further exercise of such right or the exercise of any other right or remedy under this Agreement or the applicable law. The rights and remedies of the Fund are cumulative and not exclusive of any rights and remedies under this Agreement or the applicable law.
- 15.07 **Relationship of the Parties.** Nothing contained in this Agreement shall be deemed or construed as creating a principal-agent relationship between the Parties hereto or be construed to evidence the intention of the Parties to constitute such relationship. Neither Party shall have any express or implied right or authority to assume or create any obligations on behalf of or in the name of the other Party or to bind the other Party to any contract, agreement or undertaking with any third party. The Accredited Entity irrevocably and unconditionally acknowledges that the execution, delivery and performance of this Agreement constitute private and commercial (not public) acts of the Accredited Entity.
- 15.08 **Severability.** If any term of this Agreement is to any extent invalid, illegal, or incapable of being enforced, such term shall be excluded to the extent of such invalidity, illegality, or unenforceability; all other terms hereof shall remain in full force and effect.
- 15.09 **Duration and Survival:** This Agreement shall remain in full force and effect until all the obligations of the Accredited Entity under this Agreement have been fulfilled. Notwithstanding the foregoing, Clause 13.01 (*Applicable Law; Dispute Resolution*) and this Clause 15 (*Miscellaneous*) shall, unless explicitly provided otherwise, survive for a period of five (5) years after the fulfilment of all obligations of the Accredited Entity under this Agreement.



IN WITNESS WHEREOF the Parties hereto, acting through their representatives thereunto duly authorized, have caused this Agreement to be signed in their respective names as of the day and year first above written and to be delivered at the principal office of the Fund.

[Signature blocks follow on following pages]



GREEN
CLIMATE
FUND

PALLI KARMA-SAHAYAK FOUNDATION

By _____
Dr Nomita Halder ndc
Managing Director

Date _____



GREEN CLIMATE FUND

By _____
Henry Gonzalez
Executive Director a.i.

Date _____



Schedule 1. Description of the Funded Activity

1. Project Objective and Description:

The description of the Funded Activity, as further elaborated in the Funding Proposal, is outlined below:

The primary goal of the Project is to develop climate-adaptive coastal community in Bangladesh through adopting climate-resilient housing and livelihood technologies. The Project will also enhance the capacity of the communities and organizations on addressing climate change impacts in their localities.

The specific objectives are:

- a) To develop climate resilient homestead for marginal vulnerable communities in the southwest coastal zone of Bangladesh;
- b) To develop climate adaptive livelihoods for coastal vulnerable communities; and
- c) To enhance knowledge and awareness of the coastal vulnerable communities on climate change issues.

The Project aims to enhance the resilience of 362,475 targeted people to climate change through adopting and practicing adaptive activities in the Project Area. These districts have been selected based on exposure, vulnerability and feasibility of crab hatchery. They will be able to identify the impacts of climate change on their lives and livelihoods and prepare plans for addressing those impacts through 3,200 climate change adaptation groups (“CCAGs”). Aligning the stated specific objectives, the Project will construct climate resilient homesteads for the most vulnerable households, climate adaptive farming technologies e.g., crab fattening along with mangrove tree plantation, sheep/goat rearing, household-based agriculture etc. The Project follows agriculture and food security sector guidelines while designing climate resilient livelihoods.

The Project is divided into the following outcomes, outputs and activities (each an “**Outcome**”, “**Output**” or “**Activity**”), as further elaborated in the Funding Proposal:

Outcome	Output/Activity
Outcome 1: Decreased risk of loss of assets and life from extreme weather events	Output 1.1 Climate resilient homesteads constructed Activity 1.1.1 Design and building of homesteads Activity 1.1.2 Homestead tree planting
Outcome 2: Livelihood Resilience to SLR/storm surge and salinity	Output 2.1: Traditional farming practices climate proofed Activity 2.1.1 Construction of slatted houses for goat/sheep rearing Activity 2.1.2 Provide financial support for goat/sheep rearing Activity 2.1.3: Introduce the cultivation of saline tolerant vegetables within homestead areas
	Output 2.2: Community-based farmed crab supply chain created Activity 2.2.1: Development of crab hatcheries (1 ^o stage) Activity 2.2.2 Financial support for producing crablets Activity 2.2.3 Technical and financial support for “crab nursers” (2 ^o stage) Activity 2.2.4 Technical and financial support to “crab farmers” (3 ^o stage)



Outcome	Output/Activity
Outcome 3: Improved climate planning and implementation by communities and local level institutions	Output 3.1: Climate change adaptation groups (CCAG) formed and operationalized Activity 3.1.1: Beneficiary selection and group formation Activity 3.1.2: Prepare beneficiaries' socio-economic profile Activity 3.1.3: Arrange monthly group meetings on climate change issues for CCAG
	Output 3.2: Capacity built among IEs and relevant institutions apprised on project Activity 3.2.1: Prepare training manuals on adaptation technologies and crab value chain Activity 3.2.2: Prepare guidelines on project management Activity 3.2.3: Organize training for beneficiaries and stakeholders Activity 3.2.4: Organize training for IEs' staff Activity 3.2.5: Implement workshops and seminars Activity 3.2.6: Organize exchange visits for beneficiaries and IE staff Activity 3.2.7: Improve data for crab research and development
	Output 3.3: Knowledge products prepared and disseminated Activity 3.3.1: Prepare and disseminate knowledge products Activity 3.3.2 Real time evaluation study of project activities

2. Selection of Final Beneficiaries and Implementing Entities:

The Final Beneficiaries shall be screened by the Implementing Entities in accordance with the Final Eligibility Criteria which shall be based on the Initial Eligibility Criteria and following the consultation processes with local government institutions and communities as described in the Funding Proposal, with the Final Beneficiaries to be selected under the supervision and final decision of the Accredited Entity in its capacity as Executing Entity.

Within three (3) months after the first Disbursement under this Agreement and as a condition precedent to the second Disbursement under this Agreement, the Accredited Entity shall submit to the Fund, in a form and substance satisfactory to the Fund, the Final Eligibility Criteria in the form of a report. Such report shall contain a detailed socio-economic profile of the selected households, the purpose of which is to keep a monitoring record from baseline to after Project finalisation.

The selection of Implementing Entities will take place by a selection committee based on the Eligibility Criteria for Selection of Implementing Entities set out in Schedule 9. An expression of interest ("EOI") will be prepared and published in the national dailies. The selection committee will evaluate the submitted EOIs and prepare a short list of the recommended Implementing Entities for the Project.



Schedule 3. Implementation Arrangements

The implementation arrangements for the Funded Activity, as further elaborated in the Funding Proposal, are outlined below:

The Accredited Entity shall administer the relevant GCF Proceeds to be used for the financing of the Project, in accordance with the AMA and this Agreement.

The Project will be implemented over a five (5) year period, and PKSF shall act as the Accredited Entity and as the single Executing Entity of the Project.

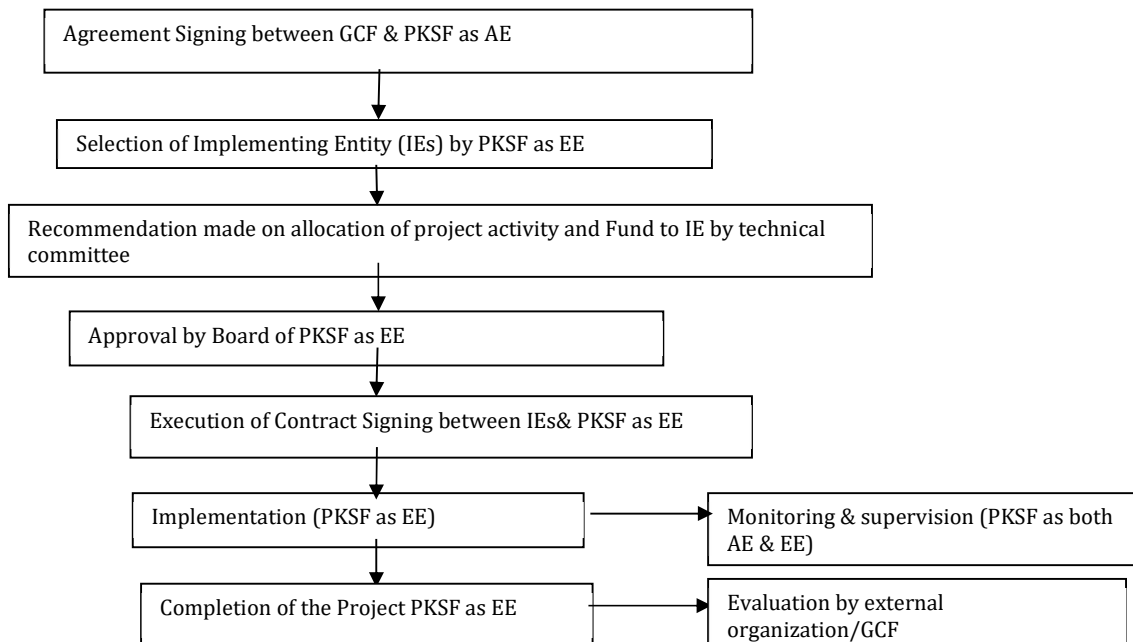
For the purposes of Project implementation, PKSF will establish a Project Management Unit (“PMU”) to manage the Project. A Project Director/Coordinator (“PD/C”) will head the PMU and will be in charge of the overall implementation of the Project. The PD/C will directly report to a senior official of PKSF and will be the contact person at PKSF for the GCF.

For implementation of the underlying Project Activities, PKSF will procure, from amongst its pre-qualified partner organizations, at least fifteen non-governmental organizations (the “**Implementing Entities**” or “**IEs**”) pursuant to its own procurement rules and procedures, in accordance with the AMA, and in accordance with the Eligibility Criteria for Selection of Implementing Entities and the Funding Proposal. PKSF will enter into relevant service agreements with the Implementing Entities which agreements will set out the responsibilities of the Implementing Entities in relation to Project implementation.

The Implementing Entities shall act in accordance with the Accredited Entity’s instructions in relation to Project implementation. For this, the PMU will engage personnel who will liaise with and monitor the Implementing Entities.

Each Implementing Entity will establish a PMU at their local office. The Accredited Entity shall ensure that the selection of the Final Beneficiaries, conducted through the Implementing Entities, is in compliance with the Final Eligibility Criteria. The Accredited Entity will provide final clearance to the Implementing Entities in relation to the selection of the Final Beneficiaries. Accordingly, the PD/C will submit the proposed Final Beneficiaries selected by an Implementing Entity to the Governing Body of PKSF for final review and approval.

Figure - Implementation Arrangements of the Project:





Co-financing

For the provision of loan part of the Co-financing, the Accredited Entity shall enter into Co-financing Agreement(s) (in the form of loan agreements) with each Implementing Entity based on the completion of an assessment in relation to loan demand at the Final Beneficiary level for the purposes of the IEs advancing loans to the selected Final Beneficiaries for purchase of goat/sheep, financial support for producing crab-lets (hatcheries owners), financing support for crab nurseries for rearing crab-lets and financial support for crab fatteners (for rearing crab at the pond). The Implementing Entities' and the Accredited Entity's staff will assess such loan demand among the selected Final Beneficiaries and make a recommendation to the Accredited Entity in relation to the loan amount. The Accredited Entity will either reject or approve the recommendation and disburse the approved amount of loan to the relevant Implementing Entity. The Accredited Entity, acting as the Executing Entity, will decide on the approval of each loan, pursuant to the Final Eligibility Criteria and processes set out in this Agreement.

For the provision of the in-kind contributions part of the Co-financing, the Accredited Entity will provide in-kind contribution to two budget heads of project management costs. PKSF, as Accredited Entity will support a full-time senior level staff as Project Coordinator for this Project. The salary of this Project Coordinator will be provided from the core budget of PKSF. Besides, the Project will require office space for PMU staff and equipment. The Accredited Entity will provide space for these staff and equipment which will also be considered as in-kind contribution.



Schedule 4. Reporting

A. Reporting Period

The Reporting Period shall be from the Effective Date to the Completion Date, which covers the duration of Project implementation of five (5) years as specified in the Funding Proposal.

The reports indicated in the Project Calendar, set out below, are due to be submitted per the indicated timing.

The APRs, Financial Information and audited and unaudited financial statements shall be submitted pursuant to the AMA within the Reporting Period. With regard to the audited financial statements to be delivered by the Accredited Entity pursuant to clause 17 of the AMA, the Accredited Entity shall engage an independent external auditor (in accordance with its procurement rules) to audit all accounts and management of the Accredited Entity. PKSF shall ensure that the accounts and expenditures for each Project Activity that is implemented or delivered by each Implementing Entity (each an “**IE Sub-Project**”) are duly audited by an independent external auditor. The Accredited Entity shall ensure that the auditors prepare separate audit reports for each IE Sub-Project and submit such reports to the Fund together with the relevant audited financial statements at the times required under clause 17 of the AMA.

B. Project Calendar

Milestones	Expected Dates
Start of Project Implementation	Effective Date
Inception Report	Within six (6) months after the Effective Date
Baseline survey	Within 12 months after the Effective Date.
Interim Independent Evaluation Report	Within two (2) years and nine (9) months of the Effective Date
End of Project implementation	Completion Date
Project Completion Report	Within three (3) months from the Completion Date
Final Independent Evaluation Report	Within six (6) months from the Completion Date



Schedule 5. Implementation Plan

COMPONENTS/OUTPUTS	Deliverables	Year 1				Year 2				Year 3				Year 4				Year 5				Y6	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Baseline study				X																			
Outcome 1: Decreased risk of loss of assets and lives from extreme weather events																							
Output 1.1 Climate resilient homesteads constructed																							
Activity 1.1.1 Design and building of homesteads	A list of 3000 household beneficiaries						X																
	Deed verification database							X															
	Vendor list						X					X				X							
	Photo books of 3000 homesteads											X									X		
	Titles and photographs of construction				X					X				X				X			X		
Activity 1.1.2 Homestead tree planting	A list of 20,000 Beneficiary households																X						
	A tree plantation report																				X		
Outcome 2: Increased livelihood resilience to SLR/storm surge and salinity																							
Output 2.1 Traditional farming practices climate proofed																							
Activity 2.1.1: Construction of slatted houses for goat/sheep rearing	A list of 20,000 beneficiary households						X																
	Vendor list				X				X				X				X						
	A report of completed slatted houses																				X		
Activity 2.1.2: Provide financial support for goat/sheep rearing	Beneficiaries list				X																X		
	Annual training reports				X					X				X									
	Annual loan disbursement report / agreements					X				X				X			X				X		
Activity 2.1.3: Introduce the cultivation of saline tolerant vegetables within homestead areas	A list of 20,000 beneficiary households																				X		
	Annual training reports					X				X				X			X				X		
Output 2.2 Community-based farmed crab supply chain created																							
	A list of 50 crab hatchery entrepreneurs					X																	



Activity 2.2.1: Development of crab hatcheries (1 ^o stage)	Annual training reports / management guidelines					X				X					X				X		
	Photo book of 50 hatcheries with brief description and record of financial support provided and agreements																			X	
Activity 2.2.2: Financial support for producing crablets	Loan approval documents					X				X					X				X		
	Annual loan and grant disbursement report/ agreements					X				X					X				X		
Activity 2.2.3: Technical and financial support for “crab nurseries” (2 ^o stage)	A list of 500 beneficiary households as crab nurseries									X											
	Annual training report					X				X					X				X		
	Annual loan / grant disbursement report / agreements					X				X					X				X		
	A report on crab nursery.																			X	
Activity 2.2.4: Technical and financial support to “crab farmers” (3 ^o stage).	A list of 20,000 beneficiary households									X											
	Annual training report					X				X					X				X		
	Annual loan / grant disbursement report / agreement					X				X					X				X		
	A report on establishment of 20,000 ponds for crab growing with mangrove tree plantation																			X	
Outcome 3: Improved climate planning and implementation by communities and local level institutions																					
Output 3.1 Climate change adaptation groups (CCAG) formed and operationalized																					
Activity 3.1.1: Beneficiary selection and group formation	A report on 3,200 PRA exercises by the CCAGs																			X	
Activity 3.1.2: Prepare Beneficiaries' socio-economic profile	Socio economic profile template		X																		
	A report on field test of socio-economic template			X																	
	Information database with data				X																
	Socio economic profile report				X																
Activity 3.1.3 Arrange monthly group meetings on climate change issues for CCAG	A document on meeting content for the CCAGs				X																
	Annual CCAG meeting report					X				X					X				X		
Out 3.2 Capacity built among IEs and relevant institutions apprised on project																					
Activity 3.2.1: Prepare training manuals on adaptation technologies and crab value chain	ToR for consultant			X																	
	Consultant agreements				X																
	Training manual					X															
	ToR for consultants		X																		



Schedule 6. Request for Disbursement

[ACCREDITED ENTITY'S LETTERHEAD]

Green Climate Fund
175, Art Center-daero
Yeonsu-gu, Incheon 22004
Republic of Korea
Attn: [CFO]

[DATE]

Ref: Request for Disbursement- Funded Activity Agreement- Funded Activity: FP206- Request for Disbursement [No. [_____]]

Ladies and Gentlemen:

1. Reference is made to the Funded Activity Agreement dated as of **[DATE]** (the "Agreement") between Palli Karma-Sahayak Foundation (the "Recipient") and the Green Climate Fund ("GCF"). Capitalized terms used but not defined in this request have the meanings assigned to them in the Agreement. The rules of interpretation set forth in Clause [1] of the Agreement shall apply to this request.
2. The Recipient irrevocably requests disbursement on **[DATE]** (or as soon as practicable thereafter) of the following amount(s):
 - (a) [_____] [USD] under the Agreement (the "Disbursement"), in accordance with Clause [3] of the Agreement, to be transferred to the GCF Account - Account No. _____, [*insert SWIFT/ABA*] at **[name and address of bank]** in **[city/country]**; and
 - (b) [_____] [USD] as payment of the Accredited Entity Fee, in accordance with Clause [4] of the Agreement, to be transferred to the GCF Account - Account No. _____, [*insert SWIFT/ABA*] at **[name and address of bank]** in **[city/country]**.

[GCF is requested to pay the amounts described in paragraphs (a) and (b) above to the GCF Account - Account No. _____, [*SWIFT/ABA*] at **[name and address of bank]** in [city and country].]
3. The Recipient certifies that all the conditions precedent set forth in Clause [9] of the Agreement have been satisfied.
4. The Recipient further certifies that the proceeds of all Disbursements shall be applied only for the purpose described in Clause [3] of the Agreement.
5. The above certifications are effective as of the date hereof and shall continue to be effective as of the date of disbursement for this Disbursement. If any certification is no longer valid as of or prior to such Disbursement, the Recipient will notify GCF immediately and, on demand, repay the Disbursement (or any portion thereof) if the Disbursement is made prior to GCF's receipt of such notice.
6. The Recipient acknowledges hereby that the total amount of funds disbursed by the GCF under the Agreement prior to the date of this Request for Disbursement are as follows:
 - (a) [_____] [USD] as Grant; and
 - (b) [_____] [USD] as towards payment of the Accredited Entity Fee.

Yours truly,

PALLI KARMA-SAHAYAK FOUNDATION

By: _____
Authorized Representative

By: _____
Authorized Representative



Schedule 7. Notice of Payment

[ACCREDITED ENTITY'S LETTERHEAD]

Green Climate Fund
175, Art Center-daero
Yeonsu-gu, Incheon 22004
Republic of Korea
Attn: [CFO]

[DATE]

Ref: Notice of Payment – Funded Activity Agreement – Funded Activity: FP206 – Notice of Payment
[No. [____]]

Ladies and Gentlemen:

1. Reference is made to the Funded Activity Agreement dated [DATE] (the “**Agreement**”) between Palli Karma-Sahayak Foundation (the “**Accredited Entity**”) and the Green Climate Fund (“**GCF**”). Capitalized terms used but not defined in this notice have the meanings assigned to them in the Agreement. The rules of interpretation set forth in Clause [1] of the Agreement shall apply to this notice.
2. The Accredited Entity notifies payment on [DATE] (or as soon as practicable thereafter) of the following amounts:

[Insert details on the amounts of the Investment Income and/or Unused Funds being transferred to the GCF.]
3. The Accredited Entity shall transfer such amounts to the bank account communicated by the Fund in writing.
4. The Accredited Entity acknowledges the right of the GCF to object to the amounts described in paragraph [2] above and/or to request further information on their calculation.

Yours truly,
PALLI KARMA-SAHAYAK FOUNDATION

By: _____
Authorized Representative

By: _____
Authorized Representative



Schedule 8. Initial Eligibility Criteria for Selection of Final Beneficiaries

A. The Project will support 362,475 people through the set of selection and eligibility criteria as well as close consultation with local government institutions and community people. Available government data will be used to identify the poor and extreme poor people in the Project Area. Direct Final Beneficiaries will be selected based on eligibility and selection criteria. The initial set of selection criteria, which are listed below, will be complemented with additional criteria (using the process described in Schedule 1) in case if interested and eligible households will be higher than target numbers.

- a. Those who live in saline-prone coastal vulnerable areas;
 - b. Priority to women-headed households and other disadvantaged groups;
 - c. Poor and ultra-poor households (as defined in the Household Income and Expenditure Survey (HIES 2016) of the Bangladesh Bureau of Statistics (BBS-2017));
 - d. Daily income is less than USD 1.90;
 - e. Those who are not receiving any similar support from other projects or organizations;
 - f. Those who have salinity-affected lands particularly away from agricultural land;
 - g. Interested in participation in the project and adoption of the project-promoted technologies and practices; and
 - h. Willing to contribute to the project through loan, cash and in-kind contributions, as necessary.
- 1.** Selection criteria for goat/sheep rearing in slatted houses (Activity 2.1.1):
- a. Those who do not have financial capacity to purchase livestock and have capacity to rear livestock;
 - b. Women headed households and households with disadvantaged members will be given priority;
 - c. Poor and Ultra-poor Households (as defined in the Household Income and Expenditure Survey (HIES 2016) of the Bangladesh Bureau of Statistics (BBS-2017)); and
 - d. Have access to homestead land¹.

The selection will be based in order of the selection criteria from amongst the targeted households in the Project Area. When the selection process reaches 90,000 beneficiaries, it will be stopped.

- 2.** Selection criteria for homestead tree plantation and saline tolerant vegetable cultivation (Activity 1.1.2 and Activity 2.1.3):
- a. Poor and ultra-poor people;
 - b. Having homestead land of at least 60 square meters; and
 - c. Women headed households and physically challenged people will be given preference.

¹Here land rights mean, a person owned land or properties by means of buying or inherited from father/mother or other persons.



The Project will select 90,000 beneficiaries for tree plantation and 90,000 beneficiaries for saline tolerant vegetable cultivation.

3. Selection criteria for crab hatchery establishment (Activity 2.2.1):
 - a. Those who have financial capacity to set up crab hatchery through their own initiative;
 - b. Limited/good educational and technological knowledge on crab/shrimp hatcheries;
 - c. Previous experience of micro-enterprise operations; and
 - d. Minimum 20 decimal of owned land not adjacent to agricultural land to set up micro-crab hatchery.
4. Only barren & fallow land will be considered to install the hatchery plant, so there will have no chance of loss of productive land.

The selection will be based in order of the selection criteria from amongst the targeted households in the Project Area. When the selection process reaches 225 beneficiaries, it will be stopped.

5. Selection criteria for crab nursers and farmers (Activity 2.2.3 and Activity 2.2.4)
 - a. Having cultivable land or capacity to hire at least 0.20 hectare;
 - b. Women headed households and households with disadvantaged members will be given priority;
 - c. Have the ability to run/manage crab farming; and
 - d. Poor and Ultra-poor households (as defined in the Household Income and Expenditure Survey (HIES 2016) of the Bangladesh Bureau of Statistics (BBS-2017)).
6. Selection criteria for resilient homestead (Activity 1.1.1)
 - a. Those who have own homestead area in minimum or above tidal flood level with high exposure to climate shock events;
 - b. Women headed households and households with disadvantaged members will be given priority;
 - c. Poor and Ultra-poor Households (as defined in the Household Income and Expenditure Survey (HIES 2016) of the Bangladesh Bureau of Statistics (BBS-2017)); and
 - d. Those who do not have financial capacity to construct resilient houses.

The selection will be based in order of the selection criteria from amongst the targeted households in the Project Area. When the selection process reaches 13,500 beneficiaries, it will be stopped.

B. Process of Final Beneficiary Selection

The IEs' staff will carry out consultation meetings in the selected areas with union parishad representatives and communities to select the Final Beneficiaries based on the Final Eligibility Criteria. They will prepare a draft list of Final Beneficiaries and submit it to PKSf for approval. The PMU representatives from PKSf will visit to verify the Final Beneficiary list and provide approval for Final Beneficiaries.



Schedule 9. Eligibility Criteria for Selection of Implementing Entities

- A. A selection committee comprised of PKSF's senior officials will be formed. The committee will select the IEs. To be selected, IEs will have following criteria:
- Permanent existence of the organization in the project areas;
 - At least five years of experience in implementing climate change-related projects or programmes;
 - A good track record of financial transaction (at least Bangladeshi Taka (BDT) 1 crore annually for the last three years);
 - Must be extra ordinary, excellent or at least good as per PKSF's assessment using defined assessment criteria which include financial efficiency, economic efficiency, operational efficiency, growth indicators, financial strength & risk management, accounting & internal control system, social performance, human capacity and governance; and
 - Valid legal documents including registration. Organizations will be ineligible on the grounds of involvement in Money Laundering and Terrorist Financing.
- B. Selection Process: A selection committee will be formed for selecting the IEs following these criteria. PKSF will call for Expressions of Interest (EoI). The selection committee will evaluate the submitted EoIs and prepare a short list of the potential IEs. The PMU staff will visit field level offices of the shortlisted potential IEs to verify their information and existence, which were presented in the EoIs. Based on the results of EoIs and field level visits, the selection committee will finalize the list of final IEs.



Schedule 10. Exclusion List

The following practices and activities will not be supported by the Project:

1. Land management practices that cause degradation (biological or physical) of the soil and water.
2. Development of large irrigation schemes and construction of new reservoirs.
3. Actions that represent significant increase in GHG emissions.
4. Use of genetically modified organisms, or the supply or use of modern biotechnologies or their products in crops.
5. Introduction of crops and varieties that previously did not grow in the implementation areas, including seed import/transfer.
6. Actions resulting in loss of biodiversity, alteration of the functioning of ecosystems, and introduction of new invasive alien species.
7. Activities that affect gene flows and biological corridors.
8. Landscape model(s) requiring high levels of (mainly) agrochemical inputs.
9. Anything in violation of the Pesticide Code of Conduct.
10. Procurement and/or use of highly hazardous pesticides or those that are not nationally validated or that are internationally regulated, especially by FAO and environmental conventions.
11. Activities that do not consider gender aspects or contribute to exacerbating any inequality or gender gap that may exist.
12. Changes in land tenure or displacement (permanent or temporary) of people from their homes or places of work and subsistence or restrict their access to them.
13. Production or activities involving harmful or exploitative forms of forced labor /harmful child labor.
14. Activities in areas with cultural, historical or transcendent values for individuals and communities.
15. Production or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements.
16. Production or trade in weapons and munitions.
17. Production or trade in alcoholic beverages (excluding beer and wine).
18. Production or trade in tobacco.
19. Gambling, casinos and equivalent enterprises.
20. Trade in wildlife or wildlife products regulated under CITES.
21. Production or trade in radioactive materials.
22. Production or trade in or use of unbounded asbestos fibers.
23. Purchase of logging equipment for use in primary tropical moist forest.
24. Production or trade in pharmaceuticals subject to international phase outs or bans.
25. Production or trade in pesticides/herbicides subject to international phase outs or bans.
26. Production or trade in ozone depleting substances subject to international phase out.
27. Production, trade, storage, or transport of significant volumes of hazardous chemicals, or commercial scale usage of hazardous chemicals.
28. Production or activities that impinge on the lands owned, or claimed under adjudication, by Indigenous Peoples, without full documented consent of such peoples.



Schedule 11. Sub-Project Disclosure Communication Process

I. INTRODUCTION

Pursuant to the procedure agreed by the Parties in relation to Category B Sub-Projects, prior to the finalization of each Category B Disclosure Package, the Accredited Entity shall deliver such documentation for the review and comment by the Fund and take into account such comments in the finalization of the Category B Disclosure Packages.

Category B Sub-Projects will be disclosed, through a Category B Disclosure Package, as defined below, no later than thirty (30) calendar days prior to the relevant Accredited Entity meeting (the “Disclosure Period”).

The Category B Disclosure Package will include (“Sub-Project Disclosure Package”):

1. The project disclosure summary, which will include the following items (“Sub-Project Disclosure Summary”):
 - A. The purpose, nature, and scale of the activities, and the intended beneficiaries;
 - B. The duration of proposed activities;
 - C. A summary of stakeholder consultations and the planned stakeholder engagement process; and
 - D. The available grievance mechanism(s) to receive complaints and facilitate the resolution of such from affected and potentially affected communities, groups and individuals.
2. The following annexures:
 - A. Completed ESS disclosure report form, in the format contained in Annex A of this Schedule X (“**Sub-Project Disclosure Form**”);
 - B. The Environmental and Social Impact Assessment (ESIA) for the relevant Sub-Project;
 - C. Where applicable, Environmental and Social Management Plan (ESMP), if separate from the ESIA;
 - D. Where applicable, the Land Acquisition and/or Resettlement Action Plan (LARAP) for the relevant Sub-Project;
 - E. Where applicable, the Indigenous Peoples Plan (IPP) for the relevant Sub-Project; and
 - F. Any other associated information including those relevant to indigenous peoples required to be disclosed in accordance with the Accredited Entity’s public information policy and GCF’s Environmental and Social Policy and Information Disclosure Policy.

The Sub-Project Disclosure Package, comprising both the Sub-Project Disclosure Summary and applicable annexures, shall be made available to the public in English and the local language (if not English). The Accredited Entity shall ensure that all disclosures can be accessed through the Accredited Entity’s website via a weblink and in locations convenient to affected peoples in English and the local language (if not English).



II. DISCLOSURE PROCESS

The following outlines the communication process to be followed by the Fund and the Accredited Entity in relation to making environmental and social (E&S) report disclosures for Sub-Projects to be considered for final approval by the Accredited Entity.

- A. The Accredited Entity will submit the Sub-Project Disclosure Package to the Fund, per the template in **Annex A**, at least five (5) GCF working days prior to the intended start of the relevant Disclosure Period.
- B. The Fund will review the Sub-Project Disclosure Package prior to the intended start of the relevant Disclosure Period, confirm to the Accredited Entity that the Sub-Project Disclosure Package is in accordance with the Fund's requirements and that it agrees with the assigned E&S risk category.
- C. If the Fund does not agree with the assigned risk category or on the Sub-Project Disclosure Package, it will inform the Accredited Entity within the same time period set out in paragraph B above. If the Fund and the Accredited Entity agree on any amendments to the Sub-Project Disclosure Package, the process will start again from point II.A.
- D. At least one (1) GCF working day prior to the intended start of the Disclosure Period, the Accredited Entity shall disclose on its website the Sub-Project Disclosure Package and submit the Sub-Project Disclosure Package to the Fund, which shall include a link on the Accredited Entity's website to the Sub-Project Disclosure Package, for subsequent distribution to the GCF Board and the Fund's active observers and for publishing in the GCF website;
- E. Upon receipt of the submission under point D, the Fund shall send a Sub-Project Disclosure Form and an accompanying transmittal message to the GCF's board members ("**Board Members**") and the GCF's active observers ("**Active Observers**") and publish the Sub-Project Disclosure Form on the GCF's webpage <https://www.greenclimate.fund/projects/safeguards/ess> (or as may be amended from time to time).
- F. The relevant Disclosure Period begins from the date that the Sub-Project Disclosure Package has been sent to the Board Members and the Active Observers and published on the GCF's website. The Accredited Entity meeting to approve the relevant Sub-project shall not be held until after the expiration of the applicable Disclosure Period.

III. POST-DISCLOSURE COMMUNICATION

In accordance with the Fund's applicable processes, the Fund is the formal recipient of all feedback received from the Board Members and Active Observers in relation to Sub-Project E&S report disclosure. Should comments and/or questions be received by the Accredited Entity directly, the Accredited Entity will log the feedback in accordance with the Environmental and Social Management System (ESMS).

- A. Comments and/or questions from Board Members and/or Active Observers are to be submitted to the GCF Secretariat's email account subprojectcomments@gcfund.org on or before the deadline specified by the Secretariat in the aforementioned transmittal message to the Board Members and/or Active Observers, with such deadline being eleven (11) calendar days prior to the expiration of the Disclosure Period. The GCF Secretariat will forward such comments and/or questions received from its Board Members and/or Active



Observers to the designated focal points of the Accredited Entity within three (3) Business Days of receipt and in any event no later than ten (10) calendar days prior to the expiration of the Disclosure Period.

- B. Notwithstanding point III.B. immediately above, comments and/or questions may be submitted by the Board Members and/or Active Observers later than eleven (11) calendar days prior to the expiration of the Disclosure Period, but prior to the expiration of the Disclosure Period itself. In such case, comments and/or questions will be communicated directly to the Accredited Entity's focal point(s) by the Secretariat, noting the limitations in terms of the potential for inclusion of such comments and/or questions in relation to points III. D. to F. below.
- C. If applicable and relevant, comments from the Board Members and/or Active Observers and the GCF Secretariat will be incorporated into documents to be presented at the relevant Accredited Entity meeting (the "Board Pack").
- D. If relevant and applicable, the Accredited Entity will present during the Accredited Entity meeting approving the relevant Sub-project in question the feedback received from Board Members and/or Active Observers and/or the GCF Secretariat, along with information describing how it has incorporated this feedback, as appropriate and where relevant, by including it in the Board Pack or other investment documentation.
- E. Within five (5) business days after the Accredited Entity's meeting for the approval of the relevant Sub-project, the Accredited Entity shall submit to the GCF Secretariat, a summary of comments received from relevant stakeholders including comments and/or questions raised by Board Members and/or Active Observers and/or the GCF Secretariat (if any) with appropriate feedback from the Accredited Entity as to how the relevant comments received have been taken into consideration and/or addressed, in accordance with the Accredited Entity's policies and procedures and the Programme's Environmental and Social Management Framework (ESMF).



Annex A: Sub-Project Disclosure Form

ESS disclosure report form for subprojects

Environmental and social report(s) disclosure

Accredited entity	
Programme	
FP number and programme title	
Sector (public/private)	
Location (target country and, if any, specific areas)	
ESS category	
Board decision and date	Decision B.XX/XX, para. (X), on Date Month Year
Subproject	
Subproject title	
ESS category	
Location (target country and, if any, specific areas)	
Environmental and Social Impact Assessment (ESIA) (if applicable)	
Date of disclosure on AE's website	
Language(s) understandable to affected peoples	
Link to disclosure	
Other link(s)	
Remarks on compliance with GCF policies	In accordance with the Green Climate Fund's Information Disclosure Policy (the "Policy"), the AE plans to disclose information relating to a Category B Sub-Projects being considered for investment. This disclosure is intended to satisfy the requirement set out in paragraph 17 of the GCF Policy to disclose an ESIA and ESMP (included as part of the ESIA), as defined below, at least 30 days in advance of the Accredited Entity's investment decision.
Environmental and Social Management Plan (ESMP) (if applicable)	
Date of disclosure on AE's website	
Language(s) understandable to affected peoples	
Link to disclosure	
Other link(s)	
Remarks on compliance with GCF policies	
Environmental and Social Management System (ESMS) (if applicable)	
Date of disclosure on AE's website	
Language(s) understandable to affected peoples	



Link to disclosure	
Other link(s)	
Remarks on compliance with GCF policies	
Any other relevant ESS reports and/or disclosures (if applicable), e.g. Indigenous Peoples Plan (IPP), Indigenous Peoples Planning Framework (IPPF), Resettlement Action Plan (RAP), Resettlement Policy Framework (RPF)	
Description of report/disclosure	
Date of disclosure on AE's website	
Language(s) understandable to affected peoples	
Link to disclosure	
Other link(s)	
Remarks on compliance with GCF policies	
Disclosure in location(s) convenient to affected peoples	
Date(s)	
Place(s)	
Provision on disclosure at the subproject level	<p>Clause 10.02 (l) of the Funded Activity Agreement:</p> <p>In relation to each Category B Sub-Project (pursuant to the Environmental and Social Risk Categories, and for the purposes of this covenant, "Sub-Project" shall mean activities generally grouped for execution in close geographic proximity), disclose the Environmental and Social Impact Assessment (ESIA) (including a Conflict Sensitivity Assessment) and ESMP and, any other associated information including those relevant to indigenous peoples required to be disclosed pursuant to the Information Disclosure Policy and the Revised Environmental and Social Policy (each, the "Sub-Project Disclosure Package"). The Accredited Entity shall, for a period of at least thirty (30) calendar days prior to its approval of the relevant Category B Sub-Project, disclose the Sub-Project Disclosure Package in English and in local language (if not English), on its website and in locations convenient to the affected peoples, and submit the Sub-Project Disclosure Package to the Fund for subsequent distribution to the GCF Board and the Fund's active observers and for publishing in the GCF website;</p>
Date and place of Accredited Entity meeting	

Note: This form was prepared by the Accredited Entity stated above. For reference, the ESS disclosure report form for the Programme is attached.



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Annex 1. Funding Proposal

[Attached]

Funding Proposal

Project/Programme title: Resilient Homestead and Livelihood support to the vulnerable coastal people of Bangladesh (RHL)

Country(ies): Bangladesh

Accredited Entity: Palli Karma-Sahayak Foundation (PKSF)

Date of first submission: 2018/03/18

Date of current submission [2023/06/06]

Version number V.7



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Contents

Section A	PROJECT / PROGRAMMESUMMARY
Section B	PROJECT / PROGRAMME INFORMATION
Section C	FINANCING INFORMATION
Section D	EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA
Section E	LOGICAL FRAMEWORK
Section F	RISK ASSESSMENT AND MANAGEMENT
Section G	GCF POLICIES AND STANDARDS
Section H	ANNEXES

Note to Accredited Entities on the use of the funding proposal template

- Accredited Entities should provide summary information in the proposal with cross-reference to annexes such as feasibility studies, gender action plan, term sheet, etc.
- Accredited Entities should ensure that annexes provided are consistent with the details provided in the funding proposal. Updates to the funding proposal and/or annexes must be reflected in all relevant documents.
- The total number of pages for the funding proposal (excluding annexes) **should not exceed 60**. Proposals exceeding the prescribed length will not be assessed within the usual service standard time.
- The recommended font is Arial, size 11.
- Under the [GCF Information Disclosure Policy](#), project and programme funding proposals will be disclosed on the GCF website, simultaneous with the submission to the Board, subject to the redaction of any information that may not be disclosed pursuant to the IDP. Accredited Entities are asked to fill out information on disclosure in section G.4.

Please submit the completed proposal to:

fundingproposal@gcfund.org

Please use the following name convention for the file name:

"FP-RHL-PKSF-Bangladesh-2023/06/06"



A. PROJECT/PROGRAMME SUMMARY				
A.1. Project or programme	Project	A.2. Public or private sector	Public	
A.3. Request for Proposals (RFP)	<u>Not applicable</u>			
A.4. Result area(s)		GCF contribution	Co-financers' contribution¹	
	Mitigation total	<u>Enter number%</u>	<u>Enter number%</u>	
	<input type="checkbox"/> Energy generation and access	<u>Enter number%</u>	<u>Enter number%</u>	
	<input type="checkbox"/> Low-emission transport	<u>Enter number%</u>	<u>Enter number%</u>	
	<input type="checkbox"/> Buildings, cities, industries and appliances	<u>Enter number%</u>	<u>Enter number%</u>	
	<input type="checkbox"/> Forestry and land use	<u>Enter number%</u>	<u>Enter number%</u>	
	Adaptation total	<u>Enter number per cent</u>	<u>Enter number %</u>	
	<input checked="" type="checkbox"/> Most vulnerable people and communities	18.99 %	0 %	
	<input checked="" type="checkbox"/> Health and well-being, and food and water security	36.64 %	100 %	
	<input checked="" type="checkbox"/> Infrastructure and built environment	44.37 %	<u>Enter number %</u>	
	<input type="checkbox"/> Ecosystems and ecosystem services	<u>Enter number %</u>	<u>Enter number %</u>	
A.5. Expected mitigation outcome <i>(Core indicator 1: GHG emissions reduced, avoided or removed / sequestered)</i>		A.6. Expected adaptation outcome <i>(Core indicator 2: direct and indirect beneficiaries reached)</i>	<i>Indicate total number of direct and indirect beneficiaries</i>	
			<table border="1"> <tr> <td><i>About 362,475 direct beneficiaries. Male: 181,238 Female: 181,237</i></td> <td><i>770,050 indirect beneficiaries. Male: 385,025 Female: 385,025</i></td> </tr> <tr> <td><i>0.002% of total population in Bangladesh</i></td> <td><i>0.005% of total population in Bangladesh</i></td> </tr> </table>	<i>About 362,475 direct beneficiaries. Male: 181,238 Female: 181,237</i>
<i>About 362,475 direct beneficiaries. Male: 181,238 Female: 181,237</i>	<i>770,050 indirect beneficiaries. Male: 385,025 Female: 385,025</i>			
<i>0.002% of total population in Bangladesh</i>	<i>0.005% of total population in Bangladesh</i>			
A.7. Total financing (GCF + co-finance²)	49,989,200USD	A.9. Project size	Small (Upto USD 50 million)	
A.8. Total GCF funding requested	<u>42,201,200USD</u>			

¹Co-financer's contribution means the financial resources required, whether Public Finance or Private Finance, in addition to the GCF contribution (i.e., GCF financial resources requested by the Accredited Entity) to implement the project or programme described in the funding proposal.

² Refer to the Policy of Co-financing of the GCF.



A

A.10. Financial instrument(s) requested for the GCF funding	<input checked="" type="checkbox"/> Grant <u>42,201,200 USD</u> <input type="checkbox"/> Equity <u>Enter number</u> <input type="checkbox"/> Loan <u>Enter number</u> <input type="checkbox"/> Results-based payment <u>Enter number</u> <input type="checkbox"/> Guarantee <u>Enter number</u>		
A.11. Implementation period	5 years	A.12. Total lifespan	20 years
A.13. Expected date of AE internal approval	5/15/2023	A.14. ESS category	B
A.15. Has this FP been submitted as a CN before?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	A.16. Has Readiness or PPF support been used to prepare this FP?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
A.17. Is this FP included in the entity work programme?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	A.18. Is this FP included in the country programme?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
A.19. Complementarity and coherence	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
A.20. Executing Entity information	PKSF is the Executing Entity of the Project.		
A.21. Executive summary (max. 750 words, approximately 1.5 pages)			
<p>Climate Context: The geographical location and low elevation of the coastal zone of Bangladesh make it susceptible to disasters, whereas climate change asserts a new depressing effect on the lives and livelihoods in the region³. The most recent IPCC report (AR6) argues that global sea level will elevate 0.44-0.76 m by 2100 under the intermediate GHG emissions scenario (SSP2-4.5). The NASA sea level tool (see Section B.1) confirms these projections for the entire coastline, but with an even higher maximum value of 0.91 m to the west of the country (by 2100 under SSP2-4.5. Even in the low GHG emission scenario (SSP1-2.6) sea level will rise 0.32-0.62 m by the end of the 21st century.⁴ It is predicted for Bangladesh that a 45 cm rise in sea level may inundate 10-15 per cent of the land by the year 2050, resulting in over 35 million climate migrants from the coastal districts⁵. The proposed project areas, which include Khulna, Bagerhat, Satkhira, Barguna, Patuakhali, Bhola and Cox's Bazar districts, are particularly vulnerable to sea level rise, salinity intrusion, coastal flooding, cyclones and storm surges because of their low elevation, ranging from 1-2 meters above average sea level.</p> <p>Hence, the vulnerability of coastal people is characterized in three ways: i.e., 1) poor human settlement in low-lying areas 2) climate-sensitive livelihood, and 3) scarcity of safe drinking water. The majority of the coastal population is poor, small, and marginal farm families and shrimp workers. The coastal poor community builds their houses in low-lying areas that are subject to coastal flooding. Most of the houses are built with mud and <i>goal pata</i> (leaves of an indigenous coastal plant) which are severely affected by cyclones, storm surges, and high tides. These people have to spend a significant amount of their earnings repairing</p>			

³CCC (2016), "Assessment of Sea Level Rise on Bangladesh Coast through Trend Analysis", Climate Change Cell (CCC), Department of Environment, Ministry of Environment and Forests, Bangladesh.

⁴IPCC, 2021: Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press. In Press.

⁵National Adaptation Programme of Action (NAPA), 2009. The Ministry of Environment and Forests, Government of Bangladesh, Dhaka



houses each year. Besides, the coastal communities primarily depend on seasonal subsistence agriculture and agricultural wage labour, which are highly climate-sensitive. Safe drinking water is highly vulnerable to sea level rise and salinity in the coastal zone of the country. The communities and local-level organisations have a lack of understanding of the present and future climate change impacts, which is one of the key barriers to promoting climate-resilient development in the coastal zone.

To respond to these challenges, the **primary goal** of the project is to develop climate-adaptive coastal communities in Bangladesh through the adoption of climate-resilient housing and livelihood technologies. The project will also enhance the capacity of communities and organisations to address climate change impacts in their localities.

The specific objectives are:

1. To develop climate-resilient homesteads for vulnerable communities in the southwest coastal zone of Bangladesh;
2. To develop climate-adaptive livelihoods for vulnerable coastal communities; and
3. To enhance the capacity of vulnerable communities and institutions so that they are able to plan and implement adaptation interventions.

The project is expected to achieve the following impacts: (i) reduced vulnerability of the coastal community to the adverse impacts of climate change, and (ii) enhanced capacity of the coastal vulnerable community to address climate change issues. The expected outcomes/results are: (i) decreased risk of loss of assets and lives from extreme weather events; (ii) livelihood resilience to SLR / storm surge and salinity; and (iii) improved climate planning and implementation by communities and local-level institutions.

Aligning with the stated specific objectives, the project will construct climate-resilient houses for the most vulnerable households, climate-adaptive farming technologies, (e.g., crab farming along with mangrove tree plantation, sheep or goat rearing, household-based agriculture, etc.), with technical, financial, and capacity building, supply chain development and market linkage support. The concept of a climate-resilient homesteads in the coastal areas of the country includes a raised homestead area, a cyclonic storm-resistant house structure, homestead-based vegetable cultivation, a sanitary latrine, a rainwater harvesting system and saline-tolerant fruit trees and mangrove species plantations in and around the raised homestead area. This integrated climate-resilient homestead development will protect them from coastal inundation and cyclones as well as help increase households' income. These homesteads will also provide some safe space for livestock farming for beneficiaries.

The project follows the GCF agriculture and food security sector guidelines while designing climate-resilient livelihoods. The proposed livelihood interventions build on the first paradigm shift pathway, i.e., promoting resilient agro-ecology. The project will promote ecologically suited, technologically feasible, and socio-culturally accepted high-value crops and farm animals while providing the required skills and technology upscaling. The project will promote an integrated fruit-fish-fiber model in the southwest coastal areas of Bangladesh.

B. PROJECT/PROGRAMME INFORMATION

B.1. Climate context(max. 1000 words, approximately 2 pages)

1. Bangladesh's coastal zone consists of 19 districts along a coastline of 710 km. The coastal zone extends over 47,150 sq. km of area and has a population of 38.52 million (BBS, 2011). The coastal zone is quite distinct from the rest of the country. The coastal zone has been delineated based on three characteristics, namely the level of tidal fluctuations; salinity conditions (both soil, surface and ground water); and risks of cyclones and storm surges⁶. The zone is characterized by a vast network of rivers and channels, enormous discharge of water with a huge amount of sediment, many islands, the Swatch of No Ground (underwater canyon located 45 km south of the Sundarbans in Bangladesh), the shallow northern Bay of Bengal, strong tidal influence and wind actions, tropical cyclones and storm surges. The average elevation in the southwest coastal zone ranges from 1-2 m and in the southeast coastal zone from 4-5 m (Figure 1). The flat topography, active delta, and dynamic morphology, along with changes in precipitation and temperature, play a significant role in its vulnerability to sea level change, salinity intrusion and cyclone and storm surge.

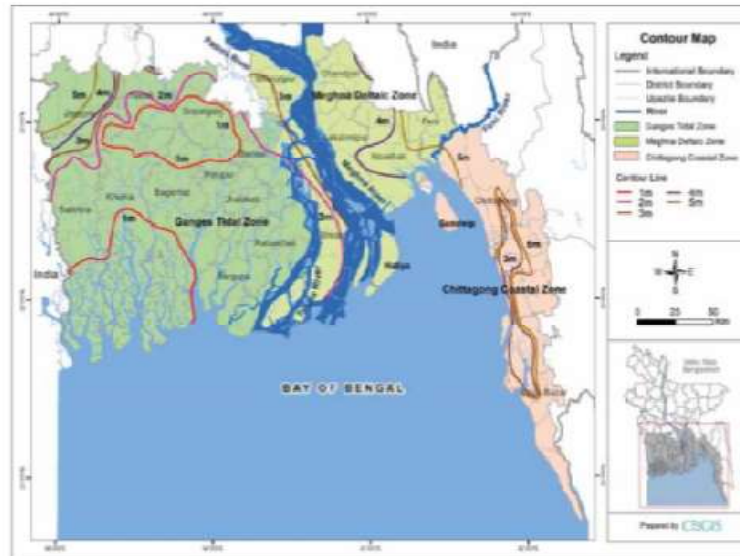


Figure 1: Topography of Bangladesh Coast

The proposed project area

2. The proposed project has selected seven exposed districts of Bangladesh's coastal zone. These are Satkhira, Khulna, Bagerhat, Barguna, Patuakhali, Bhola and Cox's Bazar. These districts have been selected based on their high exposure, vulnerability and the feasibility of introducing a crab hatchery supply chain in the regions. The following figure shows the proposed project districts.

⁶ CCC (2016), "Assessment of Sea Level Rise on Bangladesh Coast through Trend Analysis", Climate Change Cell (CCC), Department of Environment, Ministry of Environment and Forests, Bangladesh.

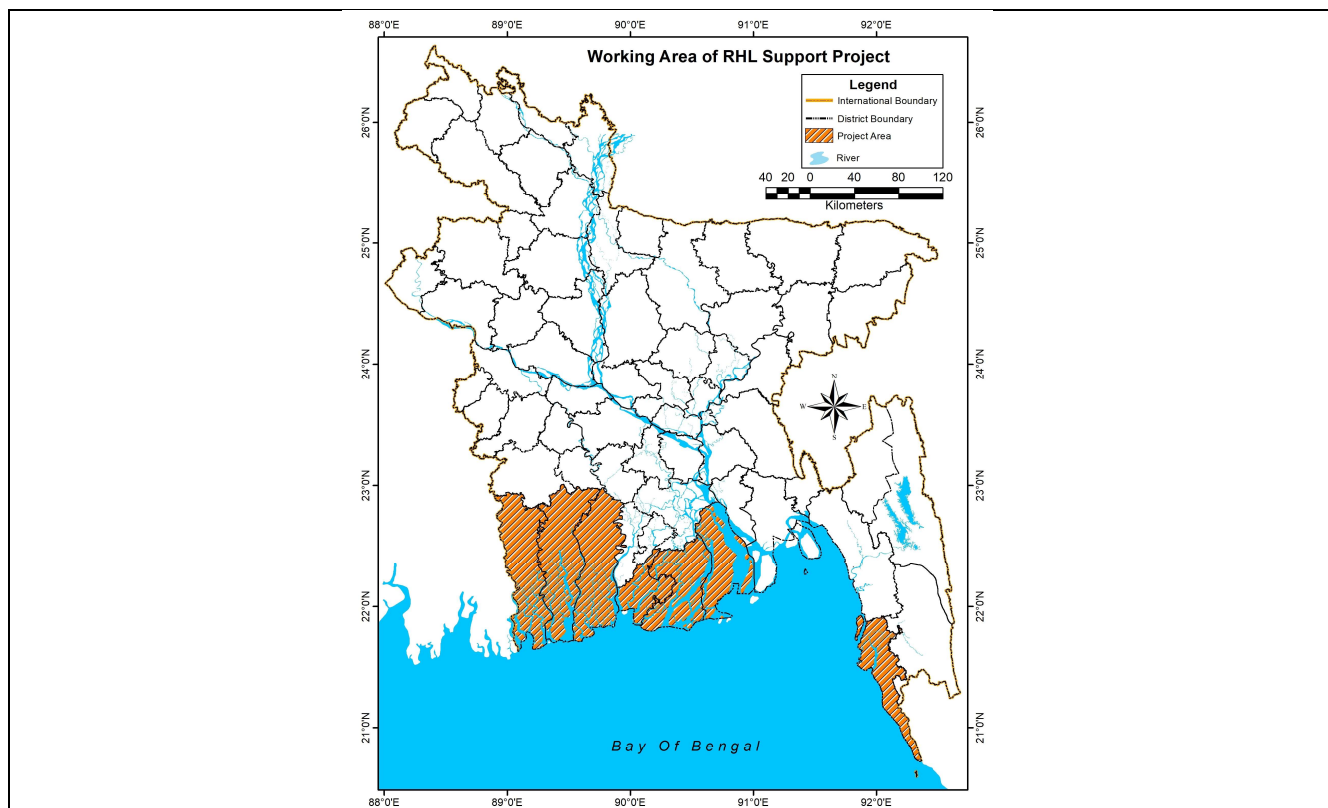


Figure 2: Proposed project area

The total area of these seven districts is 24,691 sq.km and total population is 12,275,996. The average poverty rate is 26.13per cent, which is higher than the national average of 24.3per cent ⁷. The dependency ratio is also high in these districts which is 68.59 (detailed in table 1). Moreover, 52.01per cent of household in Khulna division is katcha (temporary) and 26.86per cent are semi-pucca ⁸, which means that more than three-fourths of the households are vulnerable to intensive precipitation, cyclones and storm surges, etc.

Table 1: Area, population and poverty ratio of the selected districts

Name of district	Area (sq.km)	Population (2011)	Poverty situation (2016) (%)	Dependency Ratio (per cent)
Satkhira	3,358.33	1,985,959	18.6	56.58
Khulna	4,394.46	2,318,527	30.8	54.07
Bagerhat	5,882.18	1,476,090	31	62.77
Cox's Bazar	2,491.86	2,289,990	24.1	85.63
Barguna	1,939.39	892,781	25.7	65.99
Bhola	3,403.48	1,776,795	15.5	83.28
Patuakhali	3,221.31	1,535,854	37.2	71.83
Total	2,4691	12,275,996	Avg.=26.13	68.59

⁷BBS, 2016: Household Income and Expenditure Survey, 2016, Bangladesh Bureau of Statistics, Ministry of Planning, Government of Bangladesh.

⁸BBS, 2015: Bangladesh National Disaster Statistics 2009-2014, Bangladesh Bureau of Statistics, Ministry of Planning, Government of Bangladesh.

Sea level rise and associated salinity intrusion in Bangladesh coastal zone

3. The IPCC sixth assessment report stated with high confidence that Asian coastal countries are likely to incessantly experience relative sea-level rise, which will result in the coastal flooding of many low-lying areas⁹. Bangladesh is considered a hotspot for sea level rise impacts as mentioned in a number of scientific studies¹⁰. Increasing sea level rise is one of the most critical climate change issues for coastal areas of the country. Currently, because of the low topography in these coastal areas, about 50 per cent typically become inundated during the annual monsoons. A study by the SAARC Meteorological Research Center (SMRC)¹¹ through observing tidal gauge records between 1977-1998, found that the tidal levels in Hiron Point, Char Changa and Cox's Bazar rose by 4.0 mm/year, 6.0 mm/year and 7.8 mm/year respectively. The rate of the trend is almost double that of the eastern coast compared to the western coast. Center for Geographic Information System (CEGIS) and Department of Environment (DOE)¹² have analysed 30 years of tidal gauge data for estimating observed sea level change in the Bangladesh coastal zone without considering any land-sea interaction, i.e., sedimentation, subsidence, erosion, accretion, etc. It shows trends in water level in the Ganges tidal floodplain of 7-8 mm/year. On the other hand, the trend is 6-10 mm/year in the Meghna Estuarine floodplain and 11-21 mm/year in the Chittagong coastal plain areas. The sea level in the 37 coastal stations of Bangladesh is predicted to rise between 0.53 and 0.97m by 2100¹³, while the IPCC states in AR6 that under the intermediate GHG emissions scenario (SSP2-4.5), global sea level will elevate 0.44-0.76 m by 2100¹⁴. These figures are supported by the NASA sea level projection tool (<https://sealevel.nasa.gov/ipcc-ar6-sea-level-projection-tool>), which suggests that under SSP2-4.5, by 2100, sea level at Hiron Point will rise by 0.42-0.91 m and sea level at Cox's Bazar will rise by 0.24 – 0.73 m (see Figure 3b). It is predicted that a 45 cm rise in sea level may inundate 10-15 per cent of the land by the year 2050, resulting in over 35 million climate refugees from coastal districts.¹⁵ The sea level rise may also influence the extent of the tides (currently the lower one-third of the country experiences tidal effects) and alter the salinity quality of both surface and groundwater¹⁶.
4. During the dry season (December to March), saltwater intrusion occurs through various inlets in the western part of the coastal zone (Satkhira, Khulna, Barguna, Patuakhali, etc.) and through the Meghna estuary. Moreover, as freshwater flows decrease in the Lower Meghna during the waning of the monsoon, the saline front can move by as much as 30-40 km from the coast. During the monsoon, about 12 per cent of the total area is under high salinity levels, which increase to 29 per cent during the dry season. With increased sea level rise, drainage gradients may reduce, thereby decreasing the flow to the Bay of Bengal and allowing riverine salinity to move further inland.
5. The Soil Resource Development Institute (SRDI) of Bangladesh has presented the soil salinity status of Khulna region in their annual report for 2018-2019. The annual investigation of SRDI demonstrated the salinity changes in the different locations of Khulna region pertaining to different months in recent

⁹IPCC (2021) Sixth Assessment Report, Physical Science Basis

¹⁰Nicholls, R. J., Hutton, C. W., Lázár, A. N., Adger, W. N., Allan, A., Whitehead, P. G., ... & Payo, A. (2018). An integrated approach providing scientific and policy-relevant insights for South-West Bangladesh. Ecosystem Services for Well-Being in Deltas: Integrated Assessment for Policy Analysis; Nicholls, RJ, Hutton, CW, Adger, WN, Hanson, SE, Rahman, MM, Salehin, M., Eds, 49-69.

¹¹SMRC (2003). The vulnerability assessment of the SAARC Coastal Region due to sea level rise: Bangladesh case study. Dhaka, SAARC Meteorological Research Center.

¹²CEGIS and DoE (2011). Final report on programmes containing measures to facilitate adaptation to climate change of the second national communication project of Bangladesh. Dhaka, Department of Environment.

¹³ Haque, A., Rahman, M. H., Rahman, D., & Rahman, D. (2019). An evaluation of sea level rise vulnerability and resilience strategy to climate change in the coastline of Bangladesh. *International Journal of Environmental Sciences & Natural Resources*, 18(2), 56-70.

¹⁴ IPCC (2021) Sixth Assessment Report

¹⁵ MOEF (2009): National Adaptation Programme of Action (NAPA), 2009. The Ministry of Environment and Forests, Government of Bangladesh, Dhaka.

¹⁶ CCC (2016): Assessment of Sea Level Rise on Bangladesh Coast through Trend Analysis", Climate Change Cell (CCC), Department of Environment, Ministry of Environment and Forests, Bangladesh.

years. Figure 3a shows that the soil salinity of Batiaghata, Dumuria, Mongla and Paikgacha, (these are sub-districts, locally known as *upazilas*. under Khulna district) was found to vary throughout the year¹⁷.

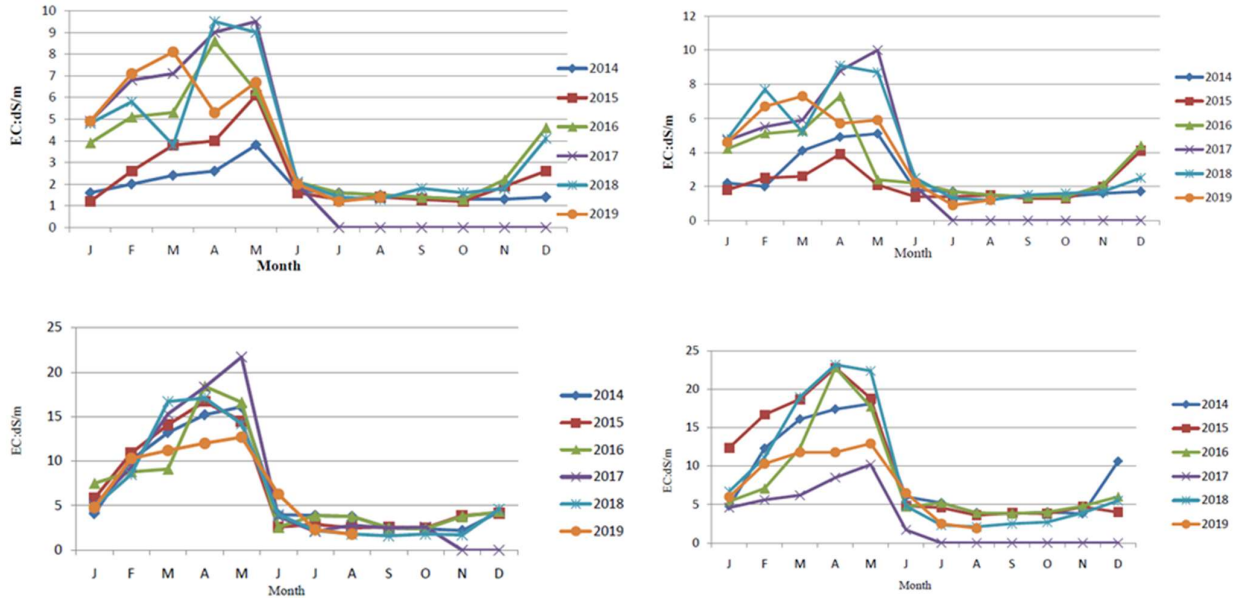
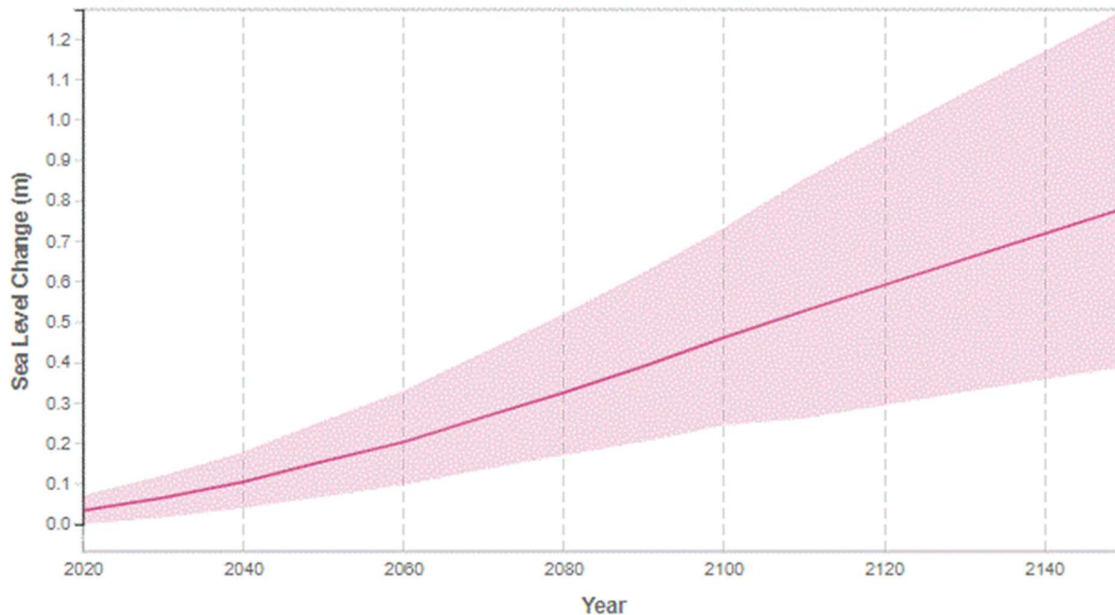


Figure 3a: Temporal distribution of salinity at different locations in Khulna Region (clock-wise location of maps from upper left: Batiaghata, Dumuria, Mongla and Paikgacha).



¹⁷Soil Resource Development Institute (2019): Annual Report, 2018-2019, Soil Resource Development Institute, Ministry of Agriculture, Dhaka.



Figure 3b. Sea level projections for Cox's Bazar. These projections are for 2100 relative to a 1995-2014 baseline under future scenario SSP2-4.5. The bold line shows the median projections, and the shading represents the 17th-83rd percentiles.

6. It is observed in the SRDI study that over 1 million hectares of cultivable land in the country are affected by salinity intrusion caused by slow- and rapid-onset events, including sea level rise, cyclones and storm surges and consequential coastal flooding. The net cultivated area in Satkhira district decreased by about 7 per cent from 1996 to 2008 and production of the principal rice crop in Satkhira district decreased from about 0.3 million tons in 2008 to 0.2 million tons in 2010 (SRDI, 2010)¹⁸. During the last 35 years, salinity-affected area have increased by almost 26per cent in the country and are spreading over the non-coastal areas of Bangladesh (Reliefweb, 2019)¹⁹.
7. The salinity front will move about 60 km to the north in about 100 years (CCC, 2016)²⁰. It is seen that a sea level rise of 27 cm causes a 6 per cent increase in brackish water area compared to base conditions. About an additional area of 327,700 ha would become a high-saline water zone (>5 ppt) during the dry season due to a 60 cm sea level rise. In the monsoon, about 6 per cent per cent of the sweet water area (276,700 ha) will be lost (CCC, 2016).

Tropical Cyclone and Storm Surges

8. The coastal areas of Bangladesh are frequently hit by cyclones that form in the Bay of Bengal. Over the last 50 years, 15 severe cyclones with wind speeds ranging from 140 to 225 km/hour have hit the coastal area of Bangladesh of which 7 hit in the pre-monsoon and rest in the post-monsoon season²¹. The highest frequency of intense tropical cyclones has been reported to occur between the months of October and November. In recent years, the lives and livelihoods of more than a million coastal people have been affected by cyclones in Bangladesh. Cyclone-induced storm surges are more devastating and often result in colossal damage²². In 2007, the tropical cyclone Sidr affected Barguna, Patuakhali, Bhola and some parts of Khulna, Bagerhat, and Satkhira districts. It was a category 4 cyclone that struck the south-west coast of Bangladesh i.e., Satkhira, Khulna, Bagerhat, Barguna, Patuakhali districts at 240 km per hour with a surge height of about 6 meters. Of the 2.3 million households affected to some degree by the effects of Cyclone Sidr, about one million were seriously affected²³. It caused a financial loss of USD 1.7 billion according to an estimate by the Government of Bangladesh (GoB). The number of deaths caused by Sidr is estimated at 3,406, with 1,001 still missing, and over 55,000 people sustaining physical injuries²³. Super cyclone Aila in 2009 damaged the coastal polder (embankment) in Satkhira, Khulna and Bagerhat districts. As a result, saline water entered the vast area and remained for a longer period, causing widespread damage to agriculture, livestock, and livelihoods. The worst two affected districts are Satkhira and Khulna followed by Bagerhat, Pirojpur, Barisal, Patuakhali, Bhola, Laxmipur, Noakhali, Feni, Chattogram, and Cox's Bazar²⁴. According to the official statistics, 545,954 people from 118,757 families are affected in Khulna, while death toll stands on 45²⁴. Loss of livestock

¹⁸ Soil Resource Development Institute (SRDI) (2010): Saline Soils of Bangladesh, Soil Resource Development Institute (SRDI), Ministry of Agriculture, Dhaka.

¹⁹Reliefweb (2019) Climate Change-Induced Salinity Affecting Soil Across Coastal Bangladesh. <https://reliefweb.int/report/bangladesh/climate-change-induced-salinity-affecting-soil-across-coastal-bangladesh>

²⁰CCC (2016), "Assessment of Sea Level Rise on Bangladesh Coast through Trend Analysis", Climate Change Cell (CCC), Department of Environment, Ministry of Environment and Forests, Bangladesh.

²¹ MOEF (2009). National Adaptation Programme of Action (NAPA), Ministry of Environment and Forests, Government of Bangladesh.

²²Reliefweb (2020) Bangladesh: Cyclone - Final report early action EAP2018BD01. <https://reliefweb.int/report/bangladesh/bangladesh-cyclone-final-report-early-action-eap2018bd01>

²³GoB (2008).Cyclone Sidr in Bangladesh: Damage, Loss, and Needs Assessment for Disaster Recovery and Reconstruction.A Report Prepared by the Government of Bangladesh Assisted by the International Development Community with Financial Support from the European Commission.

²⁴ Roy, K., Kumar, U., Mehedi, H., Sultana, T. and Ershad, D. M., 2009. Initial Damage Assessment Report of Cyclone AILA with focus on Khulna District. Unnayan Onneshan Humanity Watch- Nijera Kori, Khulna, Bangladesh, June 23, 2009. pp-31.

and poultry has been reported as 2,080 and 24,505, respectively²⁴. In total 367 km of road has been fully damaged while 1,065 km of road is partially damaged²⁴. About 7,392 acres of agricultural land has been damaged²⁴. About 594 km of embankment has been damaged which is still letting the river water to freely flow on land and lengthening the stay of waterlogged conditions²⁴. Diarrhoea has broken out in the district as 3700 and 4500 people are reported as affected in Dacope and Koyra, respectively²⁴. The storm surge of the 1991 cyclone caused the death of a substantial number of cattle and destroyed all freshwater sources in the affected coastal areas²⁵. A summary of recent cyclones can be seen in Table 2.

Table 2. Loss and damage by cyclones in the past 15 years in Bangladesh

Name of cyclone	Year	Wind speed (Km/hour)	Affected areas (districts or upazilas)	Loss and damage (Loss in USD Million (Gross/Total))	Source
Sidr	2007	240	12 Districts	1703.1	ERD, April 2008
Rashmi	2008	85	9 Districts	1.5	
Aila	2009		11 Districts/64 Upazilas	221.8	Reliefweb, June 2009
Roanu	2016	110	11 Districts/56 Upazilas	508.83	Christian Adi
MORA	2017	110-130	132 Upazilas	1700	Foyjonnesa et al., April, 2019
Bulbul	2019	120-130	16 Districts	30.9	IFRC, May 2020
Amphan	2020	60-90	19 Districts/76 Upazilas	131	Reliefweb, May 2021
Sitrang	2022	74	6 Districts	41.2	The Daily Star, 31 October, 2022

9. There is another dataset for tropical cyclones that have hit Bangladesh since 1961. A total of 61 tropical cyclones hit Bangladesh and its close neighbouring territories during the period 1961-2013. This result is an update of the analyses²⁶. The update has been accomplished by using JTWC Best Track tropical cyclone data. According to current statistics, an average of 1.15 tropical cyclones hit Bangladesh per year. The spatial distribution of these cyclones is shown in Table 3. The south-western and south-central coastal zones of Bangladesh were hit by 28 per cent and 16 per cent respectively, by reported cyclones between 1961 and 2013.

Table 3: Distribution of land-falling cyclones to different coastal regions during 1961-2013

²⁵Farukh, M. A., Hossen, M. A. M., & Ahmed, S. (2019). Impact of extreme cyclone events on coastal agriculture in Bangladesh. *Progressive Agriculture*, 30, 33-41.

²⁶Quadir, D. A. and Md. Anwar Iqbal. 2008. Tropical Cyclones: Impacts on Coastal Livelihoods, IUCN Working Paper.

Coastal region	No. of tropical cyclones hit the coast	%of the tropical cyclones	Remarks
South-eastern coast (Southern Chattogram, Cox's Bazar and Teknaf)	18	29.5	Cox's Bazar is the project area
Sundarbans (south-western) coast (Satkhira, Khulna and Bagerhat)*	17	27.9	Satkhira, Khulna and Bagerhat are the project areas
Meghna estuary, east central coast (Eastern Bhola*, Noakhali and Chattogram)	16	26.2	Bhola is the project area
Central coast (Barguna, Potuakhali, Pirozpur, Barisal, Bhola)*	10	16.4	Barguna and Patuakhali are the project areas
Total	61	100	

*Proposed project area

10. The Sixth Assessment Report of the IPCC stated that the number of intense tropical cyclones is assumed to increase (High Confidence). However, it is narrated with medium confidence that total number of cyclones throughout the world might decline or remain constant (IPCC, 2021). In AR6, the IPCC has firmly stated that coastal hazards in Asian countries will rise throughout the 21st century. In addition, it is asserted with high confidence that anthropogenic climate change results in increase in heavy precipitation and accompanying tropical cyclones. However, it is unlikely to ascertain trends in the frequency of all-category tropical cyclones due to the unavailability of authentic data.²⁷ However, it is **impossible** to ascertain the trends in the observed frequency of all-category tropical cyclones due to **insufficient** data.
11. Irrespective of changes in tropical cyclone properties, the unambiguous sea level rise (see paragraph 4) will result in all storm surges reaching a higher threshold and therefore causing increased coastal impacts. Using the IS92a scenario, Unnikrishnan (2006)²⁸ argues that there will be a significant increase in the frequency of high storm surges in the Bay of Bengal even if there is no substantial change in the frequency. Emanuel (2005) also projects increased intensity of tropical storms by 2100 for the North Indian Ocean²⁹. These findings are fully aligned with the latest IPCC Sixth Assessment Report (AR6). Combined with expected rises in sea-level, these higher intensity cyclones are predicted to cause increased tidal surge heights. Bangladesh has already experienced about 40 per cent of the total impact of storm surges in the world³⁰.

Coastal Flooding

12. Under natural conditions, areas of the coastal zone are often flooded at high tides, either throughout the year at high spring tides or only in the monsoon season when rivers entering the region from inland run at high levels³¹. Coastal flooding by saline water was found on the extreme south-west throughout the year and in the north-west and south-eastern coasts during the dry season³². Cyclones and storm surges have a direct impact on increasing coastal flooding. An estimated 3.45 million people were

²⁷IPCC Sixth Assessment Report, 2021

²⁸Unnikrishnan A.S., R. Kumar, S.E. Fernandez, G.S. Michael and S.K. Patwardhan, 2006. Sea Level Changes along the Indian Coast: Observations and Projections Current Science India, 90: 362-368

²⁹Emanuel, K. (2005). Increasing destructiveness of tropical cyclones over the past 30 years. *Nature* 436, 686–688 (2005). <https://doi.org/10.1038/nature03906>.

³⁰Murty TS. Storm surges meteorological ocean tides. *Can J Fish Aquat Sci.* 1984;212:897.

³¹ Hug Brammer, (2013): Bangladesh's dynamic coastal regions and sea-level rise, Climate Risk Management, ELSEVIER, 2013.

³² Hug Brammer, (2013): Bangladesh's dynamic coastal regions and sea-level rise, Climate Risk Management, ELSEVIER, 2013.

exposed to coastal flooding because of Cyclone Sidr³³. Compared to the no-climate change baseline scenario, an additional 7.8 million people would be affected by floods higher than one metre in Bangladesh because of a potential 10-year return cyclone in 2050 (an increase of 107 percent)³². A total of 9.7 million people (versus the 3.5 million in the baseline scenario) are projected to be exposed to severe inundation of more than 3 meters under this same scenario³⁴.

13. Dasgupta et al. (2014)³⁵ modelled cyclone storm surge impacts under a changing climate scenario in 2050. This model, in a bid to determine potential future inundation zones by 2050 under the climate change scenario, was run for five cyclone tracks (covering the entire coastal area), incorporating a 27-cm rise in sea level, a 10 per cent increase in wind speed, and the landfall of cyclones during high tide. It is predicted that by 2050 an additional 15 per cent of the coastal area of Bangladesh will be inundated with storm surges during cyclones. Figure 4 shows the additional area that will be impacted by inundation in 2050. Not only will the areas of Khulna, Bagerhat and Satkhira Districts be newly exposed, but tidal surges of 3 meters will inundate 69 per cent more land area than they do at the present time.
14. Coastal flooding due to tidal surge, along with the huge amount of sediment that is carried by the three major rivers through a steep flow gradient, coupled with the increase in sea level, results in extensive flooding in coastal regions. The Bangladesh Climate Change Strategy and Action Plan (BCCSAP) stressed the need to understand, prepare for and respond to these emerging challenges so that the wellbeing of the people is ensured (MoEF, 2009)³⁶.

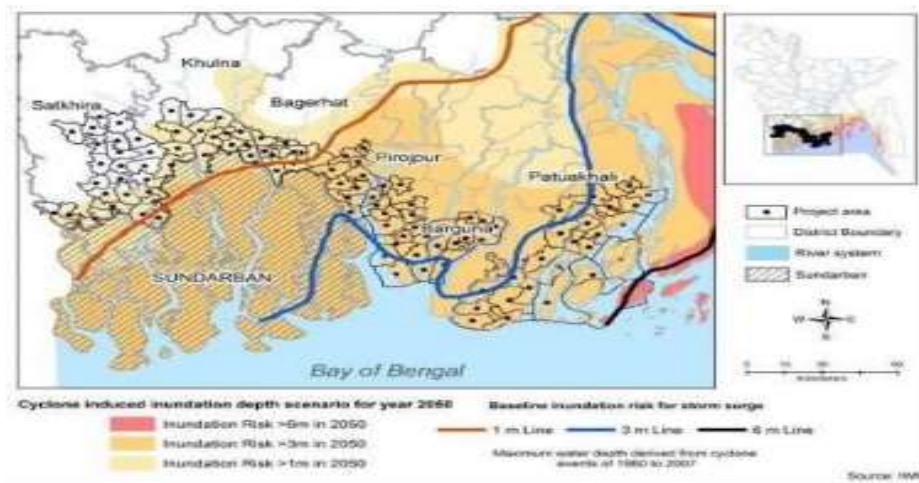


Figure 4: Cyclone inundation map in 2050 under projected climate change scenarios

Impacts of Climate Change

15. Coastal communities are particularly vulnerable to the aforementioned climatic dangers because of their poverty and other challenges, which are explained below.

Vulnerability of homesteads to climate hazards

³³<https://www.worldbank.org/en/news/press-release/2013/06/19/warming-climate-to-hit-bangladesh-hard-with-sea-level-rise-more-floods-and-cyclones-world-bank-report>

³⁴<https://www.worldbank.org/en/news/press-release/2013/06/19/warming-climate-to-hit-bangladesh-hard-with-sea-level-rise-more-floods-and-cyclones-world-bank-report>

³⁵Dasgupta, Susmita & Huq, Mainul & Khan, Zahirul & Murshed, Ahmed & Mukherjee, Nandan & Khan, Malik & Pandey, Kiran. (2014). Cyclones in a changing climate: the case of Bangladesh. *Climate and Development*.

³⁶MOEF (2009). National Adaptation Programme of Action (NAPA), Ministry of Environment and Forests, Government of Bangladesh.

16. Houses along the coastal zone are subject to coastal flooding, with more than two-thirds of the houses in coastal communities made of mud and *goal pata* that are easily and severely damaged during cyclones, storm surges and high tides. Affected people spend a significant share of their earnings and time on an annual basis for house repairs or reconstruction due to climate related damage.
17. The construction of communal cyclone shelters, among others, is the main technique used today to protect coastal people from SLR, tidal surge, coastal flooding, and cyclones. These local-level disaster response infrastructures have a number of drawbacks. Due to the lack of adequate sanitation and hygiene facilities and the increased likelihood of sexual harassment incidents, women and girls are often reluctant to use such facilities. Many families opt to seek safety in their own homes rather than using these shelters, which leaves them extremely vulnerable. The multipurpose use of cyclone shelters as elementary schools will be limited in the near future as a result of the rapid demographic changes in Bangladesh.
- Livelihoods and Nutrition*
18. Livelihoods mostly depend on the climate-vulnerable agriculture sector through seasonal subsistence agriculture and farm labour. This is expected to be further aggravated by degrading agro-ecological landscapes and resources³⁷ in part due to saltwater intrusion and environmental damage caused by storms.
19. The gradual increasing scenarios of salinity intrusion into the coastal areas (soil, river, and groundwater) of Bangladesh threaten the primary production system, coastal biodiversity, and human health³⁸. According to the Soil Resources Development Institute (SRDI), the total amount of salt-affected land in Bangladesh was ~83.3 million ha in 1973, which increased to ~102 million ha in 2000, to ~105.6 million ha in 2009, and is still continuing to increase³⁹. Salinity intrusion directly affects the livelihoods of farmers, including rice cultivators and fisherfolk. The net cropped area in coastal Bangladesh has been decreasing over the last few years due to several factors and studies have identified salinity as the main cause for yield reduction in coastal agriculture⁴⁰. Other statistics that point to the trauma of salinity include: (a) salinity has decreased the production of wheat by 4.42 million ton per year in coastal Bangladesh⁴¹, (b) 19 of 40 local rice varieties are already extinct and about four to five varieties have become rare in coastal areas, and (c) between 1975 and 2006 the number of cultivated winter vegetables has declined in coastal areas⁴².
20. Livestock, including small ruminants, are primarily affected by coastal inundation associated with tidal surges, monsoon precipitation, and cyclones. As stated earlier, livestock deaths are evident. Moreover, increased salinity has significant negative impacts on livestock products in the low-lying coastal floodplain. In the last few decades, the area of grazing land and the intensity of grazing have decreased due to increased salinity and the loss of agricultural land in coastal areas⁴³. This situation challenges the raising of large ruminants by causing a scarcity of fodder and animal feed, particularly in the south-western coastal area. Small ruminants require less fodder and feed, which may be easily arranged in the locality. Besides, SLR-induced salinity, coastal floods, cyclonic storm surges, and waterlogging will cause damage to livestock shelters and sometimes deaths. Despite these challenges, the marginal farmers raise small ruminants and poultry, as this has been traditionally practiced to ensure their livelihood and nutrition security. The slatted houses for goat or sheep will protect them from flooding, cyclones and storm surges and thus reduce their death.
21. Productive land is being lost due to saltwater intrusion, causing a loss of agricultural yield and fodder, while cyclones and storm surges are responsible for many livestock deaths. Ultimately, this is leading

³⁷Agriculture and Food Security Sector Guideline of GCF, 2021.

³⁸ Islam, M. A., N. Warwick, R. Koech, M. N. Amin, L. L. D. Bruyn. 2020. Science of the Total Environment 727, 138674.

³⁹ Chen, J., and V. Mueller. 2018. Nature Climate Change 8, 981–985.

⁴⁰Baten, M. A., L. Seal, K. S. Lisa. 2015. American Journal of Climate Change 4, 248.

⁴¹Habiba, U., M. A. Abedin, R. Shaw, A. W. R. Hassan. 2014. Salinity-induced livelihood stress in coastal region of Bangladesh. Water insecurity: A social dilemma, United Kingdom: Emerald Group Publishing Limited

⁴²Rahman, M., M. S. Uddin, M. Uddin, S. A. Bagum, N. Halder, M. Hossain. 2004. Journal of Biological Sciences 4, 1–4.

⁴³Rahman A. and Udinn N. 2022. Challenges and Opportunities for Saline Agriculture in Coastal Bangladesh. In The future of Sustainable Agriculture in Saline Environments. DOI: 10.1201/9781003112327



to protein and other deficiencies among coastal populations. Twenty-eight per cent of children under five years old are stunted (have low height for age) and 10 per cent are acutely malnourished or wasted (have low weight for height)⁴⁴. It is expected that this situation would worsen in the coastal area of the country as a direct result of climate change-induced SLR.

22. Increased coastal salinity has affected fish yields, leading to substantial reductions in the inland open-water fishery. Shrimp farming occurs on about 138,600 ha of coastal land in Satkhira (42,550 ha), Khulna (36,500 ha), and Bagerhat (49,550 ha) districts. Apart from these, the production of native freshwater fish species (e.g., rui, katla, carp, boal, tengra, golshatengra, koi, shing, taki, khalisha, potka, kanimagur, is gradually declining due to increased salinity⁴⁵.
23. A study in the highly saline Paikgacha sub-district in Khulna and moderately saline Rampal sub district in Bagerhat found that freshwater fish species had decreased by 59 per cent and 21 per cent respectively, during 1975-2005. The slight increase in salt-tolerant species did not compensate for the loss in diversity, which is a serious threat to the local ecosystem and food supply.
24. Increases in salinity by 2050 and other stressors are predicted to significantly negatively impact the Sundarbans mangrove ecosystem⁴⁶ which in turn, will impact the livelihoods of poor communities who depend on its resources, especially the poorest *upazilas* (sub-district) via loss of standing timber and honey production. Salinity has resulted in the loss of 12 percent of marine fish and 25 percent of shrimp species in south-western Bangladesh.⁴⁷ Local people used to earn cash income by selling ecosystem products, such as fish, honey, and *golpata* at local markets. Due to restrictions from the government as a part of the conservation management of the Sundarbans, people couldn't fully rely on the ecosystem services of Sundarbans. For example, to ensure that wildlife during the mating season had an undisturbed environment, following the trend of 2021, the government prohibited admission into the forest for three months, from June 1 to August 31, 2022, for purposes of fishing, travel, or resource collection. The demand for locally produced livelihoods is therefore more crucial than the need for livelihoods reliant on these fragile natural resources.

Drinking and Sanitation Water

25. Coastal surface and ground water, from which the majority of the population rely for water, is increasingly contaminated with saline water due to sea level rise, cyclones and tidal surges. Coastal people, particularly women, spend otherwise productive time collecting drinking water from long distances, which exacerbates their lack of productivity and ultimately income.
26. The result of community engagement reveals that local people are aware of water scarcity issues, and nearly all of them perceive that salinity is the main reason behind them. Even though socioeconomic factors affect their ability to adapt, communities have their own adaptation technologies to cope with the problem, such as household-based temporary rainwater harvesting, and the informal use of freshwater ponds. In the coastal belt of Chattogram, people were found to suffer both physically and financially due to the freshwater shortage. Inhabitants of those salinity-affected areas spent a significant portion of their income on buying freshwater bottles⁴⁸.

Coherence and complementarity with other past and ongoing interventions

27. **Crab hatchery-PKSF:** After successful experimentation with crab hatcheries, PKSF established four small-scale hatcheries. Three of them are at the entrepreneur level. All these hatcheries are in

⁴⁴ Bangladesh Bureau of Statistics (BBS) and UNICEF Bangladesh (2019). Progotir Pathey, Bangladesh Multiple Indicator Cluster Survey 2019, Survey Findings Report. Dhaka, Bangladesh: Bangladesh Bureau of Statistics (BBS).

⁴⁵ Alam, M. Z., Carpenter-Boggs, L., Mitra, S., Haque, M., Halsey, J., Rokonuzzaman, M., ... & Moniruzzaman, M. (2017). Effect of salinity intrusion on food crops, livestock, and fish species at Kalapara Coastal Belt in Bangladesh. *Journal of Food Quality*, 2017

⁴⁶ The World Bank (2015): Salinity Intrusion in a Changing Climate Scenario will Hit Coastal Bangladesh Hard.

⁴⁷ Alam, M. Z., Carpenter-Boggs, L., Mitra, S., Haque, M., Halsey, J., Rokonuzzaman, M., and Moniruzzaman, M. (2017). Effect of salinity intrusion on food crops, livestock, and fish species at Kalapara Coastal Belt in Bangladesh. *Journal of Food Quality*, 2017.

⁴⁸ Javed, M. A., Paul, A., and Nath, T. K. (2020). Peoples' perception of the water salinity impacts on human health: a case study in south-eastern coastal region of Bangladesh. *Exposure and health*, 12(1), 41-50.



operation. A total of US \$0.66 million was invested in hatchery development. In addition, PKSf has been promoting crab farming and has invested a total of about US\$2.15 million so far to transfer this now proven adaptive technology. The RHL project will scale PKSf's existing efforts to promote pro-saline livelihood options for the coastal vulnerable people.

- 28. World Bank Project for national housing market:** PKSf has been implementing the World Bank funded LICHSP to improve the living conditions of low-income community members residing in selected municipalities and city corporations since 20 October 2016. As of September 2022, PKSf, through its seven Partner Organizations (POs) has disbursed a total of about US \$24.40 million as loans to 11,641 borrowers for the construction of new houses and the extension or repair of existing ones in 13 towns under 'Shelter Lending & Support' component of this project. This project focused on urban and semi-urban areas, whereas the RHL project will focus on rural housing, which is arguably more vulnerable and where communities have less capacity to afford housing loans. The beneficiaries under the LICHSP are in the medium- to low-income category and are not necessarily climate-vulnerable. However, the LICHSP has developed a guideline for implementing housing loan activities for medium- to low-income groups, which will help the RHL project prepare a guideline for developing a guideline for building climate-resilient homesteads. PKSf's experience in building or repairing houses will also be useful for implementing the RHL project.
- 29. Climate Resilient Infrastructure Mainstreaming (CRIM):** This is the first GCF-financed project in Bangladesh. KfW is the accredited entity, and the Local Government Engineering Department (LGED) is the Executing Entity (EE) of the project. The total estimated budget is USD 80 million, of which GCF is contributing USD 40 million as a grant. The project has been implemented in Satkhira, Barguna and Bhola districts. The project has three intervention areas, i.e., a) Institutional Development, b) Pilot Climate Resilient Rural Infrastructure and c) Pilot Climate Resilient Urban Infrastructure. The project will enhance the capacity of LGED for addressing climate change in the infrastructure sector of the country by establishing a "Climate Resilient Local Infrastructure Centre ("CReLIC")" in the organization under the first intervention area a. Under intervention b, it will build 45 new multipurpose community cyclone shelters with innovative design in climate change aspects and rehabilitate 20 existing shelters to a climate-proof standard in the three project districts (Districts Bhola, Barguna and Satkhira). Under intervention area c, the project will improve drainage, flood protection, sanitation, water supply, and transport infrastructure, with priority given to the most vulnerable, such as the inhabitants of the city slums of Satkhira Pouroshova (municipality). The CRIM and RHL projects geographically overlap in three districts, but there is no overlap in project activities. Rather, these two projects will complement each other. For example, the CRIM project will increase capacity of government organisations whereas the RHL project will increase the capacity of non-government organisations. Similarly, the CRIM project will focus mainly on urban infrastructure except some community-based cyclone shelters, whereas the RHL project will focus on rural livelihood and homestead development activities. Most importantly, the CRIM project will develop resilient community infrastructure, whereas the RHL project will increase resilience of individuals. To avoid duplication of resources, the RHL will additionally conduct formal and informal consultations with the CRIM in the selection of the project sites and beneficiaries. The project will review the training manuals of the CRIM project while preparing the guidelines and training manual for this project.
- 30. Enhancing adaptive capacities of coastal communities, especially women, to cope with climate change induced salinity:** The GCF has financed UNDP Bangladesh to enhance the capacity of coastal communities, especially women, to cope with climate change-induced salinity. The total project budget is USD 33 million, of which GCF grant is USD 25 million and the Ministry of Women and Children Affairs contributes USD 8 million. The project will provide assistance to 39,000 women and girls in Satkhira and Khulna to adopt resilient livelihoods, while ensuring reliable, safe drinking water for 130,000 people through community-managed rainwater harvesting solutions. It will also seek to strengthen the participation of women in the last-mile dissemination of gender-responsive early warnings and the continued monitoring and adaptation of livelihoods to evolving climate risks. The UNDP's project implements salinity-resilient livelihoods in both off-farm and on-farm sectors for vulnerable people. Whereas the RHL will intervene only in the on-farm sector, specifically crab farming and goat or sheep rearing. In addition, the RHL will develop climate-resilient homestead for vulnerable people living in low-



lying areas. Moreover, the UNDP project will promote crab fattening, which is mainly nature-based. The RHL project will support the crab fattening activity by supplying hatchery-produced crablets. On the contrary, the UNDP project will promote hydroponic fodder. The RHL project will use this fodder for goat or sheep to be raised under this project. Thus, these two projects will complement each other. The two districts are expected to overlap, but measures will be taken to avoid activity overlap and ensure the complementarity of the two projects.

31. **Extended Community Climate Change Project- Flood (ECCCP-Flood):** The GCF-financed project is to support increased resilience in flood-vulnerable communities in the northern region of the country. It is a four-year project with a total budget of USD 13.68 million, of which GCF grant contribution is USD 9.32 million. The project covers the riverine char areas of Jamalpur, Gaibandha, Kurigram, Lalmonirhat, and Nilphamari districts. Major project activities include raising homestead plinths, provisioning safe water and sanitation, promoting flood-adaptive crop production, and goat or sheep rearing in slatted houses. While some activities are similar, the ECCCP will cover the Brahmaputra-Teesta basin in the northern part of Bangladesh, and the RHL will support coastal areas in the south of the country.
32. Goats and sheep rearing in slatted house is a common activity of the ECCCP-Flood and RHL project. It is a proven pro-poor livelihood option in rural areas of Bangladesh. It requires low investment and a small space, and the operation cost is also very low. It is also critical for household nutrition. In addition, women can take care of goats and sheep at home. The other family members can also look after sheep in parallel with their main duties. The project will add improved technology and management systems, i.e., slatted housing systems, to the conventional goat and sheep rearing process to make it climate-resilient. The slatted house will protect goats and sheep from coastal flooding, storm surge and cyclone. PKSF has demonstrated several hundred slatted houses under Community Climate Change Project (CCCP), which was completed in 2016. The experience of PKSF found that goats and sheep are highly resilient to increased salinity. They are less affected by disease and require a minimum amount of feed for survival. On the other hand, their productivity is very high. Women can easily get involved. The response of the community to the technology in terms of adaptive capacity and economic benefit is significant.
33. The government has established the **Bangladesh Climate Change Trust (BCCT)** and allocated USD 480 million to implement various adaptation projects that include construction of embankments and river bank protective work, building cyclone-resilient shelters, excavation or re-excavation of canals, construction of water control infrastructures including regulators or sluice gates, waste management and drainage infrastructure, introduction and dissemination of stress-tolerant crop varieties and seeds, afforestation, installation of solar panels. In particular, the project has allocated BDT 40.0 million in Khulna and BDT 170.7 million in Satkhira for housing and rehabilitation of cyclone affected people; BDT 4.0 million in Satkhira for rainwater harvesting infrastructure; and another BDT 10 million for housing and pond sand filter (PSF) construction support in Satkhira Upazila. Although these activities are closely related to this proposed project, the shelters constructed under this project are mainly community-based cyclone shelters, whereas the proposed project will implement resilient housing for individual households with raised homesteads.
34. The government has also established and implemented the **Bangladesh Climate Change Resilience Fund (BCCRF)**. Most of the projects under BCCRF are related to the improvement of climate-resilient livelihoods through agricultural interventions, i.e., promotion of stress-tolerant crop varieties, cyclone shelter reconstruction, reconstruction of embankments, etc. In addition to these funds, the government has been implementing **Pilot Program for Climate Resilience (PPCR); Strategic Programme for Climate Resilience (SPCR) fund, Coastal Embankment Improvement Project, Coastal Climate-resilient Infrastructure Project, Coastal Towns Environmental Infrastructure Project, Climate-resilient Agriculture and Food Security, Feasibility Study on Climate-resilient Housing for Low-Income Communities and Climate Change Capacity Building and Knowledge Management projects and Least Development Countries Fund (LDCF)** for implementing adaptation activities including resilient livelihoods, construction and reconstruction of embankments, safe drinking water, and afforestation etc.



35. The Global Environment Facility (GEF) supports '**Building climate resilient livelihoods in vulnerable landscapes in Bangladesh (BCRL)**' is to improve the resilience of people, communities, and ecosystems to climate change, and improve livelihoods through increased value addition in agricultural food systems. The BCRL is a landscape-based action research project. The BCRL project will develop climate-resilient high-value crop advisories in collaboration with Department of Agricultural Extension - DAE's Bangladesh Agro-meteorological Information System Development (AMISDP) Project and disseminate the advisories using the same system adopted by AMISDP. It will also help improve the overall effectiveness of the advisories through process evaluation surveys of end-users, which will seek feedback on, for example, the understandability, timeliness, and relevance of information provided (activity supported from project budget, Climate Smart Agriculture Expert along with DAE's Deputy Project Director and Project Implementation Coordinator). The project has been implemented in three landscape areas: coastal zone, hill tracts, and Barind tracts. In terms of geographical coverage, the BCRL and the RHL are coherent, i.e., two districts such as Khulna and Satkhira districts are common. The complementarity of these two projects is that the BCRL project focused on crop sector, whereas the RHL project focused on fisheries and livestock sectors. In addition, the RHL project will introduce climate-resilient homesteads for the poor and vulnerable community. In the future, the projects like BCRL will have opportunities to incorporate resilient houses for the farmers. So, the RHL project will complement this BCRL project in terms of climate-resilient homesteads for the farmers and promote climate-adaptive aquaculture, i.e., crab farming, which is one of the important sub-sectors of agriculture for avoiding duplication. In addition, a coordination mechanism has already existed at the central level, which is the Technical Advisory Committee (TAC) of the NDA (Economic Relations Division under the Ministry of Finance) to the GCF. The proposed project has already been presented to the TAC and it has received No Objection by incorporating its comments and suggestions. Again, the project will coordinate with the Department of Environment (DoE) which is the Executing Entity (EE) of the BCRL project, so that these projects are complement to each other rather than overlap.
36. The Adaptation Fund (AF) has approved 'Adaptation Initiative for Climate Vulnerable Offshore Small Islands and Riverine Charland in Bangladesh in 2019'. The United Nations Development Programme (UNDP) is the implementing entity, and the Department of Environment (DoE) of the Ministry of Environment, Forests and Climate Change (MOEFCC) is the executing entity. The AF grant amount is USD 9,995,369. The project is being implemented in Rangpur and Bhola districts. Of these, only one upazila within the Bhola district is where the AF's project and RHL's potential activity, i.e., homestead development, will overlap. To avoid it, the RHL will collaborate with representatives of the AF project, DoE and UNDP in the site selection process and promote knowledge and lesson sharing with the AF project for higher effectiveness and efficiency.

Contribution to Policies and Strategies related to climate change

37. The proposed RHL is in the Bangladesh country programme for GCF under the title "Increase resilience to climate change in southwest coastal zones of Bangladesh through adaptive livelihoods, housing, and safe drinking water supply." The title was slightly revised while maintaining the same project concept.
38. Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009 is the key strategy document of the government of Bangladesh combating climate change. The strategy document includes six thematic areas that are: 1) food security, social protection and health, 2) comprehensive disaster management, 3) infrastructure, 4) research and knowledge management, 5) mitigation and low carbon development and 6) capacity building and institutional development. The proposed RHL is aligned with thematic areas 1, 3, 4 and 6. Additionally, it is aligned with the country's National Adaptation Programme of Action (NAPA) 2005/2009 and also with National Adaptation Plan (NAP), which was published in November 2022. However, the BCCSAP document does not incorporate resilient homestead for the coastal communities. Theme 3 focuses mainly on the large-scale infrastructure development like coastal embankments and multipurpose cyclone shelters.
39. The government prepared the Climate Change and Gender Action Plan in 2013 to mainstream gender issues in all types of climate change-related development. It is expected that the project will involve mostly women, who make up more than 80per cent of the targeted community. Besides, the government of Bangladesh mainstreamed climate change issues in short-, medium- and long-term plans including



the 8th Five Year Plan, Vision 2021, and Delta Plan. In addition, the government prepared a coastal zone policy in 2005 in order to utilize coastal resources in sustainable ways. The project will contribute to this policy by restricting crab extraction from nature. It will also comply with the National Fish Policy (1992), National Agriculture Policy (1999), and National Livestock Development Policy (1992).

40. The government has established BCCTF to be financed from the state budget to address climate change impacts (see Para 33). The fund is operated by Climate Change Trust Act 2010. It has also enacted the Environment Conservation Act (ECA)-1995, Biodiversity Conservation Act-2016, and Disaster Management Act 2012.
41. The Department of Environment (DoE), under the Ministry of Environment, Forests and Climate Change is the key institution for climate change issues in Bangladesh. The DoE has established the Climate Change Cell (CCC), which is dedicated to coordinating, facilitating, negotiating and implementing climate change issues. Climate change focal points have been set up in 13 ministries so far. The Economic Relations Division (ERD) under the Ministry of Finance is the National Designated Authority (NDA) of Bangladesh to GCF. Recently, PKSF and IDCOL have been accredited as Direct Access Entities (DAEs). PKSF as a DAE and also one of the leading development organisations in Bangladesh, always works in coordination with ERD, DoE, and other public and private sectors of the country.

Crab related policy gaps

42. The industry is taking preliminary steps in the right direction, with an annual historical increase in both demand and supply. While still in its nascent stage, the sector relies heavily on the collection of crabs from the wild for business, and with the increasing annual demand, this dependency on nature needs to be diverted to hatchery-based production in order to maintain ecological stability and supply-end sustainability. The government of Bangladesh acknowledges the potentiality of the crab sector, but it also means that proper policies need to be developed in order to nurture the industry from its nascent stage into a mature one. Presently, crab and crab-based production and export are controlled by the Government of Bangladesh under the Crab and crab-based production management rules 2019 (under the Wildlife Conservation Act 2012). Under these rules, the government controls crab collection from nature (wild), crab farming, and export. But there are still some gaps in this rule. Primarily, policies need to be reformed regarding the ban on wild collection. Secondly, a policy should also be formulated on the types of crabs that can be collected from the wild in order to protect the population from depleting. Lastly, there needs to be a formulation of export policy mandates for the exporters in order to ensure quality and brand are not compromised in the international market.
43. **Breeding Policy:** It is important that the Government of Bangladesh finalize a particular window regarding the ban on wild crab collection. While the current ban is in effect in January and February of every year, researchers claim this ban period is inaccurate, resulting in business losses during the peak export season.
44. **Wild Crab Collection:** While there are policies on the type of crab that can be collected from the wild, these policies have yet to be properly implemented. It needs to prepare a separate policy or manual for the wild collection in order to control the population depletion, particularly of the young crabs that are being collected from nature for the soft-shell farms, before these crabs can reproduce.

B.2 (a). Theory of change narrative and diagram (max. 1500 words, approximately 3 pages plus diagram)

45. The coastal communities of Khulna, Bagerhat, Satkhira, Barguna, Patuakhali, Bhola, and Cox's Bazar are enduring increasing climate challenges that are disabling their ability to develop sustainably. These communities live in highly vulnerable homesteads that put themselves and their livelihoods at risk during every slow and sudden extreme-climate event that occurs, leading to the loss of homes, livestock, and arable land, and crops. It is not only life threatening but also financially catastrophic for these communities.



46. Although the GoB has implemented several settlement projects in coastal areas, the activities of the proposed project will not overlap as these are urban housing projects (undertaken by Khulna Development Authority; infrastructure development of Patuakhali *Pourashava*; *Climate Change Adapted Urban Development (CCAUD) Programme for Barisal City Corporation* project, etc.). And understandably, vulnerable rural people do not have access to these projects.
47. Salt intrusion brought on by flooding and sea level rise is expected to continue, leading to more losses of productive lands, decreased land productivity and degradation of natural resources. Low elevation, and higher salinity levels in coastal zones are already strongly correlated with lower incomes and the migration of working-age adults, leaving behind women, the elderly and disabled, who have limited resilience to climate hazards. Without adaptation, the number of people facing coastal inundation and migration is estimated to grow by 2–7 million by the 2070s⁴⁹.
48. The ideal state is one where rural families and communities can withstand cyclones and storm surges so that there is no loss of life or livelihood; livelihoods can persist even with slow-onset changes to soil salinity and higher temperatures; and families are not forced to leave traditional villages for a life of poverty in cities because of financial loss and a lack of access to finance. But to get to this state, there are key barriers that must first be addressed.

Key barriers to a resilient developmental pathway for coastal communities in Bangladesh

Barrier 1: Lack of climate planning and implementation capacity among communities for addressing climate change

49. Severe climate change impacts are today being felt by Bangladesh's communities that are least able to protect themselves. Communities vulnerable to climate change are not organised, lacking knowledge of climate impacts and the capacity and skills to adapt to them. Institutions, both governmental and non-governmental, lack coordinated climate planning and implementation capacity, ultimately leading to communities that have very low adaptive capacity with little hope of improvement.
50. Although local-level institutions, including government and non-government organizations, understand development activities, there is a latency in mainstreaming climate adaptation into them. These institutions, especially those offering extension or advisory services at the local level, have limited understanding of appropriate adaptive responses in relation to their conventional activities, and in the case of aquaculture, there is very little technical expertise. As such, there is a gap both in sectoral guidance and in integrating climate change into regular development activities.

Barrier 2: Lack of access to finance to invest in large capital expenses

51. Despite the substantial expansion of bank branches and the increase in the membership of MFIs and other financial institutions, a large number of the country's adult population still remains excluded from appropriate financial services.⁵⁰ Target communities represent the poor and ultra-poor of Bangladesh, living on subsistence agriculture and wage labour. These communities suffer from a lack of awareness, are of low income or assets, suffer social exclusion, and have limited financial literacy, which act as barriers to accessing financial services⁵¹. As a consequence, they are highly risk-averse to investment and largely fail to obtain the means to minimise additional threats from climate change. They have the least access to loans from commercial banks. While some NGOs provide loans to them, the loan sizes are inadequate when compared to their needs, especially for relatively expensive investments in climate-resilient homestead infrastructure and capital investments for their livelihood diversification. For this reason, most houses of the rural poor in the coastal zone are made of mud and sticks, which are no match for the cyclones and storm surges that plague this region, leading to total loss of assets and sometimes lives.

Barrier 3: Lack of livelihood diversification and limited capacity to adopt adaptation technologies

52. Communities lack the know-how and capacity to identify and implement alternative resilient technologies and practices that would otherwise mitigate climate threats, upscaling traditional farming

⁴⁹Climate Risk Country Profile: Bangladesh (2021): The World Bank Group

⁵⁰Bangladesh Bank: 2019. Survey on Impact Analysis of Access to Finance in Bangladesh

and diversifying activities are key to increasing their adaptive potential. However, target communities lack knowledge and are inherently risk-averse to switching to new practices (e.g., adapting to saline-tolerant crop varieties), technologies (e.g., drip irrigation, hydroponics, aqua-geonics), and sectors (such as, crab farming). The barrier is further exacerbated by a lack of technical knowledge and support owing to limited capacities among peers and local extension staff. Extremely poor households are often unable to make informed risk management strategies, given that they lack information, and are continuously coping with new shocks and stresses, and have limited space and ability to think about and act on choices that will make a positive difference to their future (relative to households that are relatively more resource-endowed).

Barrier 4: Capacity, standards, supply and market access in developing a community-based crab supply chain

53. Soft- and hard-shelled crab meats are in high demand both locally and internationally. Crab exports from Bangladesh are increasing over time, and so is local consumption among crab producer and non-producer communities. According to World Trade Organization data, Bangladesh is the 7th largest crab exporting country. Between 2010 and 2018, Bangladesh's crab exports increased three times. China is the top export destination country, followed by Thailand. Other market destinations are the USA, Malaysia, Singapore, Japan, and Australia.
54. To meet this demand, wild crabs have been harvested mostly from the Sundarbans by poor communities. However, wild crab stocks are falling, posing great risk to the industry and to the livelihoods of the vulnerable poor. In addition, wild crab harvesting poses risks from tiger attacks and kidnapping by bandits, especially of women. The markets often disadvantage the poor and women, who find it hard to obtain a fair price. Demand for crab, however, is growing both in domestic and international markets. The species is resilient to increased salinity, which poses a livelihood and nutritional opportunity for coastal communities. To maintain a sustainable supply of crab eggs, a hatchery is needed, but technology and technology transfer have been lacking to do this. In addition, the lack of extension capacity, investment shortfalls, and poor bargaining capacity of small-scale farmers lacking direct access to markets limit their ability to establish hatcheries and robust but sustainable supply chains in the target regions.⁵¹
55. The current crab industry suffers from a lack of quality and food safety standards that hamper its growth, especially as an export commodity. There is a lack of training and guidelines on husbandry standards and activities that mitigate contamination and the spread of disease.
56. In addition, crab feed relies on the importation of *Artemia* (a copepod used as feedstock for crabs) from Vietnam, which has a limited supply and could limit the growth of a community-based industry.

Project Goal and Change Theory

57. Therefore, **if** target coastal communities in Bangladesh employ weather-proof construction, have access to resources and capacity to implement climate-adaptive livelihoods, and communities with the support of institutions are knowledgeable of adaptive strategies and planning and can coordinate responses, **then** coastal communities in Bangladesh will be able to safeguard assets and livelihoods into the future **because** homes will provide protection during future extreme weather events, livelihoods will be maintained in the face of climate hazards and local institutions will be able to provide appropriate and timely support.
58. This project's principal aim is to reduce the risk to the lives and assets of the most vulnerable people living in the coastal zones of Bangladesh and provide them with improved and sustainable alternative livelihood options in the face of extreme climate challenges. It will directly benefit approximately 362,475 people in the target region and have transformative impacts.
59. To meet the needs of the people, at the beginning of the project, communities will be organised into climate change adaptation groups with gender equity to support and provide valuable local knowledge

⁵¹Lahiri, T, Nazrul, KMS, Rahman, MA, et al. Boom and bust: Soft-shell mud crab farming in south-east coastal Bangladesh. *Aquaculture Research*, 2021; 52: 5056– 5068.



for the implementation of the proposed interventions (outcome 3). Capacity will be built within them so they can seek finance, coordinate and develop further adaptation ideas, and disseminate their knowledge to their peers and communities. Local implementing entities and local governments will also be trained and included throughout the project tenure in order to build coordination, planning, and implementation capacity amongst them that will last beyond the life of the project. This project will transform the way institutions are able to support local communities by tackling development through a climate change lens. Coordination, planning, and implementation will become more efficient for meeting the needs of communities for this and future projects.

60. Together, these actions will create empowered and gender-sensitive adaptive communities throughout the coastal region of Bangladesh that will have greater capacity for climate planning and implementation (barrier 1).
61. The project will combine a mixture of loans and grants that will provide beneficiaries access to otherwise inaccessible resources and sources of finance (barrier 2), addressing a major barrier to the development and security of coastal rural communities. The GCF will provide the grants, whereas the PKSf will provide co-finance in the form of loans and in kind. The loan will be used to implement activities under outcome 2{activity 2.1.2, 2.2.2, 2.2.3 (partial), and 2.2.4 (partial)} whereas the in-kind will be used as a partial cost of PMU (salary of the Project Coordinator) and office rent.
62. This project will implement activities that will provide life and asset protection during extreme climate events, which are a priority for all coastal dwellers (outcomes 1 and 2). The construction of climate-resilient housing to the highest standards for the poorest families will protect dwellers from flooding, tidal surges, and cyclones (output 1.1). In the process of homestead development and house construction, community and institutional groups will be involved to build their capacity by exchanging knowledge. Homesteads will include additional important features, such as rainwater harvesting facilities (1000 litre capacity) to buffer the loss of freshwater.
63. The construction of resilient houses will provide multiple benefits in addition to the protection of homeowners and their families. These include the reduced need for rebuilding and repairs of existing houses in depleted condition after extreme events, saving money and time; greater security, especially for women and girls (co-benefit 1); greater asset protection from looting with valuables being held on site; and the pride of owning a concrete home. In this context, these homes will be transformative for the lives of the beneficiaries.
64. Furthermore, this project will upskill local masons, through supervision by qualified engineers employed by the project, in the design and materials used in construction and provide capacity building to government personnel so that institutional knowledge, advisory and oversight can eventually be provided to ensure safe standards, ensuring that communities will have access to the building of safe, and resilient homes after the end of the project. The project will ensure that the innovative building designs will be freely available for future use, while PKSf will continue to work with the National Housing Authority and House Building Research Institute to sensitize them through seminars and policy dialogue to shape government policy on resilient design standards.
65. Since livestock are valuable assets and are highly vulnerable to extreme climate events (livestock shelters are especially vulnerable to climate events) this project seeks to introduce innovative design to protect them (output 2.1). Hence, this project will combine the innovative housing design with livestock protection through scaling the ECCCCP-Flood project (see above) by constructing climate resilient animal shelters and providing locally adapted capacity building for building methods and design for target communities so these important family assets can be protected during storm surges and cyclones. The building design also avoids lingering moisture within the pens, minimising the risk of disease often associated with such climate hazards. The provision of loans to buy livestock will enable small farmers to invest in these crucial assets while also being able to protect those assets through resilient shelters. PKSf, as an AE, will co-finance the loan to buy livestock animals through the selected IEs (mainly Partner Organisations of PKSf).
66. Although vulnerable families and assets will be protected from the immediate effects of climate extremes through resilient homesteads, slow-onset SLR and frequent flooding still directly affect their rural



livelihoods. In order to comprehensively affect the lives of these communities, they must also have knowledge and access to resilient livelihoods (outcome 2). To address the loss of production due to soil salinity issues and knowledge and access barriers, training and resources will be provided to target communities for them to employ climate-resilient homestead agriculture (output 2.1). Salt-tolerant varieties and methods will be used to diversify outputs and maintain yields even in the face of increasing soil salinity (barrier 3).

67. To ensure replication, the project will engage respective local government offices while implementing livelihood activities and providing training and technical inputs. The project will arrange exchange visits between communities and institutions to share the results and knowledge of the activities. In addition, PKSF will continue financing best practice activities through its core programmes to partner organisations (POs) that will support replication in other areas.
68. Identifying and implementing climate-appropriate diversified livelihood opportunities for the coastal communities of Bangladesh is a great challenge. The crab industry, however, poses a particular opportunity due to the salt tolerance of the species and the relative ease of rearing them. The sector currently provides livelihoods to about 0.4 million people, the majority of whom are engaged in unsustainable wild crab and crablet collection and trading. PKSF's successful development of a crab hatchery in Satkhira district in 2016, which has been producing crablets ever since, now means that there is a unique opportunity to create a sustainable rural crab industry and supply chain (barriers 3 and 4) if the challenges of investment and technology transfer and capacity building can be met. This project aims to do just that by developing micro-hatcheries throughout the target regions that will develop crablets and sell them to secondary and tertiary crab farmers supported by the project until they reach full size (output 2.2). To ensure food safety and husbandry standards, clear growing and safety guidelines and standards will be promoted and a supply chain enhanced that meets the needs of rural poor populations while meeting the demands of internal and external markets (output 2.2). In addition, this project will maintain strong research links and provide input into the development of local crab feed production as well as monitoring and mitigation of disease risks (output 3.2). The provision of support for technical capacity and supply chain development will ensure that the market will endure after the project ends. Close links with government fisheries departments will be used to advocate for national crab production standards that will standardise practices in health and safety.
69. Outcomes 1 and 2 will not only deliver climate benefits but also a number of significant co-benefits attributable to the project. These are increased security for women and girls by being able to stay at home during an extreme climate event and avoid harvesting wild crabs (co-benefit 1), decreased urban migration since the project will reduce economic push factors (co-benefit 2), increased local secondary businesses that service the livelihoods created from this project (co-benefit 3), and an increase in wild crab populations due to the reduced pressure put on them from harvesting, which will ultimately lead to a balanced and more resilient ecosystem (co-benefit 4).
70. Finally, it will be necessary to provide ongoing support to current and future beneficiaries during and after the project, and to do this, this project will build knowledge and capacity amongst beneficiaries and institutions through the training of technicians and local government, especially in aquaculture techniques, supply chains, and standards, while knowledge products will be created so that information and practices can be continued and applied locally after the project ends (outcome 3).
71. Livelihood interventions supported through this project, using both grants and loans, as clarified in Para 62, will lower the threshold for adoption of resilient livelihoods for vulnerable and poor communities that are traditionally risk-averse to change. Through the demonstration of new livelihood strategies employed by target beneficiaries, the project will enable other indirect beneficiaries to replicate climate adapted activities, thereby increasing the project's impact. Real-time evaluation will ensure that data is captured throughout the project and fed back into adaptive management processes that will improve implementation during and after the project end. The knowledge products and their dissemination will ensure that the project's best practices are replicated throughout the coastal zone region of Bangladesh.
72. The activities and results developed in this proposal will therefore create communities and systems that are transformed into a sustainable and climate-resilient development pathway.



Risks to the project

73. The project relies on the implementation of structures and the planting of trees and growing crops. All of these are vulnerable to extreme climate events, such as cyclones and storm surges when they are immature or partially built. This project will take precautionary measures to protect these assets during their most vulnerable periods and provide training on care and maintenance of those assets to beneficiaries.
74. Shrimp farming is in decline due to a number of reasons, with disease being one of them. Crab diseases that affect farm-raised crabs have not been identified, but it is essential that consistent monitoring and safety guidelines are adhered to. This project will mitigate any risk by implementing monitoring protocols, training beneficiaries in husbandry and food standards, and maintaining research links to diagnose disease quickly so that there is no chance of an outbreak.
75. There is always a risk that a project's capacity and knowledge will only be available to those who have received direct training. Such project knowledge must stay inside the institutions and be easily transferable to other institutions if scalability and replication are to be achieved. By creating, gathering, and disseminating knowledge products, this project will ensure that institutions, communities, and not just individuals, are building their capacity.

Assumptions

76. Women will be able to participate as equal partners in the project. All activities that include beneficiaries will include women in equal proportions.
77. Concessional loans will provide enough of an incentive for crab farmers and goat rearers to invest in these climate-resilient livelihood options.
78. Climate models provide an accurate indication of future SLR and cyclonic activity and ensure that homesteads are designed appropriately for actual future climate.
79. Community groups have the desire to work together and address climate challenges together. All indications suggest this is true.
80. Crab farmers will find and maintain market linkages after the project. Through training and the development of guidelines, standards and network, this project will create an environment that will make it simple to maintain market linkages and sell crabs to both in domestic and international markets.
81. Knowledge creation and dissemination will lead to replication. PKSF will do all it can to make sure that knowledge of the project and best practices lead to replication.

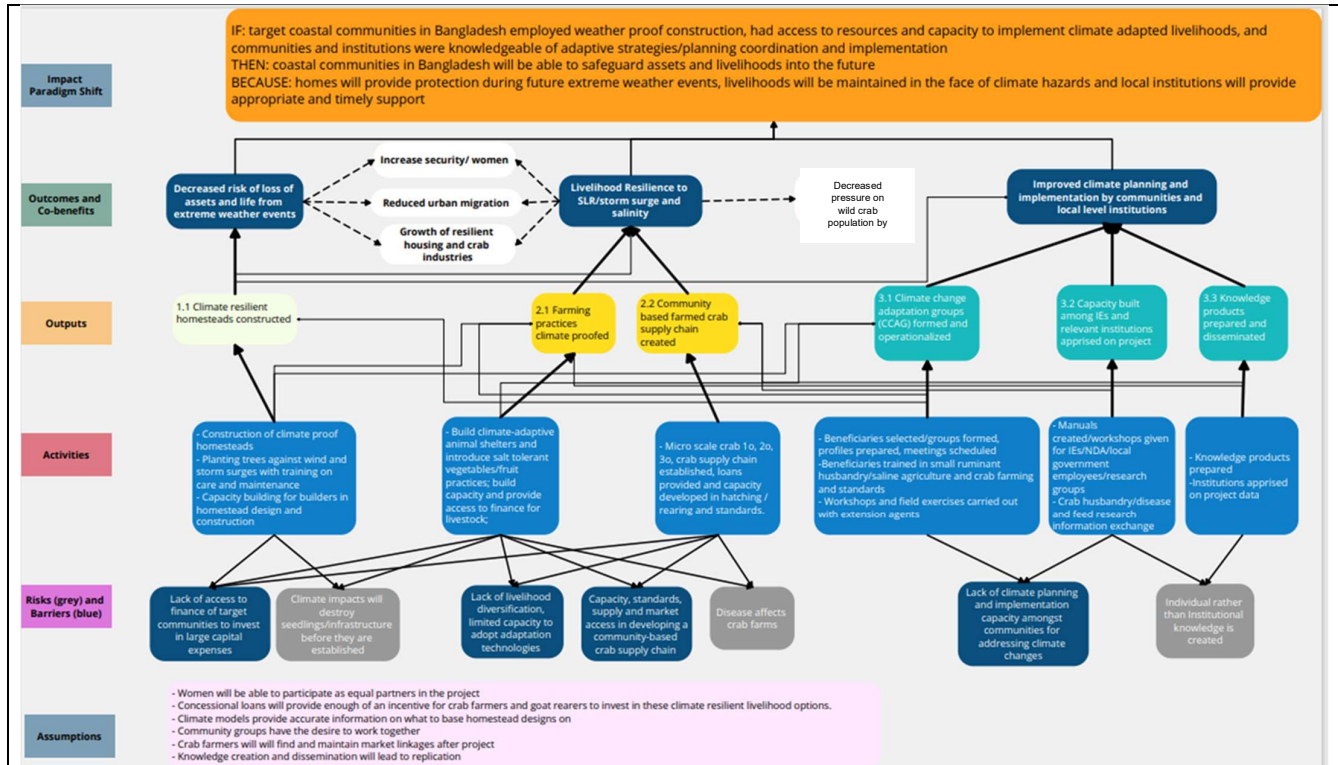


Figure 5: Theory of Change Diagram (broken lines represent co-benefit pathways; heavy lines represent direct attribution, thin lines indirect or weak attribution)

Co-benefits

Co-benefit 1: Decreased risk of assault on women

82. Crablet harvesting is a dangerous activity due to large land predators (tigers) and the presence of bandits that regularly kidnap women and girls, while they are out in the forest. This project will help women and girls avoid having to enter the forest for crab harvesting. In communal shelters, women and girls face various difficulties, including cooking, drinking water collection, sanitation, sexual harassment, etc. This project will mitigate this concern by constructing private family homes.

Co-benefit 2: Reduced Urban Migration

83. Vulnerable people from flood- and cyclone-affected regions are leaving their livelihoods and their communities at a faster rate than others from other regions, often because of grave financial losses from the destruction of livelihoods and assets from climate events. This project will reduce urban migration by reducing the push factors, namely the loss of and inability to develop livelihoods, involved in this phenomenon.

Co-benefit 3: Growth of crab and resilient housing industries

84. All communities in the coastal regions of Bangladesh are vulnerable to cyclones and storm surges. This vulnerability also has a negative effect on non-agricultural livelihoods and local economies. This project will indirectly support local service providers who provide building, transportation and labour to beneficiaries of this project.

Co-benefit 4: Decreased pressure on wild crab populations by industry

85. Wild crabs are being overharvested due to high demand and a lack of ability to create a full in vitro life cycle that is appropriate for poor communities. This project will transfer in vitro technology to



beneficiaries so that wild crabs do not need to be harvested. This will reduce pressure on wild populations and allow them to recover to baseline population sizes.

B.2 (b). Outcome mapping to GCF results areas and co-benefit categorization

As presented in the diagram above, the project expects three outcomes and five co-benefits (broken line boxes). The table below presents outcome mapping as well as the types of co-benefits. Co-benefit 1 is related to environmental co-benefit, co-benefit 2 is relevant to social and gender issues, and co-benefit 3 is aligned with economic co-benefit.

Outcome	Aligned with result area
Outcome 1: Decreased risk of loss of assets and lives from extreme weather events	The GCF's Adaptation Result Area (ARA) 1: Most Vulnerable People and Communities, is closely related to this outcome. However, it will also indirectly aid in achieving ARA 2: health, wellbeing, food security, and water security because safe housing and access to clean water will improve the beneficiaries' general health. This outcome is also aligned with ARA3 because the RHL project will build climate-resilient homesteads.
Outcome 2: Livelihood resilience to SLR / storm surges and salinity	Outcome 2 is aligned with ARA 2: Health, well-being, food and water security, because it will promote climate-resilient livelihood options that will ensure well-being and food security.
Outcome 3: Improved climate planning and implementation by communities and local level institutions	Outcome 3 is aligned with ARA 1 because trainings and meetings under this outcome will help people and institutions to adopt climate-adaptive technologies and practices, which would reduce the vulnerabilities of coastal people.

Co-benefit	Aligned with result area
Co-benefit 1: Decreased risk of assault on women	Social and Gender co-benefits. Women and girls will be able to avoid communal shelters and harvesting crabs from the forests.
Co-benefit 2: Reduced urban migration	Social co-benefit. The poor will be able to protect economic assets and livelihoods from climate events and hence not be "pushed" to urban areas
Co-benefit 3: Growth of crab and resilient housing industries	Social and Economic co-benefits. Increased flow of money across society benefitting local non-agricultural livelihoods.
Co-benefit 4: Decreased pressure on wild crab populations by industry	Environmental co-benefits. Crab populations will increase due to reduced harvesting – rebalancing ecosystems.

Outcome number	GCF Mitigation Results Area (MRA 1-4)				GCF Adaptation Results Area (ARA 1-4)			
	MRA 1 Energy generation and access	MRA 2 Low-emission transport	MRA 3 Building, cities, industries, appliances	MRA 4 Forestry and land use	ARA 1 Most vulnerable people and communities	ARA 2 Health, well-being, food and water security	ARA 3 Infrastructure and built environment	ARA 4 Ecosystems and ecosystem services
Outcome 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Outcome 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outcome 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Co-benefit number	Co-benefit					
	Environmental	Social	Economic	Gender	Adaptation	Mitigation
Co-benefit 1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Co-benefit 2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Co-benefit 3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Co-benefit 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B.3. Project/programme description (max. 2500 words, approximately 5 pages)

86. The primary goal of the project is to develop climate adaptive coastal communities in Bangladesh through the adoption of climate-resilient livelihood options, technologies and housing. To achieve this, the project will invest in the following outcomes:

- (i) decreased risk of loss of assets and lives from extreme weather events;
- (ii) livelihood resilience to SLR / storm surge and salinity; and
- (iii) improved climate planning and implementation by communities and local-level institutions.

Outcome 1: Decreased risk of loss of assets and lives from extreme weather events

87. Studies have found that more than three-fourths of households in coastal areas are vulnerable to intensive precipitation, cyclones and storm surges, and coastal flooding due to perishable materials. To sustain the livelihoods, the proposed project will provide support to construct climate-resilient housing. The concept of climate resilient housing under the project includes raising homestead plinths above flood or tidal surge level, constructing and/or reconstructing houses with concrete pillars that are resilient to climate change and associated shocks (i.e., cyclone, storm surge, tidal surge, coastal flooding, etc.), construction of climate-resilient sanitary latrines, a rainwater harvesting system, a homestead gardening system, and tree plantations around the homestead area. Resilient housing is very important for building the resilience of the affected community because they have to spend much of their income on repairing their houses each year during post-monsoon period, compromising their income, food and nutrition security.

Output 1.1: Climate resilient homesteads constructed

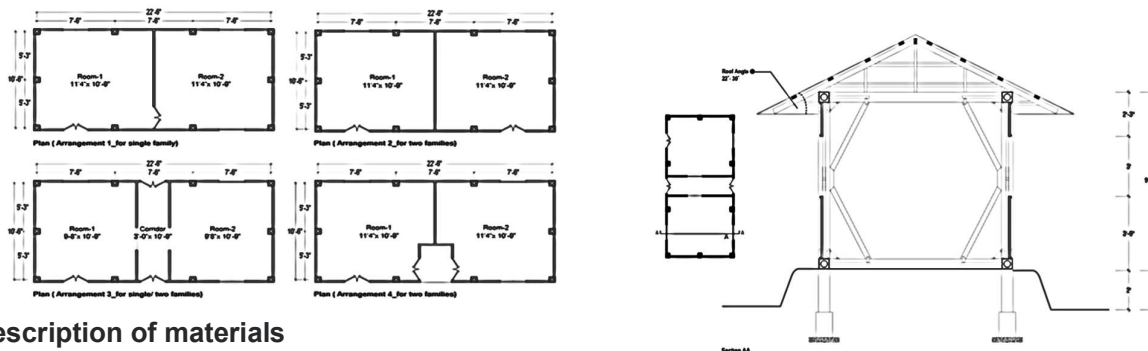
Activity 1.1.1: Design and building of homesteads

88. The project will select 13,500 beneficiaries based on the selection criteria stated in Para 126, constructing 3,000 climate-proof houses. The IEs staff will carry out consultation meetings in the selected areas to select the beneficiaries. They will prepare a draft list of beneficiaries and submit it to

PKSF for approval. The PMU representatives from PKSF will visit to verify the beneficiary list and provide approval for the final beneficiaries. The same process will be followed for all the activities. The core structure will be made of bricks and concrete. The house will be rectangular in shape, and the shorter edge will face the direction of the wind, which will reduce overall wind exposure. Secondly, the side of the roof with the greater slope will face the wind, and the roof will not extend beyond the wall, which will allow the wind to pass over the roof without affecting the core structure. Moreover, the roof will only be attached to the core structure and will not be supported by any walls, so even if the roof is affected, the walls will remain safe. Furthermore, there would be some gaps between the wall surface and the roof, so when the wind hits the roof, the thrust would be reduced.

89. In coastal areas, salinity-contaminated water is used in the brick field to mix sand and soil for making bricks. Similarly, during the construction, sometimes people use salinity-contaminated water. As a result, salt molecules remain in the construction materials. It absorbs moisture from the air during the monsoon and causes damage to brick walls. The project will ensure that the bricks and concrete are not made with saline water or soil. Fresh water will also be ensured during the construction of the house. In addition, there is local and indigenous knowledge in the coastal community about how to remove salt from water. The use of tamarind (*Tamarindus indica*) and some weak acids in treating saline water are examples of these types of local practices. PKSF has reviewed the recently carried out CTCN model of coastal housing in Bangladesh, the post-cyclone Sidr rehabilitation project of the Government of Bangladesh, and a climate resilient housing study carried out by ADPC with financial support from ADB. PKSF also reviewed coastal housing models suggested by the Bangladesh National Housing Research Institute (details can be seen in the pre-feasibility report). The review results show that most of the models put emphasis on local materials, wind speed, and tidal surge when considering the design. But the key gap in the models is that they did not consider raising the plinth of the house to make more resilient against coastal flooding due to storm surge, sea level rise, etc. But it requires raising the whole homestead area, along with the tree plantation, against the wind. This project will follow the existing design of the selected houses and use materials suggested by the House Building Research Institute (HBRI) for the low-income community, along with raising the whole homestead area. The cost of the activity will be contributed by the participating household in kind, i.e., their own labour, and the value of land that is not specified. Each beneficiary would contribute at least 5 per cent of the total costs.

Draft engineering plan and structural design is presented below:



Description of materials

- For reinforced concrete (RCC) building/housing: The whole frame structure (footing, column, grade beam, slab, and lintel) will be established.
- If the building will be built by RCC, the exterior and interior walls will be made of brick masonry and finished off with cement plaster.
- For semi-pucca buildings: The foundation and all walls will be constructed with the help of brick masonry. The roof will be made of CGI sheet roofing with wooden or MS angle trusses. Finally, all civil works will be finished off with cement plaster.
- CGI House: Strong RCC pillars having capacity to withstand wind velocity at high speeds will be used in CGI (Corrugated Galvanized Iron) houses. The plinth will be made of brick masonry, PCC (Plain Cement Concrete) casting will be done on floor, and walls. The roofing will be made of CGI sheet.



The CGI-roofing will be above wooden or MS angle trusses. In this type of house, all sorts of strengthening techniques will be taken into consideration, like horizontal and diagonal stiffeners on all walls.

- e) During the construction phase, local builders will receive on-the-job training on resilient housing standards, designs, and materials. Through this capacity building, local skills will be ensured, while standards will be updated to meet the demand for new builds.
- f) In rural areas, the union parishad (the lowest administrative tier of the government) is the approval authority for house plans. The beneficiary will get the approval from union parishad. The IE will facilitate the beneficiaries getting the approval, and PKSF as the EE will ensure that the design is approved by the local authority.

90. This component is closely linked with the livelihood component. This climate-adaptive homestead will reduce their income erosion and help them increase their resilience against climate change by avoiding significant amount of their earnings and time for house reconstruction due to damage from extreme events. The houses are easy to maintain at almost zero cost. The maintenance is related to occasional checks of the reinforcing materials and the daily cleanliness of the houses, which is largely a routine or daily task of family members in the house. This activity will use grant funding from the GCF.

Activity 1.1.2: Homestead tree planting

- 91. Tree plantations around the selected house are an approach to making the house resilient to the storm and tidal surge. Trees slow the wind speed of the storm, causing the least damage to the house. It will also improve the ecosystem and biodiversity of the selected areas. The project will promote planting trees around the proposed supported homesteads. Trees have the capacity to reduce the impacts of storms and tidal surges. The tree species will be selected in consultation with the local community. The project will put emphasis on local species that are resilient to strong winds.
- 92. The project will provide tree saplings (mangrove species) to the selected 20,000 HHs (90,000 beneficiaries), including 13,500 of the most vulnerable people (see outcome 3 below for selection criteria in para 122). More than 400,000 windbreak trees (or 20 saplings per HH) will be planted.
- 93. The IEs will be responsible for ensuring tree plantations. The procurement of tree saplings will be done in close consultation with the beneficiaries. The GCF grant will be used for tree plantation activities.

Outcome 2: Livelihood resilience to SLR/storm surge and salinity

- 94. A large portion of the coastal population is highly exposed to climate change impacts due to increased sea level rise, salinity in water and soil, the intensity of cyclones and coastal flooding. These pose a significant threat to agriculture, brackish aquaculture, and open-water fishing. The majority of them are poor or very poor. A recent study by UNDP shows that 16 and 35 percent of those living in Khulna and Satkhira respectively are extremely poor⁵² whereas the national average is 12.9 percent. Gender inequality prevails in these districts through various societal and cultural norms that shape women's day-to-day activities as well as their capacity to adapt to climate change. For example, women have less decision-making power within the household and the workplace and are expected to manage the household and care for the family. Compounding these factors, climate change aggravates the burden of unpaid care work, and create a cycle that undermines their climate-resilient livelihoods.
- 95. The UNDP study has identified eight livelihood options, which are gender-responsive and climate-resilient. These are: a) crab farming and trading; b) crab rearing; c) aqua-geoaponics; d) hydroponics; e) plant nursery; f) sesame cultivation; g) homestead gardening; and h) crab and fish feed processing. The other important pro-poor, gender-responsive and climate-resilient livelihood option is goat or sheep rearing in slatted houses, which has been implemented by the Community Climate Change Project (CCCP) of PKSF and the World Bank. These livelihood options are salinity-friendly, suitable for women's

⁵²UNDP, 2017, Climate resilient drinking water infrastructure based on demand-supply and gap analysis for 39 unions of 5 upazilas under Khulna and Satkhira district, Submitted to UNDP by Water Aid.



participation and empowerment, and appropriate for the local market system. However, communities require additional support in the form of capacity development and acquiring assets to allow a smooth transition to these climate resilient livelihoods.

96. The proposed RHL will implement goat or sheep rearing in slatted houses and the fruit-fish-fibre model, which considers a combination of crab hatchery and farming, homestead vegetable cultivation, and fruit trees, and mangrove plantations. Critical elements for success of the proposed interventions would be: a) capacity building of participants particularly women, b) adequate and suitable access to resources for beneficiaries and other value chain actors, c) collaboration between government and non-government institutions, d) private sector engagement and improved climate change adaptation knowledge, and practices. The project will provide technological support and capacity training to the selected beneficiaries in promoting saline-resilient technologies and practices, particularly in the agriculture sector. This outcome will be supported through a combination of grant and loan financing. The loans from PKSf as co-finance to beneficiaries will be used for 50 purchasing goats or sheep and GCF grants will support building goat/sheep houses. The project will provide technical support and seeds to the selected households for vegetable cultivation, while the cost of production will be financed by the households as per current practice.

Output 2.1: Traditional farming practices climate proofed

Activity 2.1.1: Construction of slatted houses for goat/sheep rearing

97. There is a scarcity of baseline information on the homestead-level goat and sheep population throughout the country. But it is observed that almost every household in rural areas rears either goat or sheep, or both. Small ruminant rearing requires a small space and is considerably less expensive making it a good option for poor households. Most importantly, women are mainly involved in goat and sheep rearing because their management is easier than that of large ruminants like cows or buffaloes. However, farmers often face recurrent economic losses through the deaths of livestock from floods and storms.
98. The RHL will support 20,000 HHs (90,000 beneficiaries) through sheep/goat rearing in slatted houses. The IEs' staff will be responsible for selecting the beneficiaries based on the selection criteria described in Paragraph 121 (Those who do not have financial capacity to purchase livestock and have capacity to rear livestock; and women-headed households and households with disadvantaged members will be given priority; poor and ultra-poor households (as defined in the Household Income and Expenditure Survey (HIES 2016) of the Bangladesh Bureau of Statistics (BBS-2017)); and have access to homestead land). They will carry out consultation meetings in the selected areas to select the beneficiaries. They will prepare a draft list of beneficiaries and submit it to PKSf for approval. The PMU representatives from PKSf will visit to verify the beneficiary list and provide approval for the final beneficiaries. The proposed project will provide financial and technological support for improved goat and sheep management as an alternative livelihood for vulnerable farmers who do not have a sustainable year-round income. The CCAG members will arrange for the builders to construct the slatted houses. Once the houses are completed, PMU staff will visit them for quality assurance. Then the payment will be made on a master roll basis. This activity will be carried out mainly by the female member of the selected household. This will empower them by contributing to family income and reducing their vulnerability to climate change. The slatted house and capacity building and technology part of the activity will be grant-financed from GCF and buying goat or sheep will be financed from PKSf as loans.

The slatted houses will be constructed on raised areas at a height above flood level. It will be constructed with wood or bamboo, and the roof will be made with rust-protected corrugated iron sheets, which are resilient to storms and associated surges. Iron-made angles will be used to align the roof with the walls. Thus, the slatted houses will be resilient to climate change.

Activity 2.1.2: Provide financial support for goat/sheep rearing



99. Most of beneficiaries, selected for this component are poor, ultra-poor and female-headed households. They do not have enough financial capacity to purchase goats and sheep on their own. The project will provide loans for them to purchase the goats and sheep. PKSF will distribute loans among the selected beneficiaries. These beneficiaries are the same as in Activity 2.1.1 and selection criteria are presented in Paragraph 121.

Activity 2.1.3: Introduce the cultivation of saline tolerant vegetables within homestead areas

100. Homestead-based vegetable cultivation is important to meet nutrition demands and enhance income. However, soil salinity hampers the production of vegetables at the homestead level. There are some saline-tolerant species, such as brinjal, carrot, tomato, and cauliflower, but their threshold tolerance is less than 10 ppt salinity whereas in many areas, salinity exceeds 10 ppt, particularly during the dry season. The project will select 90,000 beneficiaries in consultation with the CCAGs for cultivating saline-tolerant vegetables in the homestead areas based on criteria stated in Paragraph 122. The IE staff will facilitate the consultation meetings for selecting the beneficiaries. They will prepare a draft list of beneficiaries and submit it to PKSF for approval. The PMU representatives from PKSF will visit to verify the beneficiary list and provide approval for the final beneficiaries. The project will provide technical support as well as saline-tolerant seeds to the selected households using grant finance from GCF. This activity is especially appropriate for women, who will be able to further contribute to their family's nutritional intake and income through the increased capacity that they acquire through this activity.

Output 2.2: Community-based farmed crab supply chain created

101. Crab farming is relatively mature in Vietnam and practised widely. The Center for Education and Community Development (CECD) found that Bangladesh has natural conditions similar to Vietnam, particularly for crab farming. It is a tropical monsoon climate, hot and humid all year. The average summer temperature is 24- 39°C; and in winter, from 18 - 23°C. With such climatic conditions, the feasibility of crab hatchery production in Bangladesh is high. PKSF and partners have identified locations where small-scale crab hatchery farms could be developed in the coastal districts of Satkhira, Cox's Bazaar and Patuakhali.
102. The project will establish 50 crab hatcheries, which will support a sustainable crab supply chain. The 50 hatcheries will provide services to crab growers by producing juvenile crabs and contributing to a growing crab aquaculture industry in the country. Although the demand for juvenile crabs is high, the project will implement only 50 hatcheries because the capacity of crab-hatchery trainers is limited. The project will follow a "learning-by-doing" approach to develop capacity among hatchery owners and staff. The capacity development will generate knowledge and best practice on crab hatcheries and crab farming, which will be compiled and disseminated among communities and other stakeholders, including policy-makers, through workshops, seminars, consultations, and mass gatherings.
103. The hatchery owner will be provided with the necessary training on crab breeding, hatchery management and maintenance. They will also receive loans from PKSF to develop their hatcheries. Each of the hatcheries will require two staff members leading to the creation of an additional 100 jobs in the selected coastal districts. The project will also develop guidelines and training manuals on food safety and provide training to the various actors in the crab supply chain.

Activity 2.2.1: Development of crab hatcheries (1^o stage)

104. The proposed project will establish 50 small enterprises of micro-crab hatcheries. The IEs with guidance from PKSF and in consultation with communities will select the hatchery owners based on the criteria stated in paragraph 123. The hatchery owner will be provided with training on crab breeding, hatchery management, operation, and maintenance. They will also be eligible for loans from PKSF. This loan will partly cover the construction and preliminary costs of operations. A part of the construction costs will be covered by grant funding from GCF. Total initial investment for a hatchery is estimated at US \$18,000. Of this amount, the grant from the GCF is estimated at USD10,000 as it is for adaptation technology transfer costs and PKSF will provide co-financing in the form of a loan for operational costs. So, the GCF-PKSF ratio is 10,000: 8,000, i.e., 1:0.8. Each hatchery will require two staff. So, this activity will create an additional 100 jobs in selected coastal districts. Employment will target a gender ratio of at least 50 per cent women for both training and crab hatcheries. The salary of the hatchery staff will be

paid by the hatchery owners. The hatchery owner may receive a loan from the PKSF from its co-finance proceeds under this project. Beyond the project, the hatchery staff will come from crablet sales. It is to be confirmed that GCF proceed will not be used to pay the salary of hatchery staffs.

105. A crab hatchery at the entrepreneur level has an estimated production capacity 100,000 juvenile crabs per cycle, will have 6-8 larvae rearing tanks (5.68 ft x 5.68 ft x 4.87 ft), 2-4 treatment tanks (5.68 ft x 5.68 ft x 4.87 ft), 2 filter tanks (4.6 ft x 4.6 ft x 4.6 ft), 2 sea water treatment tanks (16 ft x 13 ft x 4 ft), and 1 overhead tank (5ft x 5 ft x 5 ft). The filter tank should be set up in a way that its bottom is at least 1 foot higher than the larvae rearing tank. It will ensure a smooth flow of water from the filter tank to the larvae rearing and treatment tanks. The larvae rearing tanks, treatment tanks, and adult female rearing space will be located in one section of the brick house and maintained at an optimum temperature through passive control. Water collected from the deep sea should be stored in a reserve tank. Sea water will be treated with chlorine, and then, after dechlorination, it will be filtered by the filter tank. The filtered water will be transferred to the larvae rearing tank for Zoea rearing (day one larvae).
106. Currently PKSF is planning to establish the hatcheries in Cox's Bazar to avoid the cost of collecting deep sea water. The water quality on Cox's Bazar coast meets the salinity requirement for operating crab hatcheries (around 25 ppt). The project will use small pipelines to collect saline water from the sea.
107. Every larva rearing tank and treatment tank will be connected to the filter tank by plastic pipe to ensure a smooth supply of filtered water. All tanks, including the reserve tank, in this section will have connections with blowers for the continuous supply of oxygen. Every tank will have an electric light hanging from the ceiling in the middle of the tank for a continuous light supply. For an uninterrupted power supply, a generator will be installed in the hatchery area. A microscope will be used for the observation with the zoea, housed in the hatchery, to identify and diagnose problems of the zoea, if they occur. For wastewater drainage and cleaning purposes, a proper drainage system will be constructed inside and outside the hatchery.
108. For installing generators, storing different equipment and other purposes, there will be a space outside of the hatchery section but not far from the hatchery. There needs to be a living room if the hatchery is far away from the residence of the entrepreneur.

The design of the hatchery is presented below:

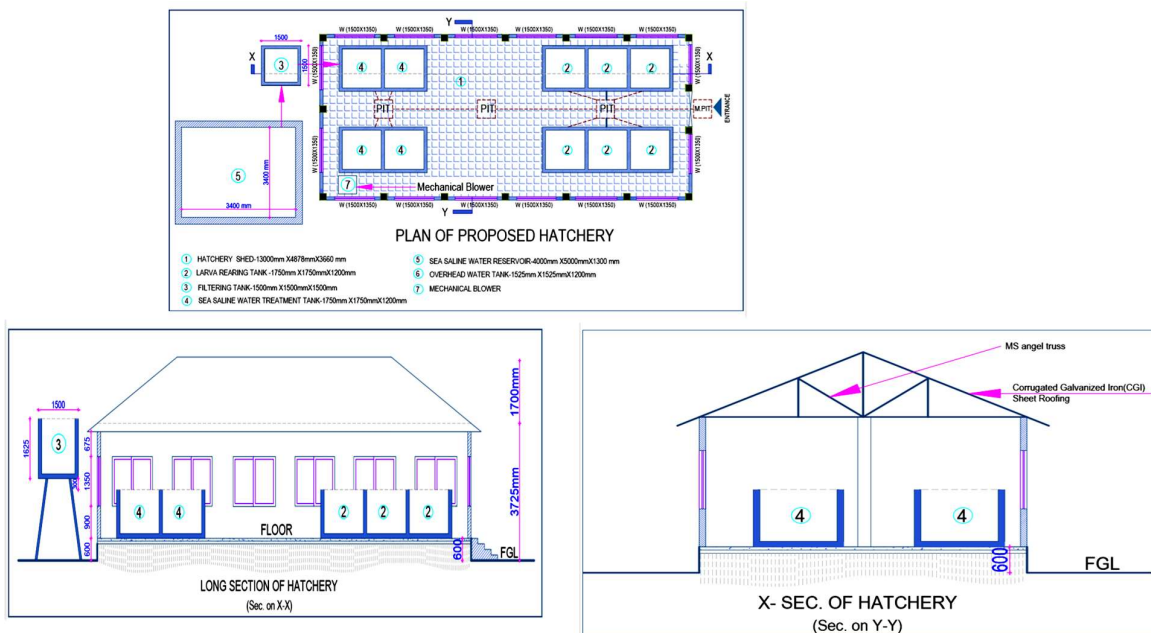


Figure: Engineering design of proposed crab hatchery

- 109.** The hatcheries will be established by private entrepreneurs through PKSf loans. The issues related to the utilization of GCF proceeds and PKSf's loans are described in Paragraph 104. The selection criteria will prioritize capable entrepreneurs with relevant knowledge and experience to ensure sustainability of the activity. A set of the selection and eligibility criteria is described in Outcome 3.

The hatcheries will be established on raised areas so that they will not be flooded by tidal surges or coastal floods. Moreover, it will be semi-*pucca* house to make it resilient to cyclones and storm surges. Thus, the hatcheries will be more resilient to climate change. The land for the building of hatcheries and houses is owned by the beneficiaries. No public land will be used for these structures.

- 110.** Hatchery owners will begin their operations with wild gravid female crabs, although they could also be obtained from their own or other hatcheries. After hatching, they will rear the zoea for up to 25-30 days in the hatchery, following the technical protocol to transform zoeas into juvenile crabs. By this time, each juvenile crab will have gained 0.1gm in weight. At this stage, they will sell the juvenile crabs to nurseries. The hatchery owners may also nurse the juvenile crabs up to their adolescent stage. The hatchery of PKSf at Shyamnagar, Satkhira will be used as a resource centre for capacity development for all crab hatchery related activities. PKSf is also working to make the required raw materials available for the crab hatchery. There is also a continuous effort to make the technology easier for entrepreneurs at the PKSf level.
- 111.** There will be a mechanism to neutralise the wastewater before releasing it from the hatcheries. The wastewater produced from the hatchery will be stored in a reserve tank. Then this water will be treated with chlorine, and then, after de-chlorination, it will be filtered through the filter tank. The filtered water will be released into nearby canals.

Activity 2.2.2: Financial support for producing crablets.

- 112.** Crab hatching technology is comparatively new in Bangladesh. The PKSf has capacity in hatchery management and in the production of juvenile crabs, or crablets. The PKSf has already established three microhatcheries as described above. The PKSf will provide technical support and loans to construct and develop the hatchery as an initial operational cost.

Activity 2.2.3: Technical and financial support for "crab nursers" (2^o stage)

- 113.** The project will engage a secondary group between hatchery owners and crab farmers. The project termed this group as "crab nursers". The 2,250 crab collectors (50per cent of them women) will be engaged in juvenile crab rearing. The IEs' staff will select the nurseries based on the selection criteria stated in Paragraph 125. The IEs staff will carry out consultation meetings in the selected areas to select the beneficiaries. They will prepare a draft list of beneficiaries and submit it to PKSf for approval.

The PMU representatives from PKSF will visit to verify the beneficiary list and provide approval for the final beneficiaries. Some of them may also be involved in crab fattening, which is the third part of the production chain. The crab nursers will be provided with the necessary training along with financial support for transporting and nursing juvenile crabs. They will buy juvenile crabs from the hatchery and rear them for one and a half to two months. At this stage, the juvenile crabs will be 40-50 gm in weight and able to grow in a pond. The nursers will sell the juvenile crabs to the crab nursers and fatteners. This activity will use both grant and loan instruments. The budget will be used from GCF proceeds for the pond preparation and the purchase of equipment, such as nets, and cages. PKSF will co-finance the loan as an operational cost, including the purchase of crab-lets, and hiring workers.

114. A nurser will have more than 400 square meter of land for nursing juvenile crabs. Considering five juvenile crabs per square meter, a nurser will rear 2,000 juvenile crabs. For pond preparation, lime will be used to balance ammonia and pH. Then, the pond is fenced with a meshed net and dykes covered with Tripoli (a type of mat). This activity will use both grants and loans. PKSF will provide loans as co-financing for purchasing crablets and other operational costs of nursery, while grant from the GCF will be used to prepare ponds, purchase cages, and procure other materials.



Figure 6: Crab production chain

Activity 2.2.4: Technical and financial support to “crab farmers” (3^o stage).

115. The project will select 90,000 tertiary level crab farmers (50per cent women) to produce export-quality crab (both hard shell and soft shell). The IEs staff will carry out consultation meetings in the selected areas to select the beneficiaries. They will prepare a draft list of beneficiaries and submit it to PKSF for approval based on the selection criteria stated in paragraph 125. The PMU representatives from PKSF will visit to verify the beneficiary list and provide approval for the final beneficiaries. They will be provided with the necessary training and financial support. They will buy juvenile crabs from the nurseries and rear them for 30 to 40 days before marketing them. The financial instruments used will be both loans and grants. PKSF will provide the loan for purchasing juvenile crabs from hatcheries, while GCF grants will be used to purchase materials and logistics for preparing gher or ponds.
116. The project will promote fruit-fish-fiber (3-F model) integrated crab farming and tree plantations in and around the crab-pond or gher. Each crab farmer will plant at least 20 mangrove tree saplings in the crab-pond or gher as well as fruit trees around the ponds. The trees will provide timber, fuel, and fruit, in addition to the crabs that will grow in the pond, leading to increased additional income for the crab farmer.
117. Two types of crab are exported from Bangladesh. One is a live crab (hard shell), and the other is a soft-shell crab. For live crab, the crab collectors collect different sizes of crab from nature and take them to the depot or sell them to the local middleman called *Faria*. There is an agent at the depot. The agent scrutinises crabs before buying them from the collectors, or *Farias*. The exportable crabs are packaged and sent to Dhaka (the capital city), and the non-exportable crabs are sold again to the farmers and consumers. Here, central-level buyers re-grade and repackage them before sending them to the international buyers. Crabs that are not exportable are sold in the local market. For soft-shell crabs, the chain is a little different (Figure 8). For soft-shell crabs, local agents buy small crabs from collectors or hatcheries in a minimum quantity. These agents sell them to large-scale farm owners. There is a processing plant. The farmers sell them to the processors after rearing. On the other hand, the collectors

themselves rear for crabs for producing soft-shell crabs and they also sell them to processing plants. The processors package and grade them before exporting them to international markets (Figure 7).

118. For the export market, the buyers ensure food safety standards. PKSf will provide training to the crab growers and other value chain actors on how to maintain these standards. PKSf will also conduct advocacy for the central government to adopt a policy for crab exports that maintains these standards.

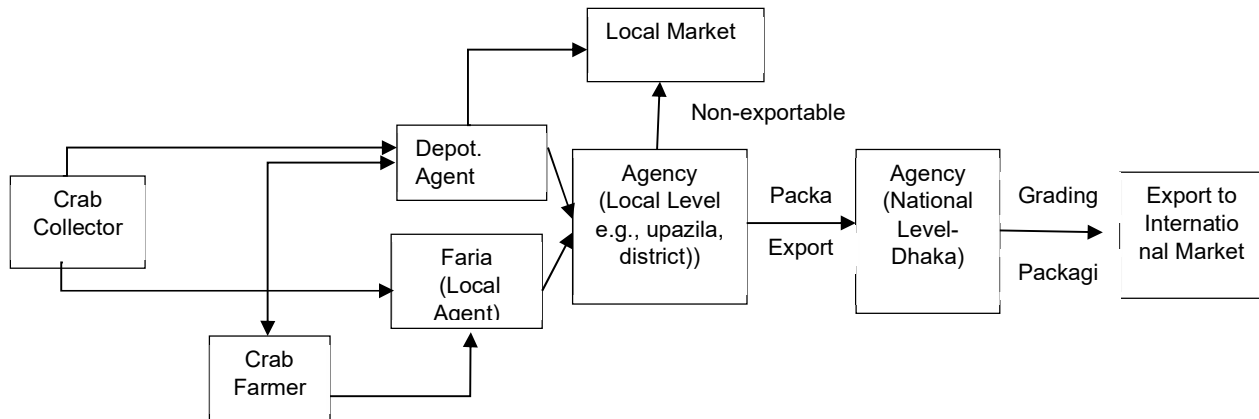


Figure 7: Crab market chain for live crab (hard shell)

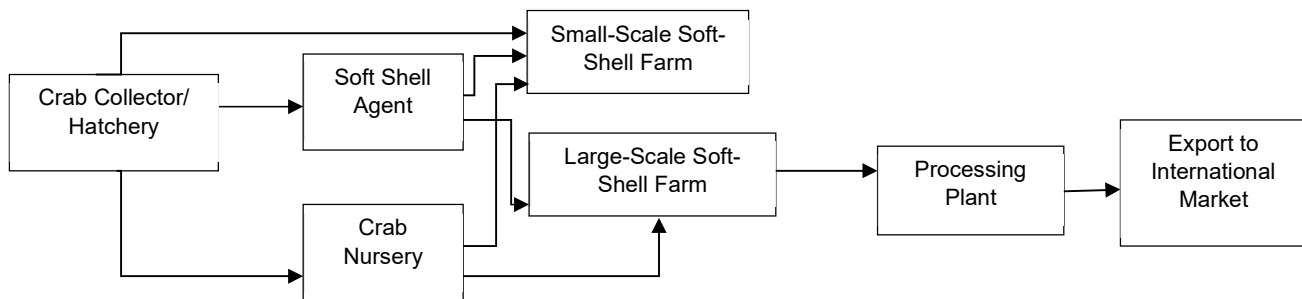


Figure 8: Crab market chain for soft shell crab

Outcome 3: Improved climate planning and implementation by communities and local-level institutions

119. Addressing climate change impacts at the community level requires specialized institutions. Local government institutions in Bangladesh mainly deal with regular development activities. Besides, there are experienced NGOs that have strong and long-term relationships with local communities due to loan programmes. These organizations would play a crucial role in promoting climate change adaptation activities at the community level. The proposed project will select at least 15 NGOs as Implementing Entities in the proposed working areas and enhance their capacity through training and practice adaptation activities. The project will also engage local government representatives in various activities, including area selection, beneficiary selection, and livelihood activities. The project will also carry out policy advocacy with the government, particularly for crab sector development and marketing to contribute to the achievement of the project objectives. Local government departments and institutions will play a role in the decision-making process at the community level by participating in meetings and workshops during implementation. The Union Parishad (UP) chairman will be the focal point of the local GRM process.

Output3.1: Climate change adaptation groups (CCAG) formed and operationalized

Activity 3.1.1: Beneficiary selection and group formation



120. The project will support 362,475 people through a set of selection and eligibility criteria as well as close consultation with local government institutions and community. Available government data will be used to identify the poor and extreme poor in the project area. Direct beneficiaries will be selected based on eligibility and selection criteria. The selection criteria, which are listed below, will be complemented with additional criteria in case of the number of interested and eligible households exceed the target numbers.

- a. Those who live in saline-prone coastal vulnerable areas;
- b. Priority to women-headed households and other disadvantaged groups;
- c. Poor and ultra-poor households (as defined in the Household Income and Expenditure Survey (HIES 2016) of the Bangladesh Bureau of Statistics (BBS-2017)⁵³);
- d. Per capita daily income is less than USD 1.90 adjusted with PPP as an alternative criterion of HIES's definition of poverty;
- e. Those who are not receiving any support from other projects or organizations;
- f. Those who have salinity-affected land particularly away from agricultural land;
- g. Interested in participation in the project and adoption of the project-promoted technologies and practices; and
- h. Willing to contribute to the project through loan, cash and in-kind contributions, as necessary.

121. Selection criteria for goat/sheep rearing in slatted houses (Activity 2.1.1):

- a. Those who do not have financial capacity to purchase livestock and have capacity to rear livestock;
- b. Women-headed households and households with disadvantaged members will be given priority;
- c. Poor and Ultra-poor Households (as defined in the Household Income and Expenditure Survey (HIES 2016) of the Bangladesh Bureau of Statistics (BBS-2017));
- d. Have access to homestead land⁵⁴

The selection will be based on the order of the selection criteria from amongst the targeted households in the project area. When the selection process reaches 90,000 beneficiaries, it will be stopped.

122. Selection criteria for homestead tree plantation and saline tolerant vegetable cultivation (Activity 1.1.2 and Activity 2.1.3):

- a. Poor and ultra-poor people
- b. Having homestead land of at least 60 square meters
- c. Women headed households and physically challenged people will be given preference.

The project will select 90,000 beneficiaries for tree plantations and 90,000 beneficiaries for saline-tolerant vegetable cultivation.

123. Selection criteria for crab hatchery establishment (Activity 2.2.1):

- a. Those who have the financial capacity to set up a crab hatchery through their own initiative;
- b. Minimum or good educational and technological knowledge on crab or shrimp hatcheries;
- c. Previous experience with microenterprise operations;

⁵³This document defined extreme poor as the person having purchasing power parity (PPP) below 1.25 USD a day and PPP below 1.90 a day is called poor.

⁵⁴Here land rights mean, a person owned land or properties by means of buying or inherited from father/mother or other persons.

- d. A minimum of 20 decimals of owned land, but not adjacent to agricultural land to set up a crab hatchery in a small scale;

124. Only barren and fallow land will be considered to set up a hatchery plant, so there will be no chance of losing productive land.

The selection will be based on the order of the selection criteria from amongst the targeted households in the project area. When the selection process reaches 225 beneficiaries, it will be stopped.

125. Selection criteria for crab nurseries and farmers (Activity 2.2.3 and Activity 2.2.4)

- Having cultivable land or capacity to rent ⁵⁵ at least 0.20 hectare;
- Women-headed households and households with disadvantaged members will be given priority;
- Have the ability to run and manage crab farming activities;
- Poor and ultra poor households (as defined in the Household Income and Expenditure Survey (HIES 2016) of the Bangladesh Bureau of Statistics (BBS-2017)).

126. Selection criteria for a resilient homestead (Activity 1.1.1)

- Those who have their own homestead area at or above tidal flood level with high exposure to climate shock events;
- Women-headed households and households with disadvantaged members will be given priority;
- Poor and ultra poor households (as defined in the Household Income and Expenditure Survey (HIES 2016) of the Bangladesh Bureau of Statistics (BBS-2017)); and
- Those who do not have financial capacity to construct resilient houses.

The selection will be based on the order of the selection criteria from among the targeted households in the project area. When the selection process reaches 13,500 beneficiaries, it will be stopped.

127. Thus, the total beneficiaries will be as follows:

Beneficiary type	Number of households	Number to total direct Beneficiaries	Comments
Activity 1.1.1: Design and building of homesteads	3,000	13,500 (3,000X4.5)	Average family size is 4.5 (Population Census, 2011). These beneficiaries will overlap with tree plantation (Activity 1.1.2)
Activity 1.1.2: Homestead tree planting	20,000	90,000 (20,000X4.5)	
Activity 2.1.1: Construction of slatted houses for goat/sheep rearing	20,000	90,000 (20,000X4.5)	
Activity 2.1.2: Provide financial support for goat/sheep rearing	-	-	The same beneficiaries of Activity 2.1.1

⁵⁵ Capacity to hire land means financial capacity of the beneficiary to have rent land.



Activity 2.1.3: Introduce the cultivation of saline tolerant vegetables within homestead areas	20,000	90,000 (20,000X4.5)	
Activity 2.2.1: Development of crab hatcheries	50	225 (50X4.5)	Hatchery owners
Activity 2.2.2: Financial support for producing crablets	-	-	The same beneficiaries of Activity 2.2.1
Activity 2.2.3: Technical and financial support for "crab nursers"	500	2,250 (500X4.5)	
Activity 2.2.4: Technical and financial support to "crab farmers"	20,000	90,000 (20,000X4.5)	
Total	81,450	362,475*	

- 128.** The project will form 3,200 groups with 25 (+/-) persons in each group for delivery support. These groups are named Climate Change Adaptation Groups (CCAGs). A total of 80,000 members will be selected from 362,475 selected beneficiaries to form these CCAGs. The members will be selected based on intensive consultations with selected communities on the basis of pre-defined criteria that include: a) potential to play role in decision-making at the household level, b) less involvement in income-generating activity, c) understanding on the local socio-economic context, and d) willingness to participate in the CCAG meetings. Each group will meet at least once a month and to discuss climate change and its impacts on their lives and livelihoods. They will adopt and practice climate-adaptive technologies that will be promoted by the project. The objective of forming this group is to deliver the support services in groups in order to minimize the delivery cost and to ensure the participation and collective decisions of the affected community in implementing the proposed interventions. It will help transfer knowledge on climate change issues among the society because they will discuss the impacts of climate change at a regular interval, typically monthly, in groups. Thus, they will be able to internalise the impacts of climate change on their lives and livelihoods. The groups will receive training on climate change issues and how to deal with these problems. They will be able to identify climate change problems on their lives and livelihoods and prepare plan accordingly to reduce the impacts of climate change in the future. They will also look after community infrastructures beyond the project. Besides, the group approach will reduce the management costs of the project. The IEs' staff will conduct necessary consultations at the local level and select potential beneficiaries. They will prepare a draft list of beneficiaries and submit it to PKSf for approval. The PMU representatives from PKSf will visit to verify the beneficiary list and provide approval for the final beneficiaries. Thus, the PMU of EE will oversee the process of beneficiary selection and group formation. Grant financing from GCF will be used to carry out this activity.
- 129.** The female headed households and other disadvantaged groups will receive priority while selecting the beneficiaries (see below for detailed information on gender priority). As per experience of CCCP, there will be female headed households. The consultation meetings during beneficiary selection will identify female headed households. Level of vulnerability is the main distinction between a woman in married households and a female head of the households. The female heads are more vulnerable because their income source is very limited; they cannot go outside of their locality, and the rate of women's participation in labour force is also low. These limitations made them more vulnerable the women in married households.



Activity 3.1.2 Prepare Beneficiaries' socio-economic profile

130. A detailed socio-economic profile of the selected households will be prepared by IEs before providing support. The purpose of the profile is to keep a monitoring record from baseline to after project finalisation. This information will be used to compare short term progress achieved by project interventions. The PMU, at the EE level, will provide necessary technical support including developing tools and guidelines. This activity will use grant financing from GCF funds.

Activity 3.1.3 Arrange monthly group meetings on climate change issues for CCAG

131. The IEs will have field-level staff to directly coordinate with the beneficiaries. S/he will assist the groups in organizing meetings, discussions on climate change and other environment and health issues. The meeting notes will be preserved in a register book. The groups will take necessary decisions in addressing climate change impacts through the project interventions. They will decide who will get what types of support from the project, based on their needs. Thus, community-level informal institutions will be shaped and carried forward by these group members. PKSf will co-finance this activity through in-kind contributions. The co-financing budgetary items will involve facilitation of meetings (i.e., staff cost), local travel, brown papers, register books, sign pens etc.

132. This staff will go to the CCAGs and discuss selected climate change issues, for example, climate change basics, climate change and crab farming, climate resilient housing, climate and poverty, and climate change and gender. The PMU at PKSf will provide technical support to IEs for producing posters or papers for discussion at the meetings.

133. The experience from the CCCP shows that CCAGs are functional where they are engaged in financial services. Most importantly, the CCAG members are continuing most of the activities as they are getting benefits from it. This project plans to engage the CCAG members in financial services (credit, savings, enterprise loans etc.) by the partner organizations of PKSf beyond the project. This will ensure the sustainability of the CCAGs.

Output 3.2: Capacity built among IEs and relevant institutions appraised on project

Activity 3.2.1 Prepare training manuals on adaptation technologies and crab value chain

134. The PMU of EE will prepare a training manual to deliver ToT to the IEs' staff on climate change issues and project management (IE selection process is described in para 165 to 168). Approximately 150 staff from at least 15 selected IEs will receive this ToT. This will significantly contribute to strengthening institutions in addressing climate change issues at the community level. Besides, another training manual on climate change will be prepared to provide training to the CCAG members and traders across the value chain. PMU will prepare the training manual and IE staff will deliver the training. On the other hand, PMU will prepare training modules for crab farming as well as crab nurseries. The project will also prepare necessary guidelines including activity implementation guideline, monitoring and evaluation guideline, environmental and social management guideline, procurement guideline, accounting and financial manual etc. This activity will use grant financing from GCF.

Activity 3.2.2 Prepare guidelines on project management

135. The project will also prepare necessary guidelines including food safety standards, activity implementation, monitoring and evaluation, environmental and social safeguards, procurement, accounting and financial management. The guidelines will be utilized by the project implementing entities. This activity will use grant financing from GCF.

Activity 3.2.3 Organize training for beneficiaries and stakeholders

136. Each selected IE (IE selection process is described in para 165 to 168) will prepare a training plan to deliver training to the selected CCAG members. This training plan will require approval from the PMU. PMU staffs will closely monitor the training sessions as per plan.



137. This project will provide classroom as well as on-the-job training to about 100 beneficiaries and value chain activities on crab hatching technology and safety standards so that they are able to provide services to the proposed hatcheries. The present shrimp hatchery owners could be prioritized as they are already experienced in hatching technology that is almost similar to crab hatching. So, involvement of shrimp hatchery owners is an advantage for this project. At the same time, the project will organize training for crab nurser and farmers for effective implementation and crab production. About 50 percent of women participants will be assured of receiving training. The IEs with guidance from PKSF and in consultation with communities will select the hatchery owners based on the criteria stated in Paragraph 123.

138. The project will provide training to the selected participants on improved management and technology of goat/sheep rearing (selection process is described in Paragraph 98). Local level livestock officers will be hired as resource persons for providing this training. About 100 percent women Beneficiaries will be ensured. Grant financing from GCF will be used to carry out the above activity.

Activity 3.2.4 Organize training for IEs' staff

139. PMU will organize and deliver the training sessions. About 155 staff will receive this training in 7 batches (the number of training sessions will be around 10). This will enhance the capacity of the newly recruited IEs' staff. They will learn about climate change and adaptation as well as management of adaptation project. They will contribute to the organizations in practice climate change-related activities within the organization. This activity will use grant financing from GCF.

140. Training for the staff and extension agents who will deal with crab hatcheries and nurseries will be long term, typically six months on the job, residential training to the crab hatchery of PKSF. It is required because the success of the hatcheries will fully depend on the efficiency of the training. The staff will be recruited through a competitive process by the IEs.

Activity 3.2.5 Implement workshops and seminars

141. The project will give 20 workshops at the national and local levels. The workshop will include project inception, policy advocacy, project closing, quarterly progress review workshops, annual learning sharing workshops, training workshops etc. In addition to NDA, representatives from other relevant government agencies including, Ministry of fisheries and livestock, Ministry of Agriculture (MOA), Department of Agricultural Extension (DAE), Ministry of Environment, Forests and Climate Change (MOEFCC), Department of fisheries, Department of Environment (DOE), Bangladesh Climate Change Trust (BCCT), Ministry of Water Resources (MOWR), Local Government Engineering Department (LGED), Ministry of Women and Children Affairs (MOWCA), Bangladesh Rice Research Institute (BRRRI), Bangladesh Agricultural Research Institute (BARI), Bangladesh Institute of Nuclear Agriculture (BINA), Department of Disaster Management will be invited to attend the workshop. PKSF will send invitation to the relevant organisations stated in paragraph 41 for requesting participants. The higher authority of the organization will nominate the workshop participants. Besides, AE representatives, IE staff and PMU staff will be invited to these workshops. PMU will organize all these workshops. About 50 per cent of them will be per centwomen participants. All the workshops and seminars will be organized with grant financing from GCF.

142. The project will identify best practices and lessons throughout the project period. These best practices and lessons learned will be shared in these workshops.

Activity 3.2.6 Organize exchange visits for beneficiaries and IE staff

143. The project will organize 15 inter-community visits in vulnerable areas. They will learn from each other and be encouraged to adopt climate-resilient technologies and practices. About 300 participants attended the events where 80 per cent per cent of them will be women. The participants will be selected in the CCAG meetings. The CCAG members with the assistance of field-level staff of the IE will discuss the exchange visits including learning objects, best practices, visit places, time, etc. Based on their discussion, CCAG will nominate participants from them. The PMU of PKSF will guide the IE staff to facilitate the meetings. It is a type of in country training and sharing of knowledge/technology for the



beneficiaries and IE's staffs. It will be conducted in the project areas or in other areas of the country under implementation of same kind of activity areas). This type of visit will be helpful for the smooth and successful implementation of project. This activity will use grant from the GCF.

Activity 3.2.7 Improve data for crab research and development

- 144.** The project will sign MoU with reputed public universities namely the Chattogram University, the Khulna University, Patuakhali Science and Technology University and Bangladesh Fisheries Research Institute (BFRI) for improve or strengthen their fisheries research laboratories in order to promote crab research and development in the country. This will help hatchery owners, nurseries and growers to identify diseases and treatments, information on water salinity, pH and other composition, and take decisions on crab management.
- 145.** To ensure quality at the farmer level, the project will use these laboratories to examine quality of food. These laboratories will examine the heavy metals, antibiotics, microbial contamination in addition to research on crab disease and diagnosis. Farmers will do this test before selling it to the processors. The grants from the GCF will be used to implement this activity.

Output3.3: Knowledge products prepared and disseminated

Activity 3.3.1: Prepare and disseminate knowledge products

- 146.** The PMU will develop and publish a quarterly newsletter on project progress and learning. This newsletter will be circulated to different stakeholders including GCF, Bangladesh NDA and other government organizations. The published newsletter will also be uploaded in PKSF's website. Grant financing from GCF will be used to carry out this activity.
- 147.** The project will carry out lessons that have been learnt throughout the project period. Relevant project officer for knowledge management of PMU will carry out the lessons and develop a booklet for publication. The knowledge documents will be distributed among the relevant government agencies (as mentioned above), international and national NGOs including partner organizations of PKSF to inform their future projects and programmes. They will use the information from the knowledge documents in designing their future projects, management of adaptation projects and measuring short- and long-term impacts of adaptation projects. They will consider the effectiveness of slatted houses, crab farming and climate-resilient houses to be documented in the knowledge documents. This will also contribute to strengthening institutions at national and local level in designing and implementing adaptation projects in the country. This activity will use grant financing from GCF.

This activity will help to address Barrier 1 and 4 in the funding proposal. Because the guidelines and tools to be developed under this activity will strengthen capacity of the communities and institutions in preparing climate plans and accordingly implementing the plans. On the other hand, tools and guidelines will help to implement standard adaptation practices in the coastal areas and thus it will remove the capacity gaps of the communities and institutions for implementing standard adaptation practices.

Activity 3.3.2 Real time evaluation study of the project activities

- 148.** Currently, there is limited knowledge and understanding of the effectiveness of adaptation interventions globally, including Bangladesh. This project will promote a periodical evaluation system of the project interventions to understand their effectiveness in terms of adaptation to climate change. Hence, the project will conduct a baseline study of the effectiveness of the proposed interventions at the inception phase and continue the effectiveness study annually throughout the project period. This will help generate adaptation knowledge as well as learning for future projects and programmes. This activity will be implemented with grant financing from the GCF.

B.4. Implementation arrangements (max. 1500 words, approximately 3 pages plus diagrams)



Implementation arrangement at PKSF level

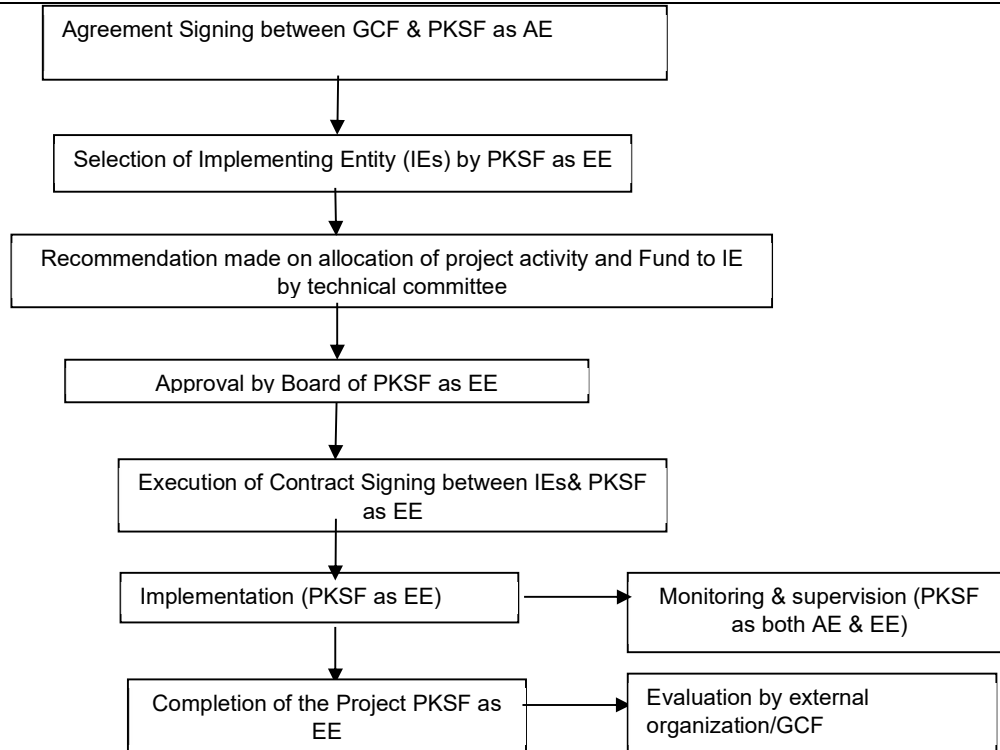
- 149. Role of PKSF:** PKSF will play dual role in this project because PKSF is Direct Accredited Entity (DAE) as well as Executing Entity (EE) for the project.
- 150. Role of PKSF as a DAE:** PKSF as a DAE, will be responsible to : a) establish the PMU, b) appraise and finalise project implementation arrangements, including mission travel, c) ensure compliance of fiduciary standards, ESS standards and gender related issues, d) facilitate financial flow to the project, e) submit APR and interim unaudited financial report, f) assist project management to draft TORs and advise on the selection of IEs for implementation, g) conduct supervision missions, including briefing operational focal points on project progress, h) provide technical services during supervision missions to advise government officials on technical matters and provide technical assistance for the project, i) oversee procurement and financial management to ensure implementation is in line with AE's policies and timeline, j) undertake the mid-term review, including possible project restructuring, k) disburse funds to the executing entities/vendors and review financial reports, l) oversee the preparation of the required reports for submission to the GCF Secretariat, m) monitor and review project expenditure reports by internal auditors, n) prepare periodic revisions to reflect changes in annual expense category budgets, o) prepare project closing documents for submission to GCF Secretariat, p) prepare the financial closure of the project for submission to GCF Secretariat, q) oversee the preparation of the Project Completion Report/Independent Terminal Evaluation, and submit the report to the GCF Secretariat, r) report required activities as agreed in the AMA and FAAs and so on.

The PMU of the project will have 13 full time staff and 1 short term consultant for procurement. The team will be headed by the Project Coordinator. The positions are a) Project Coordinator, b) Deputy Project Coordinator (ESS), c) Assistant Project Coordinator (Finance and Accounts), d) Senior Assistant Project Coordinator (Crab Hatchery Operation and Management), e) Assistant Project Coordinator (Communications and Knowledge Management), f) Assistant Project Coordinator (Training and Social Development), g) Assistant Project Coordinator (Civil Engineers), h) Assistant Project Coordinator (Programme-3), i) Assistant Project Coordinator (Value chain specialist), j) Finance & Accounts Officer, k) MIS Officer, l) Procurement management (staff recruitment cost, advertisement etc.) (Short term consultant) and Support staff.

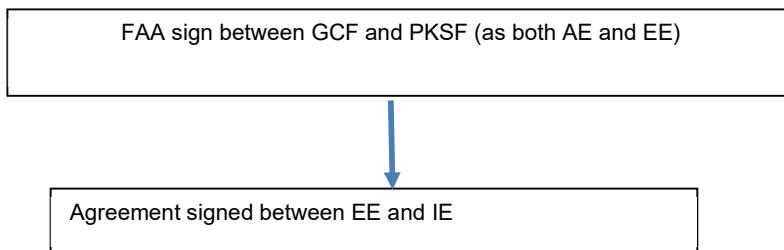
- 151. Role of PKSF as an EE:** PKSF will be a single Executing Entity (EE) in the project and establish a Project Management Unit (PMU) to manage the RHL project. A Project Director/Project Coordinator (PD/PC) will head the PMU and be in charge of the overall project implementation. He/she will directly report to a senior official of PKSF and be the contact person at PKSF for the GCF Secretariat and NDA. The PD/PC will report to the GCF in a manner approved by PKSF. The PMU will be responsible to: a) prepare tools and guidelines for implementing the project and seek approval from the AE, b) prepare procurement documents for goods and services required for implementing the project, c) make agreement with IEs through a rigorous selection process, d) organise necessary trainings and workshops for IEs and beneficiaries, e) supervise, guide and monitor day to day activities implementing by IEs at the field level, f) prepare documents with the help of AE to procure independent consultants mid-term and final evaluations, g) maintain management of project information and publish guidelines, manuals and training modules and learning documents, h) recommend fund transfer to the IEs based on quarterly reports and field visits, i) ensure ESS implementation at the field level, provide training to IEs staffs, j) review and finalize beneficiary selection to be carried out by IEs, monitor progress of activity implementation plan of IEs, k) ensure quality of implementation of project activities by IE, l) prepare APR and get approval from PKSF, as an AE (Deputy Managing Director is the approval authority), m) prepare interim unaudited financial reports and get approval from AE and so on.
- 152.** The PMU will engage project personnel who will liaise with the selected IEs and monitor the implementation of their projects. The project personnel will be the PKSF contact points for IEs and report to the PD/PC.



153. A team of technical reviewers will be engaged in using their services when required to appraise projects. These technical experts will review the project locations.
154. The PD/PC, after ensuring compliance to all fiduciary requirements, will submit the Sub-Projects (SPs) through PKSf as a DAE to the PKSf's Governing Body for final approval. As Member Secretary of the Governing Body, the PKSf's Managing Director will present the proposal.
155. PKSf as EE will bear the responsibility of implementing the project in all aspects. PKSf will delegate field level implementation of activities to the selected IEs through legal agreement. The IEs, by signing legal agreement with the PKSf will be responsible to work with the community people to deliver the project services. PKSf as EE will monitor the implementation activities of IEs through both off-site and on-site monitoring systems. PKSf will adhere to Results-Based Monitoring (RBM) system to ensure reaching the project goals efficiently and effectively.
156. PKSf always implements its projects through its partner organizations, which is selected through PKSf's policies and procedures. All these organizations are pre-qualified and enlisted through a transparent and fair technical procedure. The following five guiding principles will be applied to select the IEs and to guide IEs' activities:
- I. The project would adopt a strategic and holistic approach that targets clear climate change scenarios. Each of the demand of investment funded under the project would fit within the abovementioned scenarios;
 - II. Any organization receiving finance must demonstrate how it will contribute – through the community-level interventions – to advancing the skills and knowledge required to adapt to extreme climate variability and climate change. Organizations requesting funds for community-based adaptation must have an established presence in the relevant areas where the project will be implemented. The climate change programme would preferably build upon the foundation and social capital of other projects that the organization is already implementing;
 - III. The projects would include community leadership and local government bodies while ensuring gender sensitivity; and
 - IV. Emphasis would be placed on transparency, information monitoring and learning to ensure sustainability of the programmes and replication of those in other similar regions of Bangladesh.
 - V. CCAGs will play a significant role in ensuring transparency and accountability of the project at the community level.
157. The project under implementation will be subject to monitoring both by the IEs, and PKSf as AE and PMU (PKSf as EE). The basis for monitoring is the Integrated Results Management Framework (IRMF) of the project as mentioned in section E-7. A detailed Monitoring and Evaluation Manual consistent with **GCF frameworks and policies (IRMF, GCF Evaluation Policy, Monitoring and Accountability Framework, etc.) and as well as** PKSf's overall Results-Based Monitoring System will be developed to guide the monitoring practices of PKSf and IEs.
158. The monitoring process under the PMU will have three functions. First, through monitoring by PKSf and PMU will ensure accountability of the IEs to deliver the outputs and outcomes. This implies that resources are used efficiently for the proposed activities. Second, monitoring will establish proper documentation of the implementation process and achievements at different levels (i.e., outputs, outcomes and impacts). Third, monitoring will help gather learning from the process. Since adaptation experiences are highly contextual, documentation of learning under different contexts will add to the knowledge and subsequently to the wisdom for future actions. In short, the role of accountability is significant in case of outputs, whereas learning becomes a core issue for monitoring at the outcome- and impact-level achievements.
159. The following 7 steps flow chart characterizes the project awarding process:



Contractual Arrangement for the project

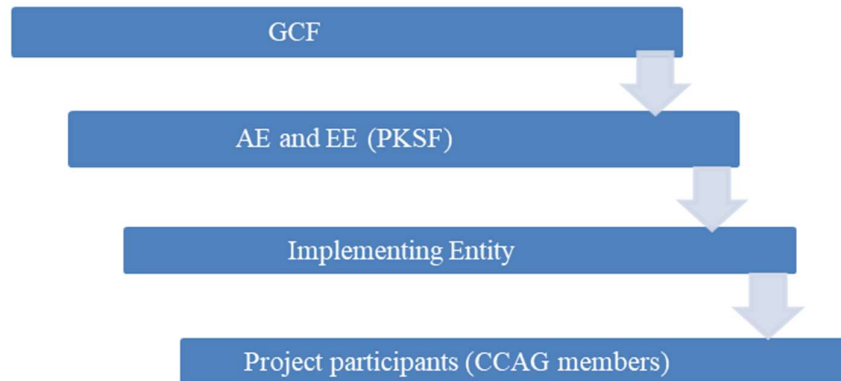


Fund flow of the project:

160. For this project, PKSf is AE as well as EE. The fund will be directly disbursed to PKSf from GCF. PKSf will receive the GCF Proceeds in the Project specific account held in a commercial bank in USD. In addition to initial advance to IEs from PKSf, PKSf will reimburse the fund to the implementing partners based on satisfactory performance. The PMU will prepare an 'activity implementation guideline', preferably in local language. In the guideline, specific instructions and design will be incorporated for each of the activities. The PMU staffs will visit the field level activities and check, whether the IEs have done any distortion from the assigned guidelines and instructions. If the IE fails to maintain the standards as mentioned in the guideline or other forms, PMU will suggest to take corrective measures. Once, the corrective measures are done, PMU will recommend for reimbursement. The implementing entities will make necessary expenditure for the beneficiaries to increase their resilience. One of the criteria for selecting the IEs is that they must have established offices in the project area. This office mainly operates loan programme financed by PKSf. The loan under the proposed project will be disbursed through **PKSf's mainstream credit programme to the IEs** (as they are also partner organizations of PKSf). In addition, the IE will establish a project management unit at their respective offices. This PMU will operate the grant part and the credit officers will operate the loan part. This is the operational procedure for blending projects and programmes of PKSf.

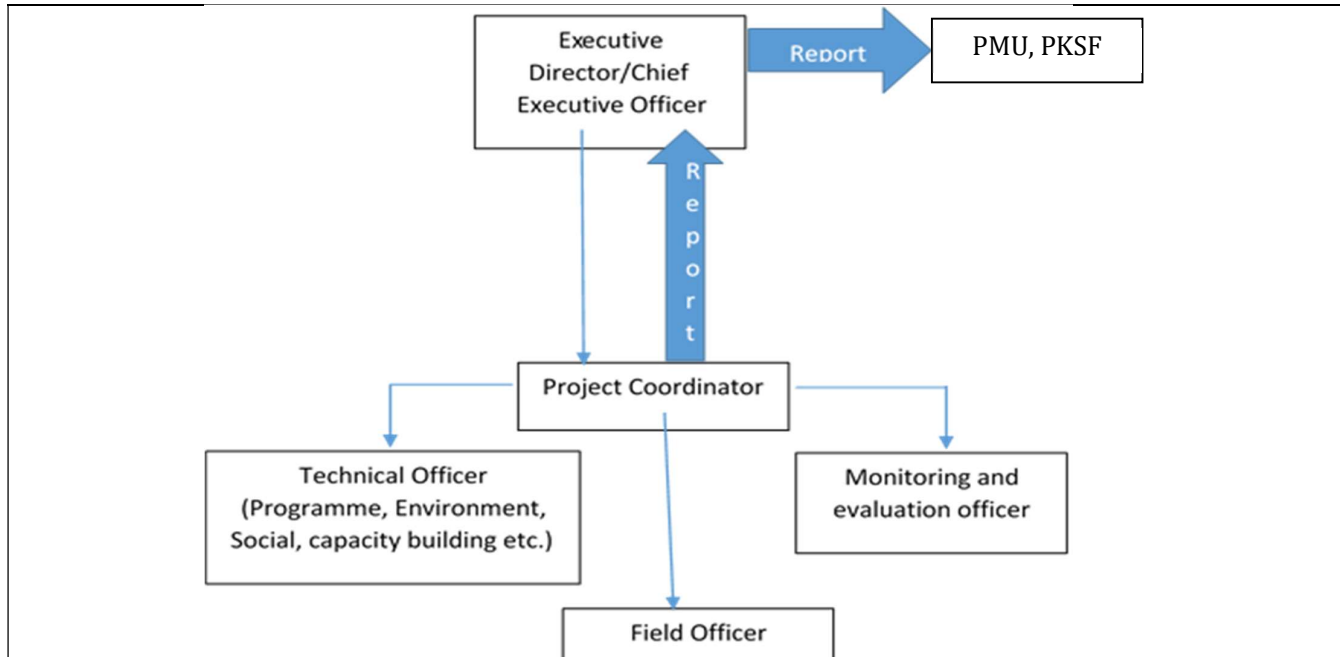
It is to be noted that PKSf will select at least 15 partner organisations who will be working as IEs at the community level. They will mobilize the beneficiaries, engage local contractors, and ensure project services for the beneficiaries. As such, they will pay to the contractors and other service providers at the local level upfront where necessary. Then they will submit financial reports and bills to PKSf on quarterly basis. PKSf will review the documents and carry out field visits to ensure that the bills are duly prepared and submitted. Then spending amount will be transferred to IE's project account. By re-imburement, we mean this process.

161. Fund flow diagram



Implementation arrangement at IE level

- 162.** PKSf as an EE will bear the responsibility of implementing the project in all aspects. PKSf will delegate field level implementation of activities to the selected IEs through legal agreement. The IEs, by signing legal agreement with the PKSf, will be responsible to work with the community people to deliver the project services. The work of IEs is always be under monitoring of the EE. The partner organizations who will qualify to implement this project at the community level are the IEs, which have been selected through PKSf's policies, and procedures (for IEs selection criteria see paragraph- 165)
- 163.** The participating entities will mainly implement the activities at the community level. They will monitor the outputs, outcomes and impacts of the activities as well as their impacts on the environment and society. They will also ensure gender participation at the organization and community levels. They will also report to PMU of PKSf on the progress and impacts of the project.
- 164.** The IEs will employ a dedicated monitoring officer who will report to the chief executive or senior officials, not directly entrusted with the implementation of the programme. He or she will implement the monitoring framework as envisaged in the project proposal and will produce quarterly activity monitoring reports based on the 'Activity to Output Monitoring (ATOM)' agreed upon by both parties. The monitoring officer will undertake the outcome-level monitoring half-yearly based on the agreed 'Outcome Assessment Sheet (OAS)' and impact-level monitoring annually based on the agreed 'Impact Assessment Sheet (IAS)', which will be prepared taking indicators of impacts and outcomes into account. He or she will post the information in the assigned fields of the IEs and in the PKSf's online system as well.



- 165.** Selection of Implementing Entity: A selection committee comprised of PKSf's senior officials will be formed. The committee will select the IEs. To be selected, IEs will have, at a minimum:
- Permanent existence of the organization in the project areas.
 - At least five years of experience in implementing climate change-related projects or programmes.
 - A good track record of financial transaction (i.e., at least BDT one crore, which is around USD 100 thousand, annually for the last three years)
 - Must be extra ordinary, excellent or at least good as per PKSf's assessment using defined assessment criteria which include financial efficiency, economic efficiency, operational efficiency, growth indicators, financial strength and risk management, accounting and internal control system, social performance, human capacity and governance.
 - Valid legal documents including registration.
- 166.** Organizations will be ineligible on the grounds of involvement in 'Money Laundering and Terrorist Financing'.
- 167.** It is to be noted that PKSf has set criteria for periodic evaluation of the performance of its partner organizations. The criteria include financial efficiency, economic efficiency, operational efficiency, growth indicators, financial strength & risk management, accounting & internal control system, social performance, human capacity and governance. Each of the criteria has several indicators to assess performance of the POs. Based on the performance criteria, the organizations are categorized as extra ordinary, excellent, good, average, and sub-standard and requires special attention (RSA). These criteria will also be considered for eligibility. PKSf will ensure completion of AML/CFT due diligence with satisfactory results in the selection process for IEs and service providers.
- 168.** The selection committee will evaluate the submitted EOIs and prepare a short list of the potential IEs. Thus, the competitive process will be followed to select IEs for this project.



- 169.** Climate change is an important additional threat to the socio-economic development of Bangladesh. The country is in the process of switching from an LDC to a lower middle-income country by 2025, which requires considerable investments in regular development interventions. Hence, the country is not in a position to invest additional resources for building resilience from climate change shocks. GCF funding is important to build climate resilience for the most vulnerable people.
- 170.** The coastal area of Bangladesh is vulnerable to many natural disasters including climate change variability and extreme events. Primarily, the land and water are affected by increased salinity and sea level rise leading to decrease crop production which is the main livelihood of the coastal people. In addition, many climate-induced hazards, such as cyclones and storm surges, coastal flooding, and erosion also damage to crop agriculture, aquaculture and other livelihoods of the poor community. Establishment of crab sub-sector for the coastal people will be a sustainable adaptation option. Because it requires salinity environment including land and water. If, sea level rises, the brackish aquaculture would be demolished where crab farming would enjoy the increased salinity in the environment. In addition, present system of crab fattening threatens the availability of crab in the nature. Once, crab hatcheries are established, the crab catchers would not need to catch wild crabs. It will help protecting the coastal biodiversity of the country.
- 171.** Most crab growers remain vulnerable to shocks from extreme events of natural disasters, climate change events and salinity intrusions into agricultural land. They lose their assets, fertile land and livelihoods' alternative options, whereby becoming vulnerable. PKSf and IEs with the support of GCF will provide the training, capacity building and financial support for crab hatcheries, crab farming to 362,475 people.
- 172.** GCF involvement is very important and critical in two ways: (i) climate change threat and long-term projections to be mentioned that coastal vulnerability will likely to increase in southern areas of Bangladesh. Coastal floods, salinity intrusion, sea swells, storms and cyclone will likely increase in occurrence and intensity. It will require additional investment to reduce the impacts of and vulnerabilities to these climate variability and extreme events. Therefore, more additional involvement and investment in enhancing knowledge and awareness on climate risk to inform and improve the present government programmes and policy in promoting climate-resilient livelihoods and safe housing is necessary; and (ii) Extreme climatic related threats also require additional finance to increase the scale of climate risk reduction investments to protect the coastal livelihoods and settlements (people and their main assets – the homes) as well as improve the methods and application of a good practice, GCF involvement will considerably enhance the ongoing government programmes, employing best practices and scaling-up achievement of successful pilots and good international practice. As a result, the proposed investment will be transformational.
- 173.** Reflecting the limited resources available to the country as well as the need to trigger systemic change, it is proposed that a significant proportion of the total cost will be covered by the GCF in the form of grant finance. This is essential because Bangladesh is a least developed country with very limited financial capacity to adapt to climate change and having to invest most of its constrained resources to address competing needs. Thus, the financial instruments chosen, which rely heavily on the GCF grants to overcome structural barriers to change, are considered appropriate to the achievement of project objectives.

The project will be financed mutually both by the GCF, the PKSf and the community. The project seeks from GCF US\$ 42.20 million as grant for hatchery, capacity building training and building climate-resilient homesteads. PKSf will provide the loan for establishing the hatchery, crab farming and sheep farming for promoting climate-resilient livelihoods and value chain interventions at an estimated US\$ 7.79 million.

B.6. Exit strategy (max. 500 words, approximately 1 page)



- 174.** The project will seize the climate change related negative impacts as an opportunity for the coastal people. Crab farming requires a comparatively high level of salinity. The coastal area will experience severe salinity under the changing climate situation. Thus, coastal people will fully use the adverse impacts of climate change by the project interventions for their wellbeing.
- 175.** PKSF has already established a large crab hatchery at a cost of 1 million USD under its technology transfer component of Promoting Agricultural Commercialization and Enterprise (PACE) project. Moreover, PKSF has taken a 'Value Chain Development' project for crab rearing. Knowledge gained from these interventions will be used in the proposed project under the GCF. All the technological support for the hatchery and crab culture have been taken from Vietnamese experts. In the meantime, a group of local experts has already been groomed up.
- 176.** PKSF has been implementing goat and sheep rearing in slatted houses for more than a decade in the Chuadanga district of Bangladesh through its partner organization called Wave Foundation (WF). But it was concentrated in very limited areas. The usefulness of slatted houses for goats or sheep in the context of climate change is enormous as experienced by PKSF. The project will promote this learning in the coastal zone of Bangladesh
- 177.** The project interventions will continue in the long run. Because it will develop a profitable economic sub-sector and promote innovative technology for the livestock sub-sector which will be resilient to climate change as well. It will include all classes of people in the society. The entrepreneurs will seek finance from banks and NGOs beyond project periods. As crab farming and trading will be a profitable business, financial organizations and NGOs will finance the sector in the long run. The government will also create favorable environment in promoting the crab sub-sector. Similarly, goat and sheep rearing will also be financed by the local MFIs if it would be explored commercially.
- 178.** The project will have multiple adaptation impacts on the coastal communities as well as contribute to the country's GDP. It will create employment for vulnerable coastal people and provide livelihood support to more than 362,475 beneficiaries. The project will support entrepreneurs at different stages of the value chain of the crab business. Thus, the project financing will be effective in achieving objectives of the project. In addition, goat and sheep rearing in slatted houses is a profitable livelihood option because slatted houses reduce disease and increase productivity. Besides, women can get easily involved in this activity while staying at home. So, the community will automatically continue this activity in the long run.
- 179.** The project will organize a series of workshops will different stakeholders including government representatives, policy makers, national and local NGOs and financial organizations. The workshops will share lessons of the project to these stakeholders in order to create favourable policy environment for up scaling crab hatchery. The POs and financial organizations will provide financial support to the entrepreneurs for extension of the business.
- 180.** After completing this project, it is expected that participants will be more resilient to any adverse effects of climate change in coastal areas. In addition, to meet their extended demand for livelihoods, they will be involved in existing MFIs. Besides, their involvement with local councils and local government institutions will broaden their social capital and institutional linkage. It is also expected that the Implementing Entities (IEs) will continue their services in communities with other demand-driven services and thus, these IEs will be readily available for the project participants to offer any kind of consulting services on the issues related to climate change.
- 181.** The exit strategy will follow PKSF's policy on project closure. Primarily, an exit plan is prepared for the project. The implementing entities will be provided necessary guidance on project closure. The project will organize workshops at the national level involving policy makers and actors to share the results of the project interventions. The IEs will organize workshops at the local level involving local government representatives and local actors. Necessary publications will be published during the tenure of the project. An exit plan is presented below.



Sl. No.	Activity	Time of action	Responsibility	Source of budget
1	Prepare guidelines for IEs on the exit plan	Last year of the project cycle	PMU	Project
2	Distribute knowledge materials	Throughout the project period	PMU and IEs	Project finance
3	Organise workshops at central level on lessons that have been learnt	Last quarter of the project	PMU	Project
4	Organise workshop at local level	Last quarter of the project	Respective IEs	Project
5	Undertake maintenance support for the infrastructure	During and post-project period	Beneficiaries	Beneficiaries own fund
5	Engage appropriate stakeholders for the continuation of activities beyond project	Post project period	Local level entrepreneurs and community people	The IEs and other PKSF's partner organizations

182. The project will generate knowledge and learning that will contribute significantly to enhance resilience of rural communities. The learning will be shared with national and international policy and decision makers in order to get policy support for the institutionalising of the sub-sector



C. FINANCING INFORMATION

C.1. Total financing

(a) Requested GCF funding (i + ii + iii + iv + v + vi + vii)	Total amount		Currency			
	42.20		million USD (\$)			
GCF financial instrument	Amount	Tenor	Grace period	Pricing		
(i) Senior loans	<u>Enter amount</u>	<u>Enter years</u>	<u>Enter years</u>	<u>Enter per cent</u>		
(ii) Subordinated loans	<u>Enter amount</u>	<u>Enter years</u>	<u>Enter years</u>	<u>Enter per cent</u>		
(iii) Equity	<u>Enter amount</u>			<u>Enter per cent equity return</u>		
(iv) Guarantees	<u>Enter amount</u>					
(v) Reimbursable grants	<u>Enter amount</u>					
(vi) Grants	42.20					
(vii) Results-based payments	<u>Enter amount</u>					
(b) Co-financing information	Total amount		Currency			
	7.79		million USD (\$)			
Name of institution	Financial instrument	Amount	Currency	Tenor & grace	Pricing	Seniority
Palli Karma-Sahayak Foundation (PKSF)	<u>Senior Loans</u>	<u>6.60</u>	<u>million USD (\$)</u>	<u>5 years</u> <u>Enter years</u>	<u>12%</u>	<u>Options</u>
Palli Karma-Sahayak Foundation (PKSF)	<u>In kind</u>	<u>1.19</u>	<u>million USD (\$)</u>	<u>5 years</u> <u>Enter years</u>	<u>Enter%</u>	<u>Options</u>
Click here to enter text.	<u>Options</u>	<u>Enter amount</u>	<u>Options</u>	<u>Enter years</u> <u>Enter years</u>	<u>Enter%</u>	<u>Options</u>
Click here to enter text.	<u>Options</u>	<u>Enter amount</u>	<u>Options</u>	<u>Enter years</u> <u>Enter years</u>	<u>Enter%</u>	<u>Options</u>
(c) Total financing (c) = (a)+(b)	Amount		Currency			
	49.99		million USD (\$)			
(d) Other financing arrangements and contributions (max.250 words, approximately 0.5 page)						



C.2. Financing by component

Outcome	Output	Indicative Cost million USD (\$)	GCF financing		Co-financing		
			Amount million USD (\$)	Financial Instrument	Amount million USD (\$)	Financial Instrument	Name of Institutions
Outcome 1: Decreased risk of loss of assets and lives from extreme weather events	Output 1.1 Climate resilient homesteads constructed	24.41	24.41	Grants			
Outcome 2: Livelihood resilience to SLR/storm surge and salinity	Output 2.1 Traditional farming practices climate proofed	7.23	4.23	Grants	3.00	Senior loans	PKSF
	Output 2.2 Community-based farmed crab supply chain created	12.18	8.58	Grants	3.6	Senior loans	PKSF
Outcome 3: Improved climate planning and implementation by communities and local level institutions	Output 3.1: Climate change adaptation groups (CCAG) formed and operationalized	1.34	0.47	Grants	0.87	In-kind	PKSF
	Output 3.2: Capacity built among IEs and relevant institutions apprised on project	2.20	2.20	Grants			
	Output 3.3 Knowledge products prepared and disseminated	0.62	0.62	Grants			
PMC		2.01	1.70	Grants	0.32	In-kind	PKSF
Indicative total cost(USD)		49.99	42.20		7.79		

C.3 Capacity building and technology development/transfer (max. 250 words, approximately 0.5 page)

C.3.1 Does GCF funding finance capacity building activities?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
C.3.2. Does GCF funding finance technology development/transfer?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

183. The project will establish 50 crab hatcheries for smooth supply of adolescent crab to the crab growing and fattening farmers. Estimated GCF financing for this technology is USD 1,205,000. Initially the project will provide training to two technical staff in each hatchery for crab let

production as well as crab rearing for the duration of six months. Through this training, they will learn technical details on the structural design of the hatcheries, crab hatching, nursing and rearing. Each hatchery will have 5-6 staff for operation. They will also learn about crab hatching technology and crab rearing. At the same time, the project provided training to 500 crab nurseries; 20,000 crab farmers. When trained farmers are started farming the neighbour follows them to use improved technology rather than traditional.

- 184.** The slatted house for goats and sheep is also an emerging technology for the selected areas. The estimated GCF financing for this technology is USD 2,825,000. The farmers, particularly the women, will be trained on this technology along with other veterinary services. This will enhance their knowledge and capacity on climate-resilient livestock farming in the changing situation. In addition, climate-adaptive vegetable cultivation on homesteads will be implemented. Bangladesh Agricultural Research Institute (BARI) has invented various salinity-adaptive vegetables for the coastal zone. The project will promote those varieties which will cost USD 1,405,000.
- 185.** Resilient homestead is another important technology of the project to be transferred to the vulnerable coastal people. The estimated GCF financing of this technology is USD 22,785,600. 20,000 households will receive support for planting trees around their homesteads to increase resilience of the houses against storm. The estimated GCF financing of this technology is US\$1,625,000.
- 186.** Besides these, IE's staff will receive training on project management, procurement, climate change adaptation and implementation procedures for smooth operation of the project. The estimated GCF financing of capacity building is USD 2,823,500.



D. EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

D.1. Impact potential (max. 500 words, approximately 1 page)

- 187.** The proposed project will **contribute to increased climate-resilient sustainable development.** The proposed climate-resilient homesteads will secure lives and livelihood resources of the selected 13,500 beneficiaries. The women beneficiaries will have additional benefits by avoiding difficulties they face when using community shelters (Details can be seen in Annex 8). The poultry and livestock of the beneficiaries will be secured because they will stay at raised and safe place. The trees around the homesteads to be planted will protect them from cyclonic storm as well as provide income. More importantly, other people may take shelter on the resilient homestead during an emergency situation. Thus, the dwellers of the resilient homesteads will have social values and honor by providing shelter to the affected communities.
- 188.** The land-based crop production in the project area has already become a challenging task. Mud-crab, a salinity-tolerant species which is resilient and less affected by natural calamities and diseases. Establishment of crab hatcheries will ensure supply of available juvenile crabs for fattening which is currently collected from nature. The availability of crab in nature is also going to extinct due to over exploitation. So, the project will contribute to adapt with the increasing salinity in the coastal areas of Bangladesh as well as protect the species in the nature.
- 189.** The establishment of the crab hatchery and farming will create opportunities of sustainable employment for the coastal people. Some people will produce juvenile crabs, some will nurse in ponds for fattening, and some other people will fatten the crabs on their farm land. In addition, some people will get involved in transporting crab-lets and mature crabs to local, national or international markets, some other people will get involved in crab processing. These value chain actors will be indirectly benefited by the project interventions. Thus, the project will create a new window into climate adaptive economic development. It is expected that the project will make resilient to 75 per cent of the selected community, generate climate-adaptive employment for 80 per cent and improve overall socio-economic conditions (i.e., income, health, nutrition, housing) of 75 per cent of the selected community.
- 190.** The number of direct beneficiaries will be 362,475 . The project will establish 50 micro crab hatcheries in the coastal areas to produce juvenile crabs which will be used by the crab growers. One micro hatchery will support 10 crab nurseries. So, 50 micro hatcheries will provide support to 500 crab nurseries. On an average 2 fulltime workers will work at each crab hatchery. So, the micro crab hatcheries will have 100 direct beneficiaries. 2,250 crab nurseries will support 20,000 crab growers for crab growing. In addition, 900 people will be engaged in different levels of value chain of crab business. Furthermore, the proposed project will provide technological support for sheep rearing to 90,000 beneficiaries, which have been proven as salinity tolerant livelihood options for the coastal zone. The project will support another 90,000 beneficiaries through tree plantations at their homesteads. This will help them earning income, meet their nutrition demand and protect their houses from cyclones and storms. The housing component of the project will protect their health and livelihood resources leading improvement well-being. The project will also support 90,000 beneficiaries in producing salinity-tolerant vegetable cultivations in their homesteads. 13,500 vulnerable and ultra-poor households will receive support for climate resilient homestead. The number of indirect beneficiaries will be around 770,050 people. It is expected that 75 per cent of the selected people will increase their resilience to climate change and related consequences.
- 191.** Women will particularly engage in homestead-based activities i.e., sheep rearing, homestead vegetable gardening and tree plantation around homestead. Hence, all the beneficiaries related to these activities will be women. The project targets that at least 10 per cent percent of the households will be female headed. The project will put priority to the women heads for supporting climate resilient homestead. The project also targets about 20 per cent percent of the crab growers will be women. Thus, roughly estimated 50 per cent of the direct beneficiaries will be women.

D.2. Paradigm shift potential (max. 500 words, approximately 1 page)

Potential for scaling up and replication

192. The project will use the negative impacts of climate change related negative impacts as an opportunity for the coastal people. Crab farming requires a comparatively high level of salinity. The coastal area will experience severe salinity under the changing climate situation. Thus, coastal people will fully use the adverse impacts of climate change by the project interventions for their well-being.
193. The homestead of coastal people is highly exposed to sea level rise, coastal flooding and storm surge. The project will promote climate-resilient homestead which is a self-sustained adaptation interventions for the coastal vulnerable communities in the country. This is an innovative approach of making the homestead resilient to climate change in the coastal zone. Because, traditionally people raise only the plinth of house but not the whole homestead area. As a result, home yards inundate during monsoon, even if there are normal tides and associated floods. Through these interventions, the people will learn how to raise the whole homestead area above flood and tidal surge level. They also learn how to construct an affordable climate-resilient house in their locality.
194. As the impact of climate change is reducing opportunities in the agricultural sector due to increase in the salinity level, the whole community should be involved in potential and sustainable land use and production. Crab hatching and fattening is one of the most suitable alternatives for the people in coastal regions.
195. Traditionally, some people are already engaged in crab rearing. The juvenile crabs are collected from natural sources and they are fattening the crabs in traditional ways. The local people informed that they could catch crab in their nearby rivers earlier (about 10-15 years back) but currently they have to travel 3-4 km meters away to catch crab (derived from community consultation in Satkhira district). Providing technological support and training to them will significantly increase the production and minimize the cost. Both the hard- and soft-shell crab interventions will be in the project. Moreover, indiscriminate collection of juvenile crabs from nature is damaging the ecological balance. Establishment of micro crab hatcheries will ensure sustainable collection of juvenile crabs. PKSf will provide micro-enterprise loans to establish the crab sub-sector in the coastal districts. PKSf will nurture the activities through Value Chain Development (VCD) for crabs. Under the value chain components of the project, crab farmers will get technological support, market linkage and microenterprise loan support from the project.
196. The PKSf expects that crab hatchery will rapidly be extended in the coastal community due to its multiple benefits. They will learn about sustainable new technology in crab hatchery and farming through the project intervention. It will create employment opportunities for technical and non-technical people and increase their income earning. It is also expected that project interventions will create profitable business interventions at local, national and international levels which will help rapid scaling up of the activities.
197. The PKSf has demonstrated goat and sheep rearing in slatted houses in Assasuni upazila (sub district) of Satkhira district under CCCP. The demonstration's effects were courageous. Many people started goat and sheep rearing in slatted houses to increase their income. The project will follow similar technology and management for goat and sheep rearing. This is a women-friendly technology for livelihood adaptation to coastal zones. The women can get easily involved in goat and sheep rearing. It increases their income due to low risk and higher income.
198. The proposed project conceptualizes relatively expensive housing to make it resilient to climate change related shocks. Because low-cost housing or traditional one cannot resist the critical climate sensitivity in the coastal zone. The proposed project will design a model house for demonstration. The design will consider the effects of storm surges, cyclones and coastal flooding. The project also considers challenges of existing the housing system to make it sustainable. Hence, it is expected that other development practitioners and community people in the coastal area will follow the housing model for sustainability.



Potential for knowledge sharing and learning

199. The project will generate information and knowledge on the effectiveness of proposed interventions and share with different levels of stakeholders through meetings, seminars, workshops and other informal communications. The project will also carry out best practices and lessons learned to disseminate the technologies and practices in other communities in the coastal zone.

Contribution to the creation of an enabling environment

200. PKSF has been investing in research and development of hatchery-based crab farming for the last few years. A big hatchery was established in 2016 with technical support from Vietnam experts, which is now in operation. Besides, PKSF has established 3 micro-scale hatcheries at entrepreneurs' level. These micro-scale hatcheries are also in operation. Moreover, commercial banks and MFIs exist in the project area to finance the expansion of hatchery-based crab farming and business.

201. PKSF will implement the project through IEs. They will have expertise on addressing climate change impacts. The communities will increase their knowledge through practice climate resilient livelihood and resilient homestead. This will create demonstration effects in the society. The government will also incorporate these activities in its climate change related policies and strategies. IEs will continue with their microenterprise loan in promoting this livelihood. There is already an established market and it will continue further when the IEs will continue working with their micro enterprise loan component.

Contribution to the regulatory framework and policies

202. Historically, the government of Bangladesh adopts a re-active type of policies and regulations to promote potential economic and development sectors. For example, the government adopted the National Shrimp Policy in 2014 while this sector was developed in 1980's and expanded in 1990's. It is expected that the project will influence the policy makers by contributing to the export earning of the country, local economy, and creating pro-saline livelihood of the coastal vulnerable people. Once, economic activity and income of the crab sector would be noticeable to the government, they would take necessary steps to amend existing fisheries policy or adopt a new policy related to crab farming. PKSF will engage all levels of government officials through meetings, workshops and seminars to sensitize them in this regard. Besides, PKSF as government-owned company can influence the government of Bangladesh's policies and strategies for integrating climate change adaptation livelihood and resilient housing in the coastal areas of the country.

Overall contribution to climate-resilient development pathways consistent with relevant national climate change adaptation strategies and plans

203. It is expected that the project will influence several policies of the government. The major policies to be influenced by the project interventions are national land use policy, national fisheries policy, national water policy, and jalmahal (wetland) policy. With the growing economic development of the sub-sector, the government will create favorable policy and regulatory environment for production and trading of crab. There is huge potential of exporting of processed meat of goat and sheep. Satisfactory production of meat and other products like milk, skin would encourage the government of Bangladesh to create favourable policy and regulations for production and trading of goat and sheep.

Transformational aspects of the project:

204. Crab hatchery and farming using already salinity affected areas. Private entrepreneurs will be engaged in establishment of crab hatcheries. They will be continuing their business in the long run. Besides, PKSF through its partner organizations will continue financing in this sector based on needs of the entrepreneurs. The market infrastructure and linkages are already established as this business is being run with natural crab.

205. The entrepreneurs, local NGOs and selected Universities will enhance capacity in juvenile crab production, growing crab and promote trades in national and global market.



- 206.** The RHL project will empower the project beneficiaries in terms of awareness raising, increasing income for their families and playing role in decision making of their families.
- 207.** The resilient homesteads will influence government's existing and future housing projects in integrating climate change for greater sustainability. The project will share the results of resilient housing with the National House Building Research Institution so that they integrate climate change in their design.

D.3. Sustainable development (max. 500 words, approximately 1 page)

Environmental co-benefits

- 208.** By nature, the project will benefit the environment of the intervention areas. Presently, crab catchers and farmers collect crab from the natural sources. The crab catchers informed that they do not get crab in their nearby areas, which they used to get 10 years back. Now, they have to go far from their locality into the river or Sundarbans, i.e., the iconic mangrove forest in Bangladesh, for catching crabs. It means, availability of crabs in the nature is decreasing day by day. The project will produce crablets in the hatchery and hence, crab catchers do not need to catch wild crabs. So, it will automatically protect the crab in the nature and improve ecological balance. Litters of goats and sheep are used to produce good quality of composed-fertilizer. It is also used to produce vermi-compost which is very important for improvement the quality of soil.

Social co-benefits

- 209.** Individuals will not only be better able to protect assets as a result of this project (direct benefit) but also it will provide security and well-being co-benefits to women and girls by avoiding the need to use communal shelters during extreme weather events. Increased income of the coastal people and diversification of their farming operations will improve quality of their lives and food and nutrition security, reducing the traditional factors that push rural communities to migrate to urban areas.

Economic co-benefits

- 210.** The project promises to spark growth in local secondary service economic activities, from transport to casual laborers to equipment maintenance and provision. It is anticipated that these secondary service providers will synergistically encourage local growth and employment, increasing local wealth and further decreasing urban migration.

Gender-sensitive development benefit

- 211.** Crab growing and fattening technology is very simple and easily manageable. Women can get involved in crab fattening and other activities of the project. PKSf from its beginning puts emphasis on disadvantaged and excluded segments of the society. 80 per cent of PKSf's beneficiaries are women. Like other projects or programmes, the project will focus on gender-based development so that women and other excluded groups can get access to the project intervention. It will enhance the capacity of women in the coastal zone and raise their voice towards their rights. Wages of male and female will be the same under the project intervention.
- 212.** Traditionally, women in Bangladesh look after livestock at household level. The project will select all women participants for implementing goat/sheep rearing in slatted houses. Thus, the interventions selected under this project are women friendly and will empower them economically as well as decision making. The housing component of the project will certainly reduce their physical vulnerabilities as they would not need to go shelter during the emergency situation.
- 213.** The proposed climate resilient homestead will ensure security of women and adolescent girls during disasters because they would not need to go to community shelter. In addition, they can grow vegetables round the year on their raised homesteads that will improve nutrition of both male and female members of the households.

D.4. Needs of recipient (max. 500 words, approximately 1 page)

- 214.** In spite of many challenges including a huge population, poverty, climate change and disaster; Bangladesh has become one of the fast-growing economies in the world. Before COVID-19, the country has been maintaining around 7-8 per cent per cent GDP growth over the last decade. The poverty headcount ratio at USD1.90/day reduced to 5.14 per cent per cent in 2021 from 20.38 per cent per cent in 2010. Considering poverty level at USD 3.20/day, the poverty headcount ratio is very high through shows a reduction trend from 57.86 per cent per cent to 33.17 per cent respectively per cent (Source: <https://dashboards.sdgindex.org/profiles/bangladesh/indicators>). Bangladesh has also achieved significant development goals in many indicators. For example, maternal mortality rate has reduced from 434/100,000 birth in 2000 to 173/100,000 birth in 2017; mortality rate of under 5 children reduced to 30.83/1000 live births in 2019 from 86.50/1000 live births in 2000; net primary enrolment increased to 120per cent in 2020 from 105per cent in 2010; per capita income increased to USD 1961.6 from USD 781.2 in 2010; and GDP growth rate increased from 5.57 per cent per cent in 2010 to 8.2 per cent per cent in 2019 with the exception in 2020 when GDP's growth rate reduced to 3.5per cent mainly due to COVID-19 pandemic. However, this development is not equal throughout the country. The rural areas are lagging behind from urban areas and the climate hotspots within the rural areas are far behind this development trajectories. The coastal region of Bangladesh is recognized as one of the most climate hotspot regions of the country.
- 215.** A World Bank Study (EACC, 2010)⁵⁶ estimates that under the baseline scenario, the damages and losses stand at USD 4.6 billion from a single cyclone and associated storm surges of a 10 years return period. With climate change, the damages and losses would increase to USD 9.16 billion, including USD 4.5 billion attributable to climate change.
- 216.** The housing of coastal areas is mainly affected by cyclones and storm surges and coastal flooding. Nation-wide, 70.31 per cent households in disaster-prone areas have *katcha* (making by mud) houses and 17.44 per cent have semi-*pucca* houses. These houses are vulnerable to heavy rainfall, flooding and storm surges as they are made with mud and straw or *golpata* (*Nypa spp.*) (traditional leaves found in the Sundarbans) (BBS, 2015)⁵⁷. This means, around 88 per cent per cent households are vulnerable to climate change and associated disasters in the country. The recent cyclone in May, 2020 has destroyed 55,667 houses completely and around 162,000 houses partially in the southwest coastal zone of Bangladesh. Cyclone Mahasen on 16 May 2013 has damaged 150,000 houses (IFRC, 2013)⁵⁸; Cyclone Aila in May, 2009 has damaged 500,000 houses (DMB, 2009)⁵⁹ and Sidr in November, 2007 has damaged 600,000 houses in the coastal areas of Bangladesh. These damages are expected to be increased in future with the increasing intensity of cyclones and storm surges.
- 217.** Considering salinity intrusion due to climate change, crop and vegetable cultivation is facing growing challenges. The salinity intrusion affects coastal agriculture faster than the research outcome reaches the farmers. However, there are some salinity-tolerant varieties including BRR1 dhan-47, BINA dhan8, BINA dhan10, sunflower, and sugarcane, but these varieties can tolerate limited levels of salinity i.e., less than 15 ppt. But most of the coastal land experiences more salinity, particularly during the dry season (mostly from September to May). Thus, technologies and practices should consider salinity-based production systems for building resilience of the vulnerable community. In this context, crab fattening a potential resilient livelihood for the coastal poor community.
- 218.** Thus, community consultations carried out during preparatory phase of this project suggested that majority of the coastal population is poor, small and marginal farm families and shrimp workers. They build their houses in low-lying areas which are subject to coastal flooding. Most of the houses are built with mud and *goal pata* which are severely affected by cyclones, storm surges and high tides. These

⁵⁶EACC, 2010: *Bangladesh - Economic of adaptation to climate change : Main report (English)*. Washington, D.C. : World Bank Group.

⁵⁷BBS (2015). Bangladesh Disaster Related Statistics, Bangladesh Bureau of Statistics, Government of Bangladesh.

⁵⁸IFRC (2013). Emergency Appeal Six-Month Consolidated Report – Bangladesh: Tropical Cyclone Mahasen. <https://www.ifrc.org/docs/Appeals/13/MDRBD01302.pdf>, accessed 10/07/2015

⁵⁹DMB (2009a). District-wise Damage Report. Disaster Management Bureau (DMB). Ministry of Food and Disaster Management (MOFDM). Government of Bangladesh. Dhaka: 3 June 2009.

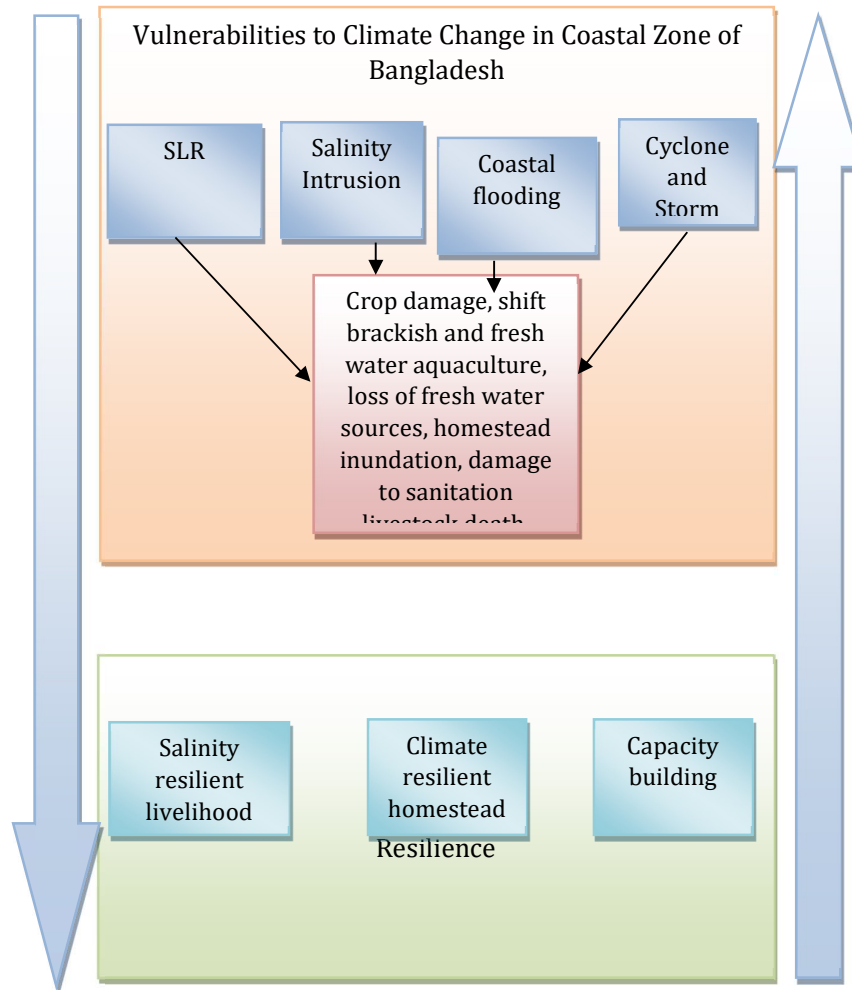


people have to spend a significant amount of their earnings repairing houses each year. Hence, they could not come out from the economic poverty. The livelihoods of these people primarily depend on seasonal subsistence agriculture and agriculture wage labour which are highly climate sensitive. Cultivable land is shrinking due to increased sea level and expansion of salinity. Thus, agricultural production is hampered. The surface and groundwater in the coastal zone of the country is increasingly contaminated with saline water due to sea level rise, cyclones and tidal surges. The coastal people, particularly the women, collect drinking water far away from their locality, spending a productive long time which also push them back into poverty. The climate scientists argue that this situation will be further aggravated by the consequences of climate change.

- 219.** Physical risks associated with these extreme events in conjunction with the societal exposure risk levies immense pressure upon coastal habitat. Sea level rise comes as a direct result of the adverse influence of the changing climate upon global tidal patterns and is ultimately increasing the risks of the vulnerable population and their livelihoods. Apart from being a catastrophe in itself, abrupt rise in sea level can cause a chain reaction of inimical natural calamities based on cause and effect. Salinity intrusion in the coastal regions is one of the major effects of sea level rise, which is currently evident in not only the various existent freshwater sources but also in the soil, thus threatening agriculture production-based livelihoods, water security and crop production. Intrusion of saline water will continue as the area under 1 ppt salinity line is expected to increase by 18.22 per cent and area under 5 ppt salinity is expected to increase 24 per cent by 2050 (CEGIS and DOE, 2011)⁶⁰.

⁶⁰CEGIS and DoE (2011). Final report on programmes containing measures to facilitate adaptation to climate change of the second national communication project of Bangladesh. Dhaka, Department of Environment.

- 220.** Polders are particularly at risk of higher tidal surges. This is because once a polder embankment is breached, the enclosed land often stays waterlogged for long periods of time, making agriculture and other livelihood activities nearly impossible. Due to saline water intrusion, salinity in the soil increases. This salinity further goes down in the subsurface soil. Mainly due to lack of precipitation during the dry season, sometimes sub-surface salinity moves upward. So agricultural and livelihood activities could be hampered even after water recedes.



D.5. Country ownership(max. 500 words, approximately 1 page)

- 221.** The constitution of the People's Republic of Bangladesh has given rights to all citizens to have a secured residence. The project will support most vulnerable coastal people to avail their rights as per the constitution. This will contribute to the government's different policy implementation particularly addressing climate change impacts including Bangladesh Climate Change Strategy and Action Plan (BCCSAP), Bangladesh National Adaptation Programme of Action (NAPA), National Communications, 8th Five Years Plan, and Perspective Plan.
- 222.** The project is listed in the summary table in page 4-5 of the Bangladesh country programme. It is numbered A25 and titled "Increase resilience to climate change in southwest coastal zones of Bangladesh through adaptive livelihoods, housing, and safe drinking water supply." The project will address the Bangladesh Climate Change Strategy and Action Plan (BCCSAP), 2009 and one of its pillars -- food security, social protection and health. It is the first among the six pillars of the BCCSAP. The pillar has nine programmes of which three are directly related to the project interventions. Programme 4 of the pillar is "Adaptation to Fisheries Sector" and Programme 5 is "Adaptation to

Livestock Sector”. As the increased sea level rise and salinity will retreat brackish water aquaculture, crab farming would be popular in this changing situation. People will take the opportunity from the adverse situation through crab production, transportation, processing and marketing. The project will also address Programme area 8, i.e., livelihood protection in ecologically fragile areas. The coastal zone of Bangladesh is critical by nature. Because, the poor people who are living in the coastal zone are dependent on the coastal ecosystem services. Thus, over exploitation of resources makes the ecosystem critical in terms of sustainability. The project intervention will create sustainable livelihood for about 0.1 million people. They would no longer depend on natural resources. Thus, the project will help achieving national strategies and action plans particularly related to climate change. The project will also support Programme areas 5 and 6 of the Thematic Area of “Infrastructure” of the BCCSAP, 2009, i.e., adaptation to flood and adaptation against cyclones and storm surges through implementing climate-resilient houses for the vulnerable coastal community.

- 223.** The project will address the Bangladesh National Adaptation Programme of Action (NAPA). The National Adaptation Programme of Action (NAPA) for Bangladesh has been prepared by the Ministry of Environment and Forest (MOEF), Government of the People’s Republic of Bangladesh as a response to the decision of the Seventh Session of the Conference of the Parties (COP-7) of the United Nations Framework Convention on Climate Change (UNFCCC). NAPA prepared a list of priority activities to mitigate impact of climate change and most of the activities of the proposed project qualify with NAPA listed activities. NAPA also developed 45 project concept notes and the nature of activity of the proposed project is partially the same with all concept notes. The proposed project is directly similar to Project No. 4 outlined in the NAPA. Climate change and adaptation information dissemination to vulnerable communities for emergency preparedness measures and awareness rising on enhanced climatic disasters, Project No. 6, i.e., mainstreaming adaptation to climate change into policies and programmes in different sectors (focusing on disaster management, water, agriculture, health and industry). Project No. 10, i.e., promotion of research on drought, flood and saline tolerant varieties of crops to facilitate adaptation in future, and Project No. 12, i.e., adaptation to agriculture systems in areas prone to enhanced flash flooding – northeast and central region of the Bangladeshi coast.
- 224.** The Government of Bangladesh under the leadership of Prime Minister Sheikh Hasina adopted the Vision 2021. The Vision 2021 and the associated Perspective Plan 2010-2021 have set solid development targets for Bangladesh by the end of 2021. The vision of the perspective plan is to take effective measures to protect Bangladesh from the adverse effects of climate change and global warming. The plan targets to take all possible steps to protect the vulnerable people from natural calamities. Steps will also be taken to make Bangladesh an ecologically attractive place and to promote tourism in this regard. The objectives of the proposed project comply with that of Vision 2021.
- 225.** This project is strongly aligned with national policies including: Seventh Five Year plan of Bangladesh government, the Bangladesh National Adaptation Programme of Action (NAPA) and Bangladesh Climate Change Strategies and Action Plan (BCCSAP), 2009, National Plan for Disaster Management (NPDM), and Sixth Five Year Plan (SFYP) of GOB boldly articulate the country’s commitment to addressing climate change and equitable development, while the National Plan for Disaster Management (NPDM) 2008-2015 addresses Disaster Risk Reduction (DRR) and climate change adaptation (CCA) comprehensively in all development plans, programme and policies. The forthcoming Seventh Five Year Plan (2016-20) put emphasis on Accelerating Growth, Empowering Every Citizen.

Capacity of Accredited Entities or Executing Entities to deliver

- 226.** PKSF will play the role of Executing Entity for the project. It was established by the Government of Bangladesh in 1990 and registered under the Companies Act 1913/1994 as a “not for profit” organization with the vision of “A Bangladesh where poverty has been eradicated; ruling development and governance paradigm in inclusive, people-centered, equitable and sustainable; and all citizens live health, appropriately, educated and empowered and humanly dignified life”.

- 227.** PKSF provides a wide range of development services including financial, health, educational, capacity development, technology transfer and business development services to disadvantaged segments of the society through appropriate pro-poor institutions. Mobilization of poor people and provision of necessary training with appropriate financial supports have been the initial and continuous interventions. PKSF has a significant pro-poor strategy that looks at poverty alleviation from a holistic way. PKSF constantly redefines and redesigns its interventions, taking into account the concerns and needs of the poor with the changes of times. PKSF believes that appropriate financial support is not the only answer to alleviate poverty and it cannot be achieved with one component only. This requires addressing the needs of education, training, and healthcare, access to resources and equal opportunities for all. Hence PKSF developed 9 core programmes which include inclusive financial services, people centered holistic development programme, enterprise development programme, social protection programme, capacity building programmes, advocacy and knowledge management, research and development (R&D) and Environment and Climate Change programmes. PKSF has established the 'Environment and Climate Change Unit' for addressing climate change in Bangladesh. The Community Climate Change Project (CCCP) implemented by PKSF has been highly appreciated by participating development partners, the World Bank, the Government of Bangladesh and the civil society and media of the country. The project has successfully established a financial mechanism for channelling climate change fund in LDC country like Bangladesh.
- 228.** The project has been designed in full consultation with the relevant stakeholders of Bangladesh. The concept was also shared other relevant stakeholders including the Department of Environment, Department of Fisheries, Department of Agriculture Extension. In addition, the proposal was also shared with relevant national and international organizations including UNDP, ICCCAD, Action Aid, and WFP. Based on their comments and suggestions, the project proposal was finalized.
- 229.** Several consultation meetings and interviews were carried out in the coastal zone. Local government representatives, and local NGOs and community people participated in discussions on the barriers, challenges and adaptation gaps. The consultations focused on new technology of crab hatchery, potentials of crab sub-sector in terms of climate change, climate resilient livelihood options, crab processing and marketing. The current proposal incorporates the feedback from these consultations. The project will engage further with relevant stakeholders (target communities, NGOs, CBOs, local government) to ensure stakeholder input throughout the implementation period for the proposed activities.
- 230.** Crab hatching technology is an emerging practice in Bangladesh. The project will require high level technical expertise for establishment of hatchery and providing training. PKSF has already gained experience in establishing crab hatchery at enterprise level. Crab hatching technology is very critical in terms of water management (maintaining water salinity, PH, temperature etc.), feeding, disease identification etc. It also established three hatcheries in Cox's Bazar and Satkhira districts at the entrepreneur level. The PKSF is now capable of hatchery management and producing crab from the hatchery.
- 231.** Women participation is the most important element to ensure the views and captured, specific efforts were made to consult with women groups, and to collect information regarding the impacts of climate change on women, in the design of this project proposal. PKSF mostly preference to work with women at projects and programmes and was consulted at both the national and local level, and field missions took care to consult with both women and men regarding lessons learned to date. The project also benefits from important lessons learned in previous implemented projects and programs that have specifically aimed to increase the participation of women, senior citizens, youth and other vulnerable groups. Feedback and lessons learned from previous project and programs reviews and policy reviews have been applied in the design of activities. The application of community-based approaches during implementation will also ensure that regular communication is maintained throughout implementation with commune level representatives.

D.6. Efficiency and effectiveness (max` . 500 words, approximately 1 page)



- 232.** It is envisioned that through proposed interventions, the project will address several crucial sustainable livelihood and resilient related issues pertinent to the coastal inhabitants of Bangladesh. Specifically, the project will employ interventions related to (i). inadequate quality of human settlements in low-lying areas of Bangladesh, (ii). climate sensitivity of the population in selected regions, (iii). scarcity of safe drinking water.
- 233.** While it is expected that all proposed project interventions will provide significant benefits to intended beneficiaries and the entire economy, the benefits stemming from some of these interventions cannot be monetized due to the issues related to the lack of readily available valuation literatures in Bangladesh. Considering time and budget constraints the benefits have been guesstimated. On the other hand, interventions that consist of activities expected to positively influence the incomes of intended beneficiaries (e.g., interventions proposing the establishment of crab hatcheries and fattening crab activities, etc.) were assessed in financial and economic terms.
- 234.** It is envisioned that the project will help establish micro crab hatcheries and crab culture/fattening facilities in the coastal areas of Bangladesh. PKSF's piloting experience setting up crab hatcheries will help facilitate the process. The project will provide micro-enterprise loans to the beneficiaries (micro hatchery and crab growers) and technological and value chain support. PKSF will continue these project's activities through the same IEs with microenterprise loans to the crab sub-sector. The necessary technical know-how and value chain development are expected to be passed on to all intended beneficiaries.
- 235.** The goal of proposed project interventions in the crab sector is to jump-start seafood production by providing the necessary financial support for establishing environmentally conscious and economically sustainable crab production. This sub-sector will additionally help promote innovative and climate-friendly technological solutions in other branches of seafood production. Furthermore, it is expected that the private sector will catch up in the longer run, and private entrepreneurs will start investing in the sector, helping it grow beyond the project's life. The Government of Bangladesh will help create a favorable policy and business environment to promote the sector. It is expected that when the sector develops further and shows investment potential, the availability of commercial funding will increase.
- 236.** Furthermore, it is envisioned that similarly to crab sector interventions, the other proposed activities in the livestock sector (e.g., construction of slated houses for goat and sheep rearing or delivery of proper inputs and training for saline-tolerant vegetable production) and saline-tolerant vegetable production will also positively influence the incomes of intended beneficiaries. Once initiated by the funding stemming from this project in the long run, these activities will be financed by the local MFIs, once they become commercially operational and viable.
- 237.** As to adaptation benefits, overall, the project is expected to deliver multiple positive adaptation impacts in the coastal communities of Bangladesh and will contribute to the national GDP. The project will help in developing a base of various entrepreneurs at different stages of the value chain of the crab, livestock, and vegetable sub-sectors. The project is also expected to create employment for vulnerable coastal people and provide livelihood support to more than 362,475 beneficiaries. The project envisions a significant impact on the women and youth population as many of the proposed activities can be pursued by females or youth. Thus, the project financing will effectively obtain the project's objectives and help diminish gender disparities in coastal communities by empowering women. By implementing project activities that are gender inclusionary, the community will automatically continue this activity in the long run.
- 238.** Lastly, the project will organize workshops and meetings with stakeholders, including government representatives, policymakers, national and local NGOs, and financial organizations. The workshops will share project lessons with these stakeholders to create a favorable policy environment for scaling proposed interventions. The project's-facilitated communication and knowledge pass-through is expected to help create an enabling environment for the future development of supported sectors. It is anticipated that the NGOs and financial organizations will be more willing to provide financial support to the entrepreneurs to extend the business co-financed by this project.

Economic and Financial Analysis

239. The RHL project proposes implementing several activities to increase livelihood resilience to climate change in the coastal region of Bangladesh. As the coastal areas of Bangladesh are the most vulnerable to climatic shocks, e.g., cyclones, and the frequency and intensity of these shocks are expected to increase over time, the proposed project's activities will help address population vulnerabilities to these shocks.

240. The appraised project's interventions are geared toward the most vulnerable communities in the coastal areas of Bangladesh with highest poverty rates and significant levels of social and economic disadvantage. The intended beneficiaries are characterized by limited scope to increase their incomes and livelihoods. It is certain that without any external support, these communities will be unable to internalize on their own the costs of improved adaptation technology due to low incomes and lack of access to commercial financing (e.g., lack of collateral or credit worthiness to obtain a commercial loan).

241. Financial Analysis was pursued on interventions that are expected to provide income increase for intended beneficiaries. The analysis was conducted separately for all five (05) activities (goat rearing, traditional vegetable farming, crab hatchery, crab nursing and crab fattening), under two different scenarios; one with RCP 4.5 (medium case scenario) and another with RCP 8.5 (worst case scenario), with and without adaptation measures, and compared with the BaU case.

The results of models assessed in the financial analysis are presented in Table 6.

Table 6. Economic and Financial Analysis

1. Goat rearing

Activities	Aggregate Results of Financial Analysis								
	NPV			IRR			Payback Period		
	BaU	RCP 4.5	RCP 8.5	BaU	RCP 4.5	RCP 8.5	BaU	RCP 4.5	RCP 8.5
	Present Climate	Moderate	Extreme	Present Climate	Moderate	Extreme	Present Climate	Moderate	Extreme
Without GCF (No grant/100% PKSf loan)	-\$51,951	-\$1,162,565	-\$1,361,291	9%	6%	5%	More than 14 years	More than 14 years	More than 14 years
With GCF (GCF grant+ PKSf Loan)	\$2,309,726	\$1,199,112	\$1,000,386	17%	13%	12%	More than 9 years	More than 10 years	More than 11 years
With GCF (100%GCF grant+0%PKSF loan)	\$5,472,686	\$4,362,072	\$4,163,346	35%	30%	29%	More than 6 years	More than 6 years	More than 6 years

2. Traditional vegetable farming

Activities	Aggregate Results of Financial Analysis								
	NPV			IRR			Payback Period		
	BaU	RCP 4.5	RCP 8.5	BaU	RCP 4.5	RCP 8.5	BaU	RCP 4.5	RCP 8.5
	Present Climate	Moderate	Extreme	Present Climate	Moderate	Extreme	Present Climate	Moderate	Extreme
Without GCF (No grant/100% PKSf loan)	-\$939,211	-\$954,994	-\$966,357	-	-	-	More than 9 years	More than 9 years	More than 9 years
With GCF (GCF grant+ PKSf Loan)	-\$453,640	-\$469,423	-\$480,785	-	-	-	More than 9 years	More than 9 years	More than 9 years
With GCF (100%GCF grant+0%PKSF loan)	\$31,932	\$16,149	\$4,786	24%	17%	11%	More than 1 years	More than 1 years	More than 1 years



242. In the EFA process, Economic Analysis was also pursued on interventions that are expected to provide income increase for intended beneficiaries. The analysis was conducted separately for all five (05) activities (goat rearing, traditional vegetable farming, crab hatchery, crab nursing and crab fattening), under two different scenarios; one with RCP 4.5 (medium case scenario) and another with RCP 8.5 (worst case scenario), with and without adaptation measures, and compared with the BaU case.

The results of models assessed in the economic analysis under BaU scenario are presented in Table 7. The results under RCP 4.5 and RCP 8.5 are not shown in funding proposal due to the large volume of data.

Table 7: Economic Analysis of RHL Project (Without GCF)-Aggregate

Goat/sheep rearing

	Economic Benefits in Present Value	Economic Costs in Present Value	ENPV	EIRR	Benefit to Cost ratio
Without GCF (No grant/100% PKSf loan)	\$33,185,624	\$31,964,842	\$1,220,782	9%	1.04
With GCF (GCF grant+ PKSf Loan)	\$37,301,085	\$31,475,670	\$5,825,415	23%	1.19
With GCF (100%GCF grant+0%PKSf loan)	\$37,301,085	\$27,949,811	\$9,351,274	44%	1.33

Traditional Vegetable Farming

	Economic Benefits in Present Value	Economic Costs in Present Value	ENPV	EIRR	Benefit to Cost ratio
Without GCF (No grant/100% PKSf loan)	\$3,222,915	\$4,272,338	-\$1,049,424	9%	0.75
With GCF (GCF grant+ PKSf Loan)	\$13,074,602	\$13,475,872	-\$401,269	23%	0.97
With GCF (100%GCF grant+0%PKSf loan)	\$13,074,602	\$12,950,941	\$123,661	44%	1.01

Crab Hatchery_Nursery_Fattening (as a value chain activity)

	Economic Benefits in Present Value	Economic Costs in Present Value	ENPV	EIRR	Benefit to Cost ratio
Without GCF (No grant/100% PKSf loan)	\$112,162,819	\$99,983,407	\$12,179,411	13.88%	1.12
With GCF (GCF grant+ PKSf Loan)	\$112,164,387	\$92,812,976	\$19,351,411	26.59%	1.21
With GCF (100%GCF grant+0%PKSf loan)	\$112,164,387	\$88,951,166	\$23,213,221	48.91%	1.26



243. ENPVs are positive and benefit to cost ratios is more than 1.00 in all the proposed funding scenarios under this proposal. Crab hatchery, crab nursery and crab fattening have been considered as a chain activity in order to conduct economic analysis..

244. The obtained results in the above economic analysis include the valuation of economic benefits like biodiversity gains due to the environmentally friendly production of cablets suggest that the RHL project will be economically viable and sustainable. Economic benefits will be increased if the disability adjusted life year, savings from avoidance of injuries, number of days in hospitals, avoidance of labour day etc. factors are also considered.

Cost effectiveness and efficiency

245. The total budget of the RHL project is proposed at USD 49.99 million, with the GCF grant financing of USD 42.20 million (GCF grant), which is 84.42 percent of the total funding and USD 7.79 million, which is around 15.58 per cent co-financing from PKSf. The project is expected to deliver direct benefits to an estimated 362,475 direct beneficiaries and 770,050 indirect beneficiaries.

246. The project's concessionally is rationalized through: (i). the project's provision of goods that are largely public in nature (e.g., interventions in mangroves and climate adaptive homesteads), (ii). the delivery of interventions to communities that might initially be private in nature (e.g., funding of hatcheries for crabs or crab fattening or funding improved production of saline resistant vegetables) but in the longer run due to biodiversity co-benefits might become public in nature.



E. LOGICAL FRAMEWORK

E.1. Project/Programme Focus

- Reduced emissions (mitigation)
 Increased resilience (adaptation)

E.2. GCF Impact level: Paradigm shift potential (max 600 words, approximately 1-2 pages)

Assessment Dimension	Current state (baseline)		Potential target scenario (Description)	How the project/programme will contribute (Description)
	Description	Rating		
Scale	<p>At time of formulation of this proposal approximately 66per cent of houses (very approximate estimation) of the most vulnerable in the target area are currently not built to withstand flood or cyclone risks. Repeated disasters have left this population with even fewer financial means to rebuild using resilient designs/materials, reducing their adaptive capacity.</p> <p>Livestock assets are also at risk and highly vulnerable to climate hazards leading to drastic loss of wealth after an extreme weather event.</p>	<u>Low</u>	<p>The project has initiated scaling so that all coastal communities are knowledgeable and engaged with resilient livelihood options that cover infrastructure, small scale agriculture and livestock husbandry as well as small business approaches that are adapted to current and future climatic and environmental conditions.</p> <p>Collaboration between institutions and communities will be pro-active and built on scientific evidence and human development will proceed in a gender sensitive manner.</p>	<p>Components 1 and 2 will directly benefit 362,475 people and indirectly benefit a further 770,050. This level of engagement with coastal communities is expected to provide the critical mass of expertise and interest from decision makers and end users that will allow this project to increase quantifiable results within and beyond the scope of the project quickly and widely. In addition, specific communications activities in Component 3 have been incorporated into the design of the project to build even greater momentum for scaling.</p> <p>ill develop communication outputs that will market the results and</p> <p>The project will enable communities and institutions to better serve each other through technical assistance and extension,</p>



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	<p>There are few livelihood options that are resilient to increased salinity</p> <p>Local communities and support institutions do not have the capacity to plan or implement climate adaptation interventions.</p>			<p>demonstrating a model that through its success is likely to scale.</p>
Replicability	<p>At time of formulation of this proposal no climate resilient homesteads programmes have yet been developed in the coastal area. So, baseline of replicability is considered zero</p> <p>The PKSF-established hatchery is fully functioning. Three entrepreneurs established micro-hatcheries. Two of them are producing juvenile crabs and the remaining one is yet to complete the establishment.</p>	<u>Low</u>	<p>If an appropriate model of resilient homestead and livelihood can be developed, then learning could be replicated in the similar geographical areas in the country as well as internationally. The project outputs will be increased both in terms of population and geographical region. In addition, the local institutions and commercial banks are in place to finance these activities at the local level. So, these activities will be replicated beyond the scope of the targeted interventions.</p>	<p>The project interventions will generate new knowledge and through its compilation and dissemination it will be possible to replicate best practices developed here in similar climate/environmental regions.</p>
Sustainability	<p>The House Building Research Institute (HBRI) has been attempting to promote resilient housing for the last few decades. They however lack an appropriate demonstration of how this would be implemented</p>	<u>Low</u>	<p>A paradigm shift would see the formation of community groups, strong support of non-government and government institutions (including financial), access to supply chain networks.</p>	<p>The project will closely work with local NGOs and government institutions to provide continued technical support and finance for housing, livestock and hatchery-based crab farming and trading.</p>



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	<p>from a technical and financial enabling environment.</p> <p>The government and donors have built several communal shelters although these save lives, they do not address asset loss.</p> <p>The crab sector is currently unsustainable. Efforts to develop a fully in vitro supply chain was achieved by PKSF in 2016 which is still functioning well. A few private micro-hatcheries are also functioning and producing juvenile crabs.</p>		<p>A paradigm shift would see national housing directives that incorporated climate-resilient homestead building standards and finance options; as well as adoption of national standards in hatchery-based crab farming and trading. The project would accelerate a transformational change in crab farming and trading by replacing wild caught with hatchery-based farming.</p>	<p>PKSF housing programme will continue funding through partner organisations (POs) in building resilient homesteads.</p> <p>PKSF will work with government to develop policies that would enhance the enabling environment created by this project.</p>
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E.3. GCF Outcome level: Reduced emissions and increased resilience (IRMF core indicators 1-4, quantitative indicators)

GCF Result Area	IRMF Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions / Note
				Mid-term	Final ⁶¹	
<u>Total project beneficiaries</u>	<u>Core 2: Direct and indirect beneficiaries reached</u>	Baseline reports, Quarterly monitoring report, mid-term, final evaluation report and household survey reports. Government	0	Direct: 150,000 Male: 75,000 Female: 75,000	Direct: 362,475 Male: 181,238 Female: 181,237	All beneficiaries will be reachable / appreciate the risks of non-participation are higher than participation. Please refer to annex 23 for more details.

⁶¹ The final target means the target at the end of project/programme implementation period. However, for core indicator 1 (GHG emission reduction), please also provide the target value at the end of the total lifespan period which is defined as the maximum number of years over which the impacts of the investment are expected to be effective.



		and non-governmental reports.		Indirect: 323,420 Male: 161,710 Female: 161,710	Indirect: 770,050 Male: 385,025 Female: 385,025	
<u>ARA1 Most vulnerable people and communities</u>	<u>Core 2: Direct and indirect beneficiaries reached</u>	Baseline reports, Quarterly monitoring report, mid-term, final evaluation report and household survey reports	0	Direct: 150,000 Male: 75,000 Female: 75,000 Indirect: 309,000 Male: 154,500 Female: 154,500	Direct: 362,475 Male: 181,238 Female: 181,237 Indirect: 770,050 Male: 385,025 Female: 385,025	All beneficiaries will be reachable / appreciate the risks of non-participation are higher than participation. Please refer to annex 23 for more details.
	Supplementary 2.1: Beneficiaries (female/male) adopting improved	Baseline reports, Quarterly monitoring report, mid-term and	0	Direct: 150,000 Male: 75,000	Direct: 362,475 Male: 181,238	Selected community members, particularly women, appreciate the risks of climate change on their livelihoods



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	and/or new climate-resilient livelihood options	final evaluation report, household surveys. Government and non-governmental reports.		Female: 75,000 Indirect: 309,000 Male: 154,500 Female: 154,500	Female: 181,237 Indirect: 770,050 Male: 385,025 Female: 385,025	<p>and are able to practice the prescribed adaptation options.</p> <p>Adaptation options designed are viable and applicable to communities.</p> <p>Please refer to Annex 23 for indirect beneficiary calculation</p> <p>Baseline is considered 0 because there are very few people currently practising resilient livelihoods.</p> <p>The targets have been considered in consultation with the local communities and institutions.</p> <p>Please refer to Annex 23 for more details.</p>
<u>ARA2 Health, well-being, food and water security</u>	<u>Core 2: Direct and indirect beneficiaries reached</u>	Baseline reports, Quarterly monitoring report, mid-term and final evaluation report, household surveys	0	Direct: 150,000 Male: 75,000 Female: 75,000 Indirect: 323,420 Male: 161,710	Direct: 360,000 Male: 180,000 Female: 180,000 Indirect: 770,000 Male: 385,000	<p>The selected communities particularly the women members of the community understand climate change impacts and practice the prescribed adaptation options</p> <p>Adaptation options designed are viable and applicable to communities</p> <p>Baseline is considered 0 because very few people have</p>



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				Female: 161,710	Female: 385,000	been implementing planned adaptation for building resilience to climate change. The target is considered in consultation with the local communities and institutions. Please refer to Annex 23 for more details.
	Supplementary 2.2: Beneficiaries (female/male) with improved food security	Baseline reports, Quarterly monitoring report, mid-term and final evaluation report, household surveys. Government and non- governmental reports. ⁶²	0	Direct: 150,000 Male: 75,000 Female: 75,000 Indirect: 323,420 Male: 161,710 Female: 161,710	Direct: 362,475 Male: 181,238 Female: 181,237 Indirect: 770,000 Male: 385,000 Female: 385,000	Selected community members, particularly women, appreciate the risks of climate change on their livelihoods and are able to practice the prescribed adaptation options. Adaptation options designed are viable and applicable to communities. Please refer to Annex 23 for more details.
	Supplementary 2.3: Beneficiaries (female/male) with	Baseline reports, Quarterly monitoring report, mid-term and	0	6,750 Male: 3,375 Female 3,375	13,500 Male: 6,750 Female 6,750	Selected community members, particularly women, appreciate the risks of climate change on their livelihoods

⁶² This indicator will be measured through the (FIES) methodology (<https://www.fao.org/in-action/voices-of-the-hungry/fies/en/>)



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	more climate-resilient water security	final evaluation report, household surveys ⁶³		Indirect: 14,400 Male: 7,200 Female: 7,200	Indirect: 36,000 Male: 18,000 Female: 18,000	and are able to practice the prescribed adaptation options. Adaptation options designed are viable and applicable to communities. Please refer to Annex 23 for more details.
<u>ARA3 Intrastructure and built environment</u>	<u>Core 2: Direct and indirect beneficiaries reached</u>	Baseline reports, Quarterly monitoring report, mid-term and final evaluation report, household surveys, local government statistics	0	Direct: 51,888 Male: 25,944 Female: 25,944 Indirect: 54,420 Male: 27,210 Female: 27,210	Direct: 103,775 Male: 51,888 Female: 51,887 Indirect: 136,050 Male: 68,025 Female: 68,025	Topographical and other physical attributes exist for specific construction type. Training is successful. Local craftsmen are skilled in this construction type and are available. Assumes that homestead building starts immediately on project initiation and continues at even pace. Direct beneficiaries reached includes 13,500 for homesteads, 90,000 for goat sheds and 225 for crab hatcheries. Please refer to Annex 23 for more details.

⁶³ Evaluated based on sufficient available fresh water for basic needs during a flooding/surge event without intervention versus that with intervention



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	<p>Supplementary 2.6: Beneficiaries (female/male) living in buildings that have increased resilience against climate hazards</p>	<p>Baseline reports, Quarterly monitoring report, mid-term and final evaluation report, household surveys. Government and non-governmental reports.</p>	<p>0</p>	<p>Direct: 6,750 Male: 3,375 Female: 3,375 Indirect: 14,400 Male: 7,200 Female: 7,200</p>	<p>Direct: 13,500 Male: 6,750 Female: 6,750 Indirect: 36,000 Male: 18,000 Female: 18,000</p>	<p>Willing participants. Local government administration and departments are supportive. Soil of raised plinths are available without disturbing topsoil. Assumes that homestead building starts immediately on project initiation and continues at even pace. Includes only beneficiaries of homesteads. Please refer to annex 23 for more details.</p>
	<p><u>Core 3: Value of physical assets made more resilient to the effects of climate change and/or more able to reduce GHG emissions</u></p>	<p>Baseline reports, Quarterly monitoring report, mid-term and final evaluation report, household surveys, local government statistics</p>	<p>0</p>	<p>USD 9,016,000</p>	<p>USD 22,540,000</p>	<p>Topographical and other physical attributes exist for specific construction type. Local craftsmen are skilled in this construction type and are available. Total value combines homesteads, goat sheds with crab hatchery infrastructure. Assumes that homestead building starts immediately on</p>



						<p>project initiation and continues at even pace.</p> <p>Please refer to feasibility study and annex 23 for more details.</p>
	<p>Supplementary 3.1: Change in expected losses of economic assets due to the impact of extreme climate-related disasters in te geographic area of the GCF intervention</p>	<p>Baseline report, quarterly monitoring report, mid-term and final evaluation report, government / agency reports where possible</p>	<p>Local loss baseline TBD at inception</p>	<p>USD 9,016,000</p>	<p>USD 22,540,000</p>	<p>Topographical and other physical attributes exist for specific construction type.</p> <p>Local craftsmen are skilled in this construction type and are available.</p> <p>Total value combines homesteads, goat sheds with crab hatchery infrastructure.</p> <p>Assumes that homestead building starts immediately on project initiation and continues at even pace.</p> <p>Please refer to feasibility study and annex 23 for more details.</p>

E.4. GCF Outcome level: Enabling environment (IRMF core indicators 5-8 as applicable)

Core Indicator	Baseline context (description)	Rating for current state (baseline)	Target scenario (description)	How the project will contribute	Coverage
<p>Core Indicator 5: Degree to which GCF investments contribute to strengthening institutional and</p>	<p>The government has adopted a national fisheries policy which does not specifically cover the crab</p>	<p>low</p>	<p>Local government departments particularly department of fisheries, universities and NGOs have</p>	<p>Due to the close working nature of government with this project and through PKSF advocacy it is expected that the</p>	<p>Single sub-national area within a country</p>



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<p>regulatory frameworks for low emission climate-resilient development pathways in a country-driven manner</p>	<p>hatchery-based production system. The Environmental Conservation Rules (ECR) of the government also does not address crab hatchery technology and production.</p>		<p>increased knowledge and capacity to support in vitro crab production, juvenile crabs nursing, fattening.</p> <p>General guidelines for food safety and husbandry are developed at national level.</p>	<p>government will implement national housing policy standards that include climate resiliency and in addition amend fisheries policy and ECR for integrating hatchery-based production system and trade.</p> <p>Financial resources from PKSF will be used to continue to promote regulatory frameworks within the housing and fisheries sectors.</p> <p>Coordination mechanisms between beneficiaries, civil society organisations and local government will be created and mainstreamed through this project.</p> <p>Civil society organisations that will be executing this project will understand the important contribution that they will make to climate challenges.</p>	
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<p>Core Indicator 6: Degree to which GCF investments contribute to technology deployment, dissemination, development or transfer and innovation</p>	<p>PKSF have initiated a small pilot programme after developing their crab hatchery production unit. Although operational these are not yet of any significant scale.</p>	<p>low</p>	<p>All people have access to climate resilient house/shelter technology to protect lives and assets in coastal Bangladesh.</p> <p>Crab hatchery technology (and financing) is available to any entrepreneur wishing to adopt this climate resilient livelihood option.</p>	<p>The project will introduce new building design technology that is resilient to climate extremes, through providing 3000 very poor vulnerable families with homesteads.</p> <p>The project will disseminate crab hatchery technology and establish 50 micro scale crab hatcheries to promote pro-salinity production in the coastal areas of Bangladesh, directly benefitting 90,000 people.</p> <p>PKSF will continue to commit funding to promote technology transfer in these sectors.</p>	<p>Single sub-national area within a country</p>
<p>Core indicator 7: Degree to which GCF Investments contribute to market development/transformation at the sectoral, local, or national level</p>	<p>Current markets are based on the unregulated / unsustainable harvesting of wild crabs. An (export) market is already established but supply</p>	<p>medium</p>	<p>The crab sector reaches market maturity that includes people of all levels, is transparent, supported and guided by institutions and fair prices are attainable at</p>	<p>The investment in crab sector under this project will transform the market by having a fully in vitro life cycle. The project will allow small producers to enter supply chain and obtain fair prices.</p>	<p>Single sub-national area within a country</p>



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	chain is largely unregulated.		all levels of the supply chain.	The project will enable a shift in market dynamics from an informal wild based resource to a standardised, safe and formal supply chain.	
Core indicator 8: Degree to which GCF investments contribute to effective knowledge generation and learning processes, and use of good practices, methodologies and standards	<p>There is very little knowledge of resilient housing standards/materials and designs.</p> <p>There is no general knowledge by communities or institutions on crab hatchery technology</p>	low	Knowledge is generated compiled and easily accessible by everyone. That the knowledge accrued is used and best practices continuously refined through practice.	<p>Valuable knowledge will be created, compiled and disseminated nationally through this project.</p> <p>The project will develop a swathe of best practices that will be refined through a real time evaluation methodology which will improve adaptation management of the project and across organisations.</p> <p>The project will generate quarterly monitoring reports. Mid-term and final evaluation report, quarterly newsletters, e-newsletters, carried annual studies under IRMF process etc.</p>	Single sub-national area within a country


E.5. Project/programme specific indicators (project outcomes and outputs)

Project/programme results (outcomes/ outputs)	Project/programme specific Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions / Note
				Mid-term	Final	
Outcome 1: Decreased risk of loss of assets and lives from extreme weather events	Share of earnings and time spent on repairs from climate hazard event	Baseline report, monitoring report, evaluation report, household surveys	Local baseline TBD at inception	60per cent	30per cent	<p>New construction is adequate against predicted weather events, not necessarily un-predicted ones.</p> <p>An extreme weather event will occur during the M&E phase to measure this indicator.</p>
Output 1.1Climate resilient homesteads constructed	Number of new homesteads constructed that include house, water harvesting facilities and green windbreaks	Quarterly monitoring report, evaluation report, government reports	0	1,500	3,000	<p>Local communities and institutions agree to new constructions.</p> <p>Adequate soil and other physical conditions for construction/planting</p>



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						No extreme event destroys trees before establishment
Outcome 2: Livelihood resilience to SLR/storm surge and salinity	Number of beneficiaries that reduce their coping strategies to climate events compared with pre-intervention years ⁶⁴	Baseline survey report of PKSF, Quarterly monitoring report, evaluation report, household surveys	0	180,000 Men: 90,000 Women: 90,000	360,000 Men: 180,000 Women: 180,000	Beneficiaries, particularly women recognise value in interventions, are available to participate and adhere to training. Local community groups and institutions are able to support individuals in resilient livelihoods.
Output 2.1: Traditional farming practices climate proofed	Number of slatted houses constructed for sheep/goat rearing	Quarterly monitoring report, evaluation report, household surveys	0	8,000	20,000	Beneficiaries, particularly women recognise value in interventions, are available to participate and adhere to practising their training.

⁶⁴Coping Strategies: are mechanisms that people choose as a way of living through difficult times such as climate events. Some coping strategies are not damaging to livelihoods and are easily reversible: for example, short-term dietary changes, migration of individuals for work, use of savings or solidarity networks. Other strategies may be damaging and tend to be harder to reverse: for example, sale of land, sale of 'productive' assets, early weddings, intensive use of wood from nearby areas causing deforestation, taking children out of school to make them work (child labour) or prostitution.



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	Number of households cultivating saline tolerant vegetables	Quarterly monitoring report, evaluation report, household surveys	0	8,000	20,000	Beneficiaries, particularly women recognise value in interventions, are available to participate and adhere to practising their training.
Output 2.2: Community-based farmed crab supply chain created	Number of beneficiaries involved in crab supply chain using new in vitro model of production with 3-F	Quarterly monitoring report, evaluation report, household surveys	0	Crab hatchers: 90 (men 90, women 0) Nursers: 900 (men 450, women 450) Farmers: 40,000 (men 20,000, women 20,000) Other supply chain: 2000 (men 1000, women 1000)	Crab hatchers: 225 (men 225, women 0) Nursers: 2250 (men 1125, women 1125) Farmers: 90,000 (men 45,000, women 45,000) Other supply chain: 4050 (men 2025, women 2025)	Beneficiaries, particularly women recognise value in interventions, are available to participate and adhere to practising their training.
Outcome 3: Improved climate planning and implementation by	Percent of target with embedded personnel with disaster preparedness and	Quarterly monitoring report, evaluation report, community surveys	0	40per cent	100per cent	Local communities and institutions are enthusiastic / have time to take part in



communities and local level institutions	response knowledge					the project interventions
Output 3.1: Climate change adaptation groups (CCAG) formed and operationalized	Number of groups formed and operationalized	Quarterly monitoring report, evaluation report, community surveys	0	2,000	3,200	Willingness and time to participate
Output 3.2: Capacity built among IEs and relevant institutions apprised on project	Number of trainees whose knowledge and capacity has been improved	Testing results prior to and after trainings. Quarterly monitoring report, evaluation report	Low	Moderate	High	The beneficiaries regularly attend the meetings.
Output 3.3: Knowledge products prepared and disseminated	Number of knowledge products disseminated	Quarterly monitoring report, evaluation report, household survey	0	Guidelines and training manuals/ focus notes/ other documents: 3 Newsletters: 10 Lessons Learned Document: 0 Best practices documents: 2	Guidelines and training manuals/ focus notes/ other documents: 5 Newsletters: 20 Lessons Learned Document: 1 Best practices documents: 5	New information is created that will be of use for adaptive management and future projects.
Project/programme co-benefit indicators						
Co-benefit 1: Decreased risk of assault on women	Number of women and adolescent girls	Baseline report, monitoring report,	0	3,500 women and girls of	7,000 women and girls of	Resilient homes offer increased



	not having to go to communal shelters	evaluation report, community survey		resilient homesteads	resilient homesteads	safety for women and girls
Co-benefit 2: Reduced Urban Migration	Number of beneficiaries migrating away due to livelihood issues	Baseline report, monitoring report, evaluation report, community survey	TBD at project inception	30per cent reduction from baseline	75per cent reduction from baseline	Livelihood options are being practiced as expected
Co-benefit 3: Growth of crab and resilient housing industries	Number of service providers providing new services to resilient housing market and crab supply chain	Baseline report, monitoring report, evaluation report, community survey	0	200	500	Livelihood options practiced as expected.
Co-benefit 4: Decreased pressure on wild crab populations by industry	Percent of collectors collecting from the wild from target villages	Baseline report, monitoring report, evaluation report, community survey	100per cent	50per cent	0per cent	Wild crab collection is more expensive, dangerous and time constraining than the alternative proposed here.

E.6. Project/programme activities and deliverables

Activities	Description	Sub-activities	Deliverables
Activity 1.1.1 Design and building of homesteads	The proposed project will provide designs and implement construction of climate resilient houses. The house will be as simple as possible and include rainwater harvesting provision. Moreover, the plinth height will be raised more than 1 meter (may	Sub-activity 1.1.1.1 Selection of beneficiaries during CCAG meeting Sub-activity 1.1.1.2 Validation of land ownership Sub-activity 1.1.1.3 Selection of vendors	<ul style="list-style-type: none"> • A list of 3,000 household beneficiaries • Deed verification database • Vendor list • Photo books of 3000 homesteads • Titles and photographs of construction



	vary based on location) to reduce risk of flooding and water logging.	Sub-activity 1.1.1.4 Construction of house with on-the-job training for local builders Sub-activity 1.1.1.5 Handover the house to its owner	
Activity 1.1.2 Homestead tree planting	Wind resistant native trees planted as wind barriers for houses.	Sub-activity 1.1.2.1 Selection of beneficiaries during CCAG meeting Sub-activity 1.1.2.2 Validation of land ownership Sub-activity 1.1.2.3 Selection of vendors Sub-activity 1.1.2.4 Planting of trees	<ul style="list-style-type: none"> • A list of 20,000 Beneficiary households • A report on tree plantation
Activity 2.1.1 Construction of slatted houses for goat/sheep rearing	IE field officers in consultation with CCAG members will select women interested in rearing goat/sheep. In addition, IEs will procure work for construction of goat/sheep shelters as per the approved procurement plan	Sub-activity 2.1.1.1 Selection of beneficiaries for goat/sheep rearing Sub-activity 2.1.1.3 Selection of vendors for slatted house Sub-activity 2.1.1.4 Distribute slatted house for goat/sheep to the selected beneficiaries'	<ul style="list-style-type: none"> • A list of 20,000 beneficiary households • Vendor list • A report of completed slatted houses
Activity 2.1.2 Provide financial support for goat/sheep rearing	IEs' staff will select the Beneficiaries' during CCAG meeting for goat/sheep rearing. After selection IEs' staffs provide training and distribute slatted house. The AE will provide loan to the beneficiaries through the IEs if required for purchase goat.	Sub-activity 2.1.2.1 Selection of appropriate beneficiaries during CCAG meeting Sub-activity 2.1.2.2 Provide training on goat/sheep rearing	<ul style="list-style-type: none"> • Beneficiaries list • Annual training reports • Annual loan disbursement report / agreements



		Sub-activity 2.1.2.4 Distribute loan to the beneficiaries	
Activity 2.1.3: Introduce the cultivation of saline tolerant vegetables within homestead areas	IE staff will select the Beneficiaries who have minimum required space to employ this activity. S/He will be trained to cultivate saline tolerant vegetable gardening within the homestead. IE staff will provide technical support, seeds and training.	Sub-activity 2.1.3.1 Select the appropriate beneficiaries Sub-activity 3.1.3.2 Provide training / resources and technical support	<ul style="list-style-type: none"> • A list of 20,000 beneficiary households • Annual training reports
Activity 2.2.1: Development of crab hatcheries (1° stage)	Hatchery technology will be transferred to local entrepreneurs that have experience in aquaculture. The hatchery owner will be provided necessary training on crab breeding, hatchery management and maintenance.	Sub-activity 2.2.1.1 Selection of crab hatchery entrepreneur Sub-activity 2.2.1.2 Provide training on crab hatchery management Sub-activity 2.2.1.3 Partially financial support to establish crab hatchery from Project	<ul style="list-style-type: none"> • A list of 50 crab hatchery entrepreneurs • Annual training reports / management guidelines • Photo book of 50 hatcheries with brief description and record of financial support provided and agreements
Activity 2.2.2 Financial support for producing crablets	The project will provide both grants and loans to establish the crab hatcheries for initial operational costs.	Sub-activity 2.2.2.1: Assessment of loan demand for hatchery operation and its approval by PKSF Sub-activity 2.2.2.2: Loan disbursement to the hatchery owners	<ul style="list-style-type: none"> • Loan approval documents • Annual loan and grant disbursement report/ agreements
Activity 2.2.3 Technical and financial support for “crab nursers” (2° stage)	The crab nursers will be provided necessary training along with financial support on transporting and nursing crablets. They will buy crablets from the hatchery (1°) and	Sub-activity 2.2.3.1 Selection of Beneficiaries (crab nurser) from CCAG Sub-activity 2.2.3.2 Provide training	<ul style="list-style-type: none"> • A list of 500 beneficiary households as crab nursers • Annual training report



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	<p>rear them for two months. At which time the juvenile crabs will be adolescent weighting 90 gm. and able to grow in a pond. The nursers (2°) will sell the adolescent crab to the growers (3°).</p>	<p>Sub-activity 2.2.3.3 Provide partial financial support from project</p> <p>Sub-activity 2.2.3.4 Provide financial support (Loan) from PKSF</p> <p>Sub-activity 2.2.3.5 Establish crab nursery ponds with mangrove and fruit trees</p>	<ul style="list-style-type: none"> • Annual loan / grant disbursement report / agreements • A report on crab nursery.
<p>Activity 2.2.4 Provide technical and financial support to crab farmers (3° stage)</p>	<p>The project will select crab farmers for producing export quality crab (it is already practiced in coastal districts of Bangladesh). IE staff and extension agents will be provided necessary training and support. Farmers will buy adolescent crabs from the nurseries and rear them for 30 to 40 days. Then they will sell it to the market.</p>	<p>Sub-activity 2.2.4.1 Selection of Beneficiaries (crab fattener) from CCAG</p> <p>Sub-activity 2.2.4.2 Provide training</p> <p>Sub-activity 2.2.4.3 Provide partially financial support from project</p> <p>Sub-activity 2.2.4.4 Provide financial support (Loan) from PKSF</p> <p>Sub-activity 2.2.4.5 Establish crab fattening ponds with mangrove and fruit trees</p>	<ul style="list-style-type: none"> • A list of 20,000 beneficiary households • Annual training report • Annual loan / grant disbursement report / agreement • A report on establishment of 20,000 ponds for crab growing with mangrove tree plantation
<p>Activity 3.1.1: Beneficiary selection and group formation</p>	<p>The project will select 362,475 beneficiaries in consultation with local government institutions and community members. The field officers of the IEs will carry out this activity. IEs will require approval of the list of selected beneficiaries form the PMU of Executing Entity.</p>	<p>Sub-activity 3.1.1.1 Beneficiaries selection and group formation through PRA</p>	<p>A report on 3,200 PRA exercises by the CCAGs</p>



E

<p>Activity 3.1.2: Prepare beneficiaries' socio-economic profile</p>	<p>After selection, the IE field level staff will visit door to door of the selected beneficiaries and collect their socio-economic information before providing supports from the project. The PMU will prepare the format for collecting socio-economic profile. PMU will share this format with GCF relevant staff before execution</p>	<p>Sub-activity 3.1.2.1 Prepare socio-economic profile template Sub-activity 3.1.2.2 Field test by the IEs' and EEs' staff Sub-activity 3.1.2.3 Collection of information from the individual HH beneficiaries Sub-activity 3.1.2.4 Prepare report</p>	<ul style="list-style-type: none"> • Socio economic profile template • A report on field test of socio-economic template • Information database with data • Socio economic profile report
<p>Activity 3.1.3: Arrange monthly group meetings on climate change issues for CCAG</p>	<p>The PMU will prepare content for monthly group discussion in Bangla. Relevant field staffs of the IEs will facilitate this content in the group meetings.</p>	<p>Sub-activity 3.1.3.1 Prepare contents for session with CCAG Sub-activity 3.1.3.2 Arrange CCAGs' monthly group meeting Sub-activity 3.1.3.3 Take decision and put it to register for further planning</p>	<ul style="list-style-type: none"> • A document on meeting content for the CCAGs • Annual CCAG meeting reports
<p>Activity 3.2.1: Prepare training manual on adaptation technologies and crab value chain</p>	<p>The PMU will prepare this training manual. It will be shared with GCF before finalizing this manual. The manual will be used to provide training to the staffs of IEs. Bangla version of this manual will be developed to provide training to the CCAG members</p>	<p>Sub-activity 3.2.1.1 Prepare ToR for selection of consultant Sub-activity 3.2.1.2 Selection of consultants Sub-activity 3.2.1.3 Prepare training manuals on adaptation and crab value chain for Beneficiaries' Sub-activity 3.2.1.4 Validation consultation meeting on training manual</p>	<ul style="list-style-type: none"> • ToR for consultant • Consultant agreements • Training manual • Meeting notes



		Sub-activity 3.2.1.5 Delivery of training manuals	
Activity 3.2.2: Prepare guidelines on project management	The PMU will prepare the guidelines on project management. It will be shared with GCF before finalizing this manual. The guidelines will be used to smooth operations of the project and activities for the PMU and IEs'. A Bangla version of this guidelines will be developed.	<p>Sub-activity 3.2.2.1 Prepare ToR for selection of consultant</p> <p>Sub-activity 3.2.2.2 Selection of consultants</p> <p>Sub-activity 3.2.2.3 Prepare guidelines on project management and different activities</p> <p>Sub-activity 3.2.2.4 Validation consultation meeting on guidelines</p> <p>Sub-activity 3.2.2.5 Delivery of guidelines</p>	<ul style="list-style-type: none"> • ToR for consultants • Consultant agreements • Meeting notes • Training plan document • 5 guideline documents
Activity 3.2.3: Organize training for beneficiaries and stakeholders	IE's staffs will prepare this training plan and get approval from the PMU. The IE staffs will organize the training session as per approved plan. PMU will physically monitor the training activities on sample basis.	<p>Sub-activity 3.2.3.1 Prepare training plan by the IEs'</p> <p>Sub-activity 3.2.3.2 Selection of appropriate participants</p> <p>Sub-activity 3.2.3.3 Selection of venue</p> <p>Sub-activity 3.2.3.4 Conduct training to the Beneficiaries</p> <p>Sub-activity 3.2.3.5 Report to PMU</p>	<ul style="list-style-type: none"> • Training plan document • Training participants' list • Training presentation / notes • Reports prepared by IEs
Activity 3.2.4: Organize training for IE staff	IEs' staff and extension agents will carry out the implementation of project activities in the field level. They need to know the procedure of the implantation as well as	Sub-activity 3.2.4.1 Prepare training plan	<ul style="list-style-type: none"> • Training plan document • Training participants' list • Training presentation • Training reports prepared by PMU



	climate change adaptation. PMU will carry out this training.	<p>Sub-activity 3.2.4.2 Selection of venue</p> <p>Sub-activity 3.2.4.3 Conduct training to the IEs' staff</p> <p>Sub-activity 3.2.4.4 Reporting on training session</p>	
Activity 3.2.5: Implement workshops and Seminars	PMU will carry out these activities. Government representatives, development partners, civil society representatives, IEs etc. will take part in these workshops and seminars	<p>Sub-activity 3.2.5.1 Selection of venue</p> <p>Sub-activity 3.2.5.2 Invite stakeholders</p> <p>Sub-activity 3.2.5.3 Hire local-consultant</p> <p>Sub-activity 3.2.5.4 Organize workshop</p> <p>Sub-activity 3.2.5.5 Report on workshop</p>	<ul style="list-style-type: none"> • Invitation letters • Workshop presentation / agenda / photos • Workshop report
Activity 3.2.6: Organize exchange visits for beneficiaries and IE staff	PMU will carry out this activity. IE staffs and beneficiaries will take part in this activity.	<p>Sub-activity 3.2.6.1 Selection of appropriate activities for visit</p> <p>Sub-activity 3.2.6.2 Selection of participants</p> <p>Sub-activity 3.2.6.3 Organize exchange visit</p>	<ul style="list-style-type: none"> • Activity list • A list of 5,000 Participants • Exchange visit plan document and report
Activity 3.2.7: Improve data for crab research and development	Exchange of information on field / lab data with university collaborators	Sub-activity 3.2.7.1 Organize periodic meetings	<ul style="list-style-type: none"> • Meeting notes



<p>Activity 3.3.1: Prepare and disseminate knowledge products</p>	<p>The knowledge products will include newsletters, evaluation reports, lessons learned documentation, and narrative monitoring reports.</p>	<p>Sub-activity 3.3.1.1 ToR of consultant</p> <p>Sub-activity 3.3.1.2 Prepare newsletter, booklet and related publications</p> <p>Sub-activity 3.3.1.3 Selection of vendors</p> <p>Sub-activity 3.3.1.4 Printing of knowledge documents</p>	<ul style="list-style-type: none"> • Consultant agreement • 5 guidelines and training manuals; 20 newsletters; 1 lessons learned booklet, 5 best practice publications • Physical copies of documents
<p>Activity 3.3.2 Realtime evaluation study of project activities</p>	<p>Annual impact study will be carried out to measure short-term outcome and impacts of the project</p>	<p>Sub-activity 3.3.2.1 Develop ToR for national level consultants for evaluation study</p> <p>Sub-activity 3.3.2.2 Procure Consultants</p> <p>Sub-activity 3.3.2.3 Follow up and monitor the study</p>	<ul style="list-style-type: none"> • ToR for consultants • Study tools including questionnaire and checklists • FGD and KII reports • Study reports
<p>E.7. Monitoring, reporting and evaluation arrangements (max. 500 words, approximately 1 page)</p>			
<p>247. The monitoring and evaluation (M&E) under this project will have three functions. First, thorough monitoring by PMU will ensure accountability of the IEs to deliver the outputs agreed in the project proposal, which implies that the resources are used efficiently for the proposed activities. Secondly, monitoring will establish proper documentation of the implementation process and achievements at different levels (outputs, outcomes, and impacts). Third, monitoring will help gather learning from the process. In short, the role of accountability is significant in the case of outputs, whereas learning becomes a core issue of monitoring at the outcome level and impacts level achievements. In order to analyze and guide the project strategy, maintain efficient operations, satisfy internal and external reporting obligations, and inform future programming, project design, implementation, and completion, the RHL's M&E system should always be aligned with the major stages of a project's lifecycle (see Figure 9).</p>			

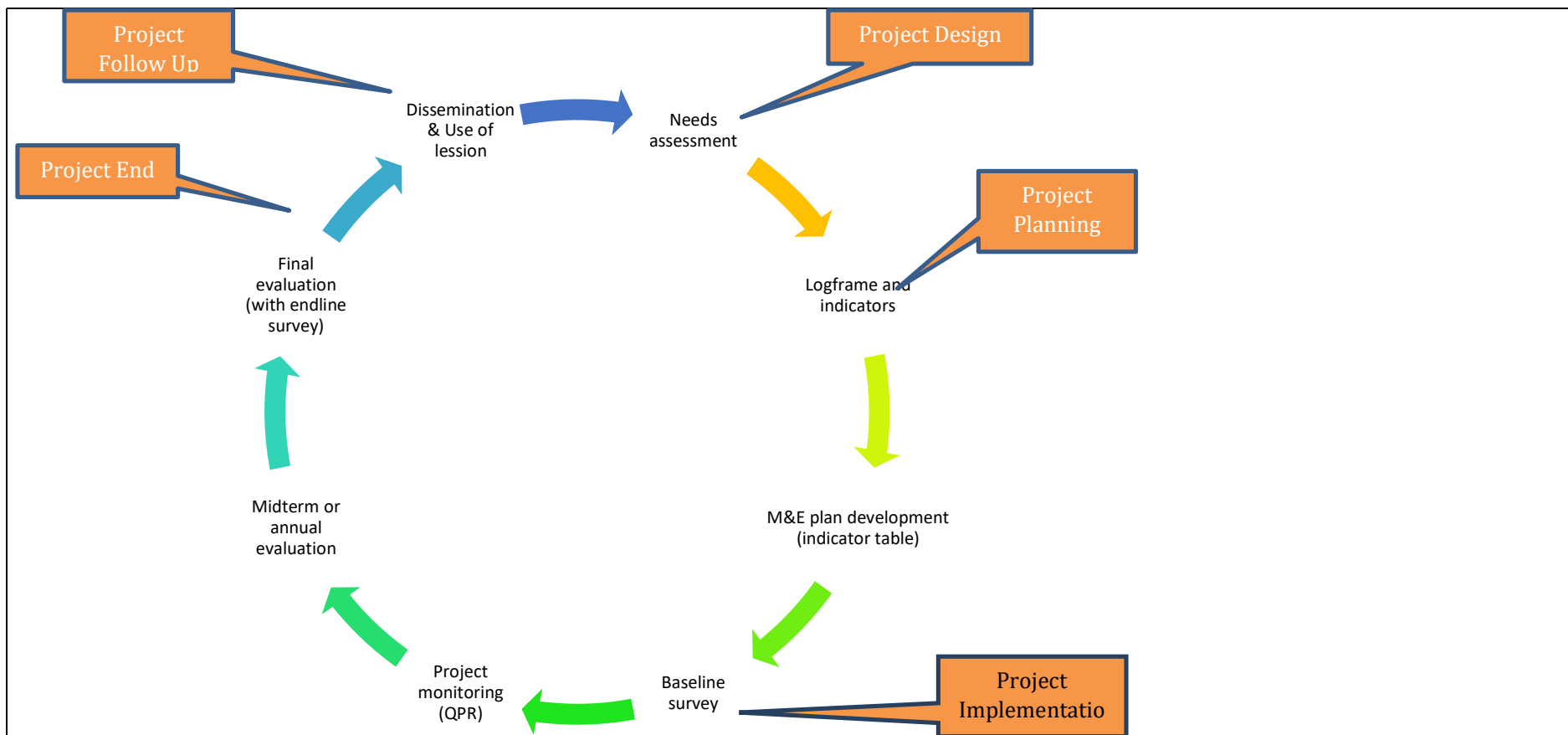


Figure 9: Major stages of project's lifecycle.

248. Monitoring is conceptualized in this project as the continuous assessment of the interventions and its implementation processes. It will take place at all levels of management and uses both formal reporting and informal communication. A minimum common format for progress and monitoring reports will be established, on which each concerned partner organization will develop its own internal monitoring system, which will be centrally consolidated from the project at the PMU level. Mainly, four types of monitoring will be done in this project using different instrument. They are: i) **Progress Monitoring**: In this monitoring system, progress monitoring generally refers to the activity monitoring of the project, ii) **Process Monitoring**: This justifies the delivery mechanism of the project and monitors whether the deliverables are being supplied properly, iii) **Budget**



Monitoring: Budget monitoring refers to proper book keeping of the account of the project. This ensures the transparency in financial matters of the project and iv) **Impact Monitoring:** The overall impact of the project is monitored through impact monitoring. This monitoring is conducted at various stages of the project such as periodically using RBM and finally, by conducting independent final evaluation.

- 249.** Monitoring and Evaluation will be done, at different stages of the project implementation, through following instruments or systems such as i) On-site Field Monitoring, ii) Off-site Monitoring, iii) Results-Based Monitoring (RBM), and iv) Independent Evaluation. Monitoring is an important part for any projects implemented by PKSf. The main question is: "Who monitors what to whom, how, when and where, and under what conditions?" Many stages are followed in PKSf for monitoring any project activities. **First**, the **on-site monitoring** will be conducted once in every three month for each EE by member of the PMU of the project. The on-site monitoring report will be one of the crucial monitoring systems of the project which will be done in customized systematic format. This report will be subjective in nature and provides valuable insight about the projects at the grass root level. Senior management from PKSf will oversee the PMU and participate in field level operations as part of AE's objective (PKSf as the Executing Entity). The AE will review evaluation reports and audit reports carried out by individual consultants. It will oversee procurement and financial management of the project; prepare a project completion report; and submit the report to the secretariat of GCF. AE will ensure that all compliance requirements are met, including the gender action plan, ESMF, and IP. The AE will also review the annual budget in order to enhance the efficient use of resources. The AE will monitor the audit process, fund disbursement, prepare the financial closing report of the project, and project closing documents for submission to the secretariat. **Second**, the quarterly MIS and training evaluation is also conducted once in every three months and is based on monthly data of the EEs which is accumulated over time and evaluated after consolidating to assess the trend and progress of project activities. **Third**, Results-based Monitoring (RBM) is mainly used for measuring the output, outcome and impact of the project. A distinct set of indicators have been developed based on log frame as well as literature for assessing the project overall objective over the time. For implementing RBM, a sample of households among all project participants will be chosen to collect required data using formatted questionnaire based on an agreed result framework. The sample size will be then adjusted for addressing the heterogeneity problem and statistical software will be used to analyze the data to find out the results. The IEs should hire a specialized monitoring officer who will report to the Chief Executive or any other authorized person. He/she will implement the Monitoring Framework as envisaged in the project proposal and will produce quarterly activity monitoring reports based on the Activity to Output Monitoring (ATOM) agreed upon. The Monitoring Officer will undertake outcome-level monitoring half-yearly based on an agreed Outcome Assessment Sheet (OAS) and impacts-level monitoring annually based on an agreed Impact Assessment Sheet (IAS) which were prepared taking indicators of impacts and outcomes into account. He/she will post the information in the assigned fields of the IEs and on the PKSf server online as well. **Fourth**, to gauge the unbiased impact of the project, various independent studies will also be undertaken at different project period to have the true picture of the project's impact on the project participants. Evaluation is defined in this project as the systematic and objective assessment of an on-going or completed project, including its design, implementation and results. It generally aims to determine the relevance and fulfillment of objectives of the project, development of efficiency, effectiveness, impact and sustainability. The objectives of evaluation process of this project is to explain how and why progress is causing about (or not), and identify recommendations to strengthen the project, determine the outcomes and impacts of the project and assess their value, and re-examine the project rationale in light of subsequent developments.
- 250.** Different types of data is used in the evaluation process such as secondary data, on-demand sample surveys, field reports, qualitative studies and external assessment to name a few among others. In this project, a systematic evaluation will be done by conducting base-line study, mid-line



study and end-line study. It has a plan to use Randomized Control Trial (RCT) to understand the effectiveness of different or a package of interventions on the project participants. For this, there might have a control group to determine a representation counterfactual. A brief description is given below on base-line, mid-line and end-line studies.

a) Base-line Survey: The independent consulting firm will perform a baseline survey at the start of the project to learn more about the existing state of the indicators that will be monitored throughout the project. It will be completed prior to the project's official start. It is the procedure or action performed to find out how the targeted families were doing in terms of various indicators previous to the project's introduction. The main reason for doing a baseline survey is to determine what change may be directly attributed to the project intervention.

b) Mid-line Survey: The mid-line study, also known as a mid-term review or mid-term evaluation, is described as a thorough exercise typically held at the halfway point of a project to re-evaluate the original development objectives of the project, their applicability in light of new circumstances, and their likelihood of realization. In the midst of the project, a midline study will be done. It will serve two immediate purposes: decision-making and taking stock of initial lessons from experience. Specifically, a mid-line study will provide the project managers with a basis for identifying appropriate actions to: (a) address particular issues or problems in design, implementation and management, and (b) reinforce initiatives that demonstrate the potential for success.

c) End-line Survey: Following the completion of the project, an end-line study will be carried out. The outcomes of the end-line will be evaluated in comparison to some comparative data, ideally the results of the baseline investigation. The action will be taken as part of an impact assessment. By comparing the same individuals before and after the project intervention, an end-line research will be conducted with the aim of estimating the impact of the project intervention. Every single possible variable will be compared with same group. The project has a plan to use one of the most scientific methods of impact evaluation of certain interventions is Randomized Control Trial (RCT), where programme interventions are placed randomly at the individual or cluster level. Recently, this method has been used in the context of social research. Impact evaluation, in general requires comparing the outcome of 'treated' group with 'control' group. However, if there is 'selection bias', then comparing the treatment group with the control group provides biased estimate of the intervention impact. Selection bias arises particularly for two reasons: (1) intervention is placed non-randomly (by choice) by the programme implementers and (2) programme participants self-select them to participate in the programme. In RCT method, interventions are placed randomly which remove the possibility of the selection bias and provide unbiased estimation of intervention impact.

251. Finally, for a successful M&E system, the many capacities of an organization need to be taken care of, for example, human capacities, such as knowledge, skills, attitudes, relationships, resources and motivations; management information system (MIS), such as data storage, processing, access and retrieval; organisational structure, for example, how do M&E functions fit in organisational information flows, and do they support efficient communication?; M&E plans, i.e., articulating information needs, how they will be addressed, what resources are committed, who is responsible.

F. RISK ASSESSMENT AND MANAGEMENT

F.1. Risk factors and mitigations measures (max. 3 pages)

252. The project design has carefully considered all social, financial, operational and environmental risks. The environmental risks from crab hatchery and farming and house construction are considered low to medium. To mitigate Environmental risks, the project has already developed an Environmental Management Framework. Two types of tools will be used in the project considering nature of intervention and magnitude of impact on the environment. These are Environmental Screening and ES impact assessment. Social risk may arise due to the establishment of hatchery because existing crab collectors may lose their income as crab growers will buy crab-let from the hatcheries. These will be mitigated by involving them as project beneficiaries. Financial risk may arise at the procurement and beneficiary selection stage, and the project design includes adequate safeguard measures to minimize this risk. The major operational risk, at medium probability, is the reduction of coverage of beneficiaries due to currency exchange loss or domestic inflation.

The project has been screened based on the exclusion criteria presented in Section 4.3 of the annex 6: Environmental and Social Management Framework. The screening results found that the project will have some impacts that will require some mitigation measures. For example, the project will construct crab hatcheries that will require water treatments facilities. The labour may require to wear personal protective equipment including masks, hand-gloves, helmet etc. For reducing dust, the construction activities will require water-spray etc. In this consideration, the project is categorized B. The project was screened based on the exclusion criteria of GCF's ES safeguard policy. As per the screen results, the project is categorized B. The rationale of categorization B is presented below:

- a) The project will have small construction work like houses for vulnerable people as well as hatchery infrastructure. There is least possibility to become injured at a scale that requires hospitalized or cause significant treatment cost. No children or vulnerable women will be engaged in this activity. The project will not require any force labour.
- b) The project will promote crab hatchery and crab culture. Hence, it has potential to increase soil and water salinity around the hatchery and crab ponds. But it will be implemented in already salinity-affected land.
- c) The project will have small scale construction activities like crab hatchery, resilient homestead, slatted houses for goat/sheep etc. But the project will not require critical infrastructure like dam, embankment, coastal infrastructure etc. So, the activities will not require further technical assessment and safety studies.
- d) The project will not propose any activities which may include resettlement and dispossession, land acquisition, and economic displacement of persons and communities. Moreover, there is no temporary displacement issue. The households/families will be living in the same houses as the houses have alternative rooms. The rooms will be constructed one after another. So, families/HHs just have to be shifted from one room to another.
- e) The project will be implemented in existing settlement and farming areas.
- f) There are insignificant ethnic minorities found in the selected project area. However, the project will avoid those areas where these people are living.
- g) In the project area, there is no archaeological paleontological, historical, cultural, artistic, and religious values or contains features considered as critical cultural heritage.
- h) The activities will not affect human rights because these are selected in consultation with the affected communities. Besides, these will be implemented on beneficiaries' own land to avoid any dispute related to land.
- i) The activities may involve women labour in the crab farm and construction of crab hatcheries. So, they may be affected by other local people or co-workers during on the way to work place or vis-à-vis. However, as external workers will not be involved in the implementation process, the possibility of sexual harassment, abuse or exploitation is very limited.



There is potential to pay lower wage to the female than male workers. But there is limited possibility of wage discrimination due to the nature of the project. Because the project will involve mostly women members of the community who will make decisions on wage rate, bargain with contractors etc. At the institutional level, HR policies of PKSF and IEs will be applicable to ensure equal wage of male and female staffs.

- 253.** Awareness of these risks is well integrated in the project design, and resources have been allocated to mitigate them. The environmental risk will be mitigated by following the principles of environmental sustainability and standards for biodiversity conservation. Stringent safeguard measures will be in place in the Sundarbans area, following GoB's guidelines. For the financial risk, the project will include representatives from relevant department and/or sections in major procurement stages; undertake audits by the internationally reputed audit firm. Coverage risk will be mitigated by careful forecasting of price and exchange rate and building-in of appropriate contingencies. The beneficiary selection risk will be mitigated by introducing official gazette selection criteria, utilization of participatory methodologies and complaints and grievance redress mechanism to be regularly monitored by the project, and drawing guidance from the project board and steering committee.

Selected Risk Factor 1

Category	Probability	Impact
<u>Technical and operational</u>	<u>Low</u>	<u>Low</u>

Description

Timely implementation of the planned interventions due to cyclone and storm surge

Mitigation Measure(s)

(i) Preparation and execution of effective implementation and monitoring plan ; (ii) Periodical progress review plan and timely initiatives of corrective measures; and (iv) Ensure suitable human resources with adequate skills and capacities, Raising awareness on early warning and Build cyclone resilient house and construction

Selected Risk Factor 2

Category	Probability	Impact
<u>Technical and operational</u>	<u>Low</u>	<u>Low</u>

Description

Unavailability of mother crabs

Mitigation Measure(s)

Alternative source will be ensured from Bangladesh deep sea areas; (ii) Linkage with fisherman who are catching fish from deep sea and (iii) Liaison with other area/district of Bangladesh

Selected Risk Factor 3

Category	Probability	Impact
<u>Technical and operational</u>	<u>Low</u>	<u>Low</u>

Description

Technical person not available

Mitigation Measure(s)



i) Local people will be provided training on implementation and operation on crab hatchery and (ii) trained the local expert for hatchery operations.

Selected Risk Factor 4

Category	Probability	Impact
Technical and operational	<u>Low</u>	<u>Low</u>

Description

Disease infested

Mitigation measure(s)

i) the project will strengthen laboratories of three universities for carrying out research on crab development including disease,
 ii) Linkage between crab farmers and service providers including department of fisheries will be established.

Selected Risk Factor 5

Category	Probability	Impact
Operational	<u>Low</u>	<u>Low</u>

Description

Remoteness of the project areas

Mitigation measure(s)

- Remoteness will be solved by using local transport system
- Partners will be selected based on the establishment in the project areas

Selected Risk Factor 6

Category	Probability	Impact
Operational and Technical	<u>Low</u>	<u>Low</u>

Description

Selected Risk Factor 7

Category	Probability	Impact
Physical	<u>Low</u>	<u>Low</u>

Description

Availability of appropriate land to establish hatchery



Mitigation measure(s)		
Consultation meetings and reconnaissance visit will be carried out while selecting sites for hatchery establishment.		
Selected Risk Factor 8		
Category	Probability	Impact
Physical	<u>Low</u>	<u>Low</u>
Description		
Availability of appropriate land to establish hatchery		
Mitigation measure(s)		
Before establish the hatchery feasibility survey will be conducted to overcome the unavailable suitable land		
Selected Risk Factor 9		
Category	Probability	Impact
Physical	<u>Low</u>	<u>Low</u>
Description		
Cyclone and storm surge may make the implementation process delay.		
Mitigation measure(s)		
<ul style="list-style-type: none"> • Raising plinths of hatcheries and homesteads • Execute early warning information and decision • Construction of storm resilient structure of house and hatcheries • Raised dykes of ponds of crab nursery and farm 		
Selected Risk Factor 10		
Category	Probability	Impact
Physical	<u>Low</u>	<u>Low</u>
Description		
Unplanned extension of crab farms		
Mitigation measure(s)		
<ul style="list-style-type: none"> • Critical minimum interventions will be ensured • Ensure implementation of EMF of the project 		



Selected Risk Factor 11		
Category	Probability	Impact
Social	<u>Low</u>	<u>Low</u>
Description		
Conflicts on inherited land resources for housing		
Mitigation measure(s)		
<ul style="list-style-type: none"> • House will be built on existing land • Legal documents of land ownership must be ensured • Selection criterion on proof of land and property ownership will be used. 		
Selected Risk Factor 12		
Category	Probability	Impact
Social	<u>Low</u>	<u>Low</u>
Description		
Conflict with the local influential persons		
Mitigation measure(s)		
The project will carry out consultations with different stakeholders including shrimp farmers, local money lenders, crop famers, traders etc. before establishment of hatcheries.		
Selected Risk Factor 13		
Category	Probability	Impact
Social	<u>Low</u>	<u>Low</u>
Description		
Political influence		
Mitigation measure(s)		
The project will involve local government institutions and divisions to sensitise them about the project interventions.		
Selected Risk Factor 14		
Category	Probability	Impact
Environmental	<u>Low</u>	<u>Low</u>
Description		



Loss of productive land due to establishment of hatcheries		
Mitigation measure(s)		
Only barren & fallow land will be considered to install the hatchery plant, so there will have no chance of loss of productive land.		
Selected Risk Factor 15		
Category	Probability	Impact
Environmental	<u>Low</u>	<u>Low</u>
Description		
Salinity increased at adjacent agricultural land.		
Mitigation measure(s)		
Wastewater treatment system will be built in with the hatchery through de-chlorination. At the farm level, only salinity affected lands will be used for crab farming.		
Selected Risk Factor 16		
Category	Probability	Impact
Financial (ML/FT)	<u>Low</u>	<u>Low</u>
Description		
ML and FT could hamper the implementation of the project activities		
Mitigation Measures(s)		
Given that both ML and FT are typically committed through abuse of financial institution, thereby it will be mitigated through:		
<ul style="list-style-type: none"> i) Maintain strong KYC database for the POs ii) Regular audit the bank statement and expenditure of the POs iii) Strongly monitor the POs' activities grading project implementation and expenditure balance sheet. 		

G. GCF POLICIES AND STANDARDS

G.1. Environmental and social risk assessment (max. 750 words, approximately 1.5 pages)

254. The project design has carefully considered all social, financial, operational and environmental risks. The environmental risks from crab hatchery and farming and house construction are considered low to medium. To mitigate Environmental and social risks, the project has already developed an Environmental and Social Management Framework (ESMF). Two types of tools will be used in the project considering nature of intervention and magnitude of impact on the environment. These are Environmental and social Screening and ES impact assessment. Some environmental and social risks are presented below:

Identified environmental risks

- 255.** Climate resilient homestead development will require earthen works that will have potential to use top soil materials. Taking soil from the top soil layer of agricultural land diminishes agricultural production because it deprives the land of fertile nutrients. By gathering soil from waste land or storing topsoil and restoring it later, such an impact can be avoided. Additionally, surrounding borrow pits and ponds can be used to collect soil, which will assist those regions produce more fish.
- 256.** None of the project activities will require cutting trees or forests. As the plinth of the homesteads will be raised, some grasses and herbs may be damaged. The crab hatchery will reduce the capture of wild crabs and thus increase crab stock in nature, which is the most significant impact of the project interventions on biodiversity.
- 257.** Dust pollution occurs as a result of soil handling during construction and, more specifically, a lack of watering of the earth's surface. Such pollution is also a function of weather conditions—in the dry season, nuisance is greater; during the rainy season, dust nuisance subsides. Pre-construction and construction stages are more susceptible to dust accumulation. Noise pollution is normally due to some construction-related activities.
- 258.** The project will promote crab hatcheries and farming, which will require saline water. The hatchery will use deep sea water that contains more than 25 ppt. In addition, crab ponds will also require saline water. These two activities may cause changes in the present soil and water salinity condition of the specific sites.

Identified social risks

- 259.** Social risk may be arisen due to establishment of hatchery because existing crab collectors may lose their income as crab growers will buy crab-let from the hatcheries. The project is only undergoing minor construction. As a result, the workers' risk of injury is quite low. The project intervention can be carried out with the help of local labour. The recipients typically carry out the suggested tasks themselves. Construction of hatcheries, dirt cutting for constructing plinths, the construction of goat or sheep barns, and the reconstruction of homes will all demand labour. Local resources exist for this labour. Therefore, no outside labour will be required for the project. Additionally, there is a very slim probability of engaging in forced labour or child labour.
- 260.** According to the Bangladesh Population and Housing Census 2022, there are approximately 1.65 million indigenous people living in Bangladesh, divided into 52 categories. Of these, approximately 49.98% are men and 50.02% are women. Every ethnic indigenous group in Bangladesh has its own unique tradition, culture, legacy, and sense of self. They also have a variety of ways to make a living, most of which are based on survival techniques and strategies that have been tailored to the various agro-ecological zones where they dwell. Twelve coastal districts in Bangladesh's south-west are included in the project. According to population census, there are roughly 13.92 million people living in the project area. Only 26,047 of them, or an insignificant 0.19% of the overall population, are indigenous people. The indigenous people mostly are from the Rakhyain community and concentrated mainly in the Patuakhali, Barguna and Cox's Bazar districts. If any indigenous people comes under the project, necessary action will be take according to the IPPF of the project.



- 261.** The project interventions are community based and will not require external labour. Hence, risks associated with violation of human rights, particularly women, disable and other ethnic minorities (if any) are very limited or absent from external source. But, there are some internal risks to engage child labour in project interventions particularly crab farming and goat/sheep rearing. This may be occurred by the family members.
- 262.** There is less possibility to occur Sexual Exploitation, Abuse and Harassment (SEAH) by the project interventions. Because, selected women members will directly involve many of the activities as these will be implemented at their homestead and neighbouring areas. In addition, some women may require to away to work in the crab farm. They might have risks to SEAH while working in the farm or traveling from home to farm and vice versa. However, the risk is very limited or negligible. But the challenge is that if any woman is affected, she does not want to disclose due to either shyness or fear of loss of dignity. At the IE level, there may be female staffs who will have to travel frequently in the selected villages. These staffs may also face similar types of difficulties. Similarly at the PMU level, female staffs may be recruited. These female staffs would require to frequent field visits in the remote areas of the country. Thus, they might be exposed to SEAH. High Court's guideline on sexual harassment will be applied in this project to SEAH.
- 263.** The project interventions have limited risk to make discrimination between male, female and other disadvantaged group of people in the project area due to gender sensitive design. The contractor may provide low wage to the female labours. Besides, children and adolescent girls may engage in the project interventions. These problems will be solved by implementing community based approached. The CCAG members are the key actors at the local level for implementing the proposed activities, the project will engage 80per cent female while forming the CCAGs. They will actively participate in the project. So, discrimination should not take place.

Financial risk

Financial risk may arise at the procurement and beneficiary selection stage, and the project design includes adequate safeguard measures to minimize this risk. The major operational risk, at medium probability, is the reduction of coverage of beneficiaries due to currency exchange loss or domestic inflation.

To ensure internal control and prevent money laundering, PKSf has sufficient and verified information about client - "know your client" (KYC) - and make use of that information that underpin the most effective defense against being used to launder the proceeds of crime. PKSf has very strong relation with its partner organization and maintain the KYC. PKSf, having long experience in managing projects supported by the donor and other development partners, has developed efficient financial management and internal control systems. PKSf has an established finance division headed by a Deputy Managing Director for Finance and Administration. In order to monitor the activities of it's partner organizations. PKSf has also have its an effective internal audit cell headed by a General Manager who directly reports to the Managing Director of the organization. PKSf has built up a system and capacity for disbursing fund to POs based on efficient review procedures in coordination with field level monitoring. An internationally acclaimed audit firm carries out external audit of PKSf every year, and will continue to do the same for the PKSf's financial management of the project. Detail is described in Operation Manual of PKSf. (For details, please visit <https://pkssf.org.bd/policy-documents/>). PKSf has also adopted a Whistle Blower Protection Policy. If any occurrence is identified or complaints are received, an investigation committee is formed. The committee generates an investigation report with recommendation. The Managing Director of PKSf takes the final decision (about punishment) about the offence.

In addition, in line with the international standards and initiatives, Bangladesh has passed Money Laundering Prevention Act (MLPA), 2002 (Amended, 2012). The Government has also enacted Anti-Terrorism Act (ATA) in 2009 (Amended in 2012) aiming to combat terrorism and terrorism financing. Both the Acts have empowered Bangladesh Financial Intelligence Unit (BFIU), Bangladesh Bank (BB) to



perform the anchor role in combating ML/TF through issuing instructions and directives for reporting agencies and building awareness in the financial sectors. There are no United Nations Security Council (UNSC) sanctions and any other restrictions against Bangladesh. In compliance with its accreditation to the GCF, PKSf has Anti-money laundering /counter financing of terrorism measures according to the above-mentioned acts to prevent these prohibited practices. PKSf conducts due diligence to its partner organisations before signing any financial agreement. The due diligence includes physical visits of the organisations, review financial transactions, accounts, background check and book keepings etc. The same process will be followed for this project

G.2. Gender assessment and action plan (max. 500 words, approximately 1 page)

- 264.** The project is well aware about gender mainstreaming in the project activities. Hence, the proposed project has taken a gender responsive and transformative approach to climate change vulnerability, considering gendered differences in access to resources, ability to pursue adaptive livelihoods and institutional support and capacity building, and this has fundamentally shaped all of the activities and outputs of the project. The proposed project recognizes women's essential contributions as leaders and agents of change in the face of a changing climate and resource constraints. The project will select 362,475 direct beneficiaries for transferring knowledge and adaptation technologies proposed under this project. More than 50 percent of the total direct beneficiaries i.e., 181,237 will be women. It is already mentioned that the project will form 3,200 CCAGs. Considering the gender sensitivity of the proposed project, 80per cent of the CCAG members will be women beneficiaries (among the beneficiaries under PKSf, around 90per cent are women). 10per cent of the CCAG members will be women heads. The project will select mostly women because they usually teach their children at home. They will also teach their children about climate change issues what they will learn through training and meetings. Thus, climate change concepts and practices would transmit to the next generation which will have long term implication of addressing climate change in this country. Besides, necessary female staffs will be ensured at the field level so that women members can easily express their opinions and actively take part in the project activities. Considering gender integrity, the project proposes more crab farming and slatted housing for goat and sheep to outreach maximum number of women. Allocated budget for female beneficiaries also very high which is estimated USD 22.56 million which is more than 50 percent of GCF proceed.
- 265.** Besides, CCCP experiences showed that women were benefitted both economically and socially due to engage them with CCAG. In coastal areas, women usually are not willing to go to cyclone shelter during cyclone or tidal surge. They prefer to stay at home because they feel safe at home than at shelter. Most important lesson was that they could talk about climate and disaster in their locality. They also felt empowered because they contributed to family income through vegetable cultivation, goat rearing etc. We expect the similar outcomes in the proposed project. The CCCP faced some challenges to engage the CCAG with the women members of the families. Initially, the women in the vulnerable areas were not much supportive due to shyness and hesitation. Besides, climate change was new issue to them. However, motivation through disseminating proper information helped to overcome this challenge.
- 266.** The activities are designed in a way that the women will be mostly benefitted economically and socially. The important livelihood option selected for the proposed project is goat and sheep rearing in slatted houses. The proposed project will select only women participants for implementing the activity because traditionally, all most all women in rural areas of Bangladesh including saline zone commonly rear livestock animal including goat and sheep. But the traditional process of management is a constraint of achieving expected benefit of rearing goat and sheep. The proposed project will provide support technological support and capacity building training to make it climate resilient and sustainable livelihood adaptation to climate change.
- 267.** The RHL project considers not only the benefits of women, but also considers the inter-sectional vulnerability to changing conditions, of those beneficiaries facing additional marginalization due to poverty, and social exclusion. The project design recognizes to build adaptive capacity in regards to



changing climatic conditions, by supporting climate resilient livelihoods, resilient homestead and better integration into local value chains, in which women are already playing a growing role.

- 268.** The RHL project will accommodate GoB's policies and strategies on women's resilience and their critical role in preparedness and recovery from disasters and the necessity of shifting livelihoods towards adaptive options, efforts remain limited compared to the actual and acute needs of women. The Gender Assessment expands on the information provided throughout the proposal, by providing additional information on the national and local gender context, particularly in regards to women's access to resources, their role in decision-making and the gendered aspects of local livelihoods, and provides the basis for, and lessons on which, the Gender Action Plan (which is reflective of the overall project design) has been built. The activities of the proposed project have been selected considering that women can easily implement to enhance their capacity and increase their resilience to climate change.
- 269.** For promoting women's empowerment through the project interventions, we will consult not only with the women members of a family, but also with the male members and other guardians. This will help eliminate hesitation and shyness. Besides, IEs will build good rapport by disseminating appropriate information with the vulnerable community.

G.3. Financial management and procurement (max. 500 words, approximately 1 page)

Financial Management and Audit

- 270.** The project will follow AE's guidelines on Financial Management and Public Procurement Act 2006 (PPA2006) and Public procurement Policy 2008 (PPR2008) for procurement. PKSf, having long experience in managing projects supported by the donor and other development partners, has developed efficient Financial Management and internal control systems. PKSf has an established finance division headed by a Deputy Managing Director for Finance. In order to monitor the activities of its partner organizations, it also has in place a properly staffed internal audit cell headed by a General Manager who directly reports to the Managing Director of the organization. PKSf has built up a system and capacity for disbursing fund to IEs based on efficient review procedures in coordination with field level monitoring. An independent audit firm carries out external audit of PKSf, and will continue to do so for the PKSf's financial management of the project. As per GCF guideline PKSf will be provided financial management report and letter to GCF within 06 months of audited period of the AE's fiscal year end. Both internal and external audit is carried out once in a year. External audit is carried out using International Accounting Standard (IAS). PKSf as the AE will oversee, supervise, and approve the annual work plans of the 15 implementing entities and executing entities.

Disbursement and Funds Flow:

- 271.** The funds for the project will flow through a Segregated Designated Account (DA) to be opened by PKSf in a commercial bank. The disbursement is report based; i.e., an advance to the DA is made on submission of Quarterly Financial Reports (QFRs), including a forecast of projected expenditures for the next, two calendar quarters. Further advances as required would be made to the DA based on updated expenditure forecasts for the subsequent two quarters having the balance available in the Designated Account including the balances in the bank accounts of the IEs at the end of the reporting quarter. The amount spent from the DA on eligible expenditures is documented as project expenditures based on claims for documentation in the QFRs, and the advances to the DA is adjusted accordingly.

Books of Accounts and Financial Reporting



- 272.** The accounts of PKSf are prepared in accordance with International Accounting Standard (IAS) as adopted by the Institute of Chartered Accountants of Bangladesh (ICAB), on a going-concern basis under Generally Accepted Accounting Principles. PKSf's accounts are maintained on accrual basis under historical cost convention. The accounting manual of PKSf has been consistently followed for preparation of software-based final accounts.
- 273.** PKSf follows Public Procurement Act 2006 and Public Procurement Rules 2008 for procurement goods and services. As per the PPA 2006 and PPR 2008, IEs will prepare and submit a procurement plan and get approval from PKSf. The first package of goods and services will be subject to prior review. The rest of the packages will be reviewed by the PMU staff at the field office of the IEs after procurement is over. This way, PKSf will ensure that all procurements are conducted as per policy. To ensure appropriate procurement, the first package of goods and services will be subject to prior review, and the rest will be subject to post-review. **It is observed from the previous experience that providing rigorous support for the first package, the IEs are equipped with proper knowledge of the procurement process. Nevertheless, the PMU will provide necessary support during the project period. For this,** IEs will submit their annual procurement plan; therefore, PMU will be aware of the procurement. In addition, IEs will submit a quarterly financial report which PKSf's audit team will check. Besides, the PMU staff will visit IEs field office at least quarterly to verify the procurement and financial transaction. **On top of that,** PKSf's internal audit team will also visit the IEs office frequently for auditing. Any mis-procurement noticed by either PMU or the core audit team, immediate action will be taken as per policy.
- 274.** PKSf recruits audit firms as per PPA 2006 and PPR 2008 for auditing all accounts and management of PKSf including each project. This audit firm submits a separate audit report for each project. The procurement committee of PKSf carries out the whole procurement activities. The committee calls for Expression of Interest (EOI) in the national dailies in both Bangla and English. Only the enlisted firm can submit the EOI. The procurement committee evaluates the applications and makes recommendations to select the firm. The Governing Body of PKSf select the firm in its Annual General Meeting based on the recommendation. A detailed procurement plan as per GCF format is presented in Annex 10.
- 275.** Tax Exemption: Value Added Tax and Income Tax will be applicable as per PPA 2006 and PPR . PKSf enjoys Income Tax exemptions. Hence, GCF proceeds will not be used to finance any taxes in relation to the Goods and Services to be procured under the Project.

G.4. Disclosure of funding proposal

No confidential information: The accredited entity confirms that the funding proposal, including its annexes, may be disclosed in full by the GCF, as no information is being provided in confidence.

With confidential information: The accredited entity declares that the funding proposal, including its annexes, may not be disclosed in full by the GCF, as certain information is being provided in confidence. Accordingly, the accredited entity is providing to the Secretariat the following two copies of the funding proposal, including all annexes:

- full copy for internal use of the GCF in which the confidential portions are marked accordingly, together with an explanatory note regarding the said portions and the corresponding reason for confidentiality under the accredited entity's disclosure policy, and
- redacted copy for disclosure on the GCF website.

The funding proposal can only be processed upon receipt of the two copies above, if containing confidential information.



H. ANNEXES

H.1. Mandatory annexes

- Annex 1 NDA no-objection letter(s) ([template provided](#))
- Annex 2 Feasibility study - and a market study, if applicable
- Annex 3 Economic and/or financial analyses in spreadsheet format
- Annex 4 Detailed budget plan ([template provided](#))
- Annex 5 Implementation timetable including key project/programme milestones ([template provided](#))
- Annex 6 E&S document corresponding to the E&S category (A, B or C; or I1, I2 or I3):
[\(ESS disclosure form provided\)](#)
 - Environmental and Social Impact Assessment (ESIA) or
 - Environmental and Social Management Plan (ESMP) or
 - Environmental and Social Management System (ESMS) or
 - Others (please specify – e.g. Resettlement Action Plan, Resettlement Policy Framework, Indigenous People’s Plan, Land Acquisition Plan, etc.)
- Annex 7 Summary of consultations and stakeholder engagement plan
- Annex 8 Gender assessment and project/programme-level action plan ([template provided](#))
- Annex 9 Legal due diligence (regulation, taxation and insurance)
- Annex 10 Procurement plan ([template provided](#))
- Annex 11 Monitoring and evaluation plan ([template provided](#))
- Annex 12 AE fee request ([template provided](#))
- Annex 13 Co-financing commitment letter, if applicable ([template provided](#))
- Annex 14 Term sheet including a detailed disbursement schedule and, if applicable, repayment schedule

H.2. Other annexes as applicable

- Annex 15 Evidence of internal approval ([template provided](#))
- Annex 16 Map(s) indicating the location of proposed interventions
- Annex 17 Multi-country project/programme information ([template provided](#))
- Annex 18 Appraisal, due diligence or evaluation report for proposals based on up-scaling or replicating a pilot project
- Annex 19 Procedures for controlling procurement by third parties or executing entities undertaking projects financed by the entity
- Annex 20 First level AML/CFT (KYC) assessment
- Annex 21 Operations manual (Operations and maintenance)
- Annex 22 Assessment of GHG emission reductions and their monitoring and reporting (for mitigation and cross cutting-projects)⁶⁵
- Annex 23 Other references: Methods of beneficiary calculation
- Annex 24 IPPF_RHL_PKSF

* Please note that a funding proposal will be considered complete only upon receipt of all the applicable supporting documents.



⁶⁵Annex 22 is mandatory for mitigation and cross-cutting projects.