



POLITIQUES ENVIRONNEMENTALES DES BAILLEURS DE FONDS

ANALYSE

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Action contre la Faim France
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INTRODUCTION

CONTEXTE

Ces dernières années, les acteurs humanitaires ont démontré un engagement croissant à prendre en compte les impacts environnementaux de leurs interventions. En 2012, le Réseau Environnement Humanitaire (REH) est fondé, regroupant environ 250 acteurs du secteur. En 2020, dix ONG¹ de ce réseau – parmi lesquelles Action contre la Faim France (ACF) – s’engagent, notamment, à réduire de 50% leurs émissions de gaz à effets de serre (GES) d’ici 2030². Trois ONG supplémentaires ont depuis signé cet engagement, portant au moins à treize le nombre d’ONG françaises et francophones officiellement engagées à réduire leur empreinte carbone d’ici à 2030.

Suite à cet engagement, ACF a renforcé l’ensemble de ses actions environnementales, au-delà de la seule prise en compte de l’empreinte carbone. Une division interne dédiée à l’environnement a été créée pour intégrer cette problématique dans les interventions et le fonctionnement de l’organisation. ACF participe également activement au renforcement du REH. Les efforts actuels d’ACF se concentrent notamment sur l’estimation de l’empreinte de GES, les achats responsables, la gestion de déchets, et la coordination avec les nombreuses initiatives en cours dans le secteur humanitaire, y compris celles des bailleurs de fonds.

Au niveau international, près de 350 organisations ont signé la *Charte sur le climat et l’environnement pour les organisations humanitaires* visant à stimuler et orienter l’action collective en réponse aux crises environnementales. A ce jour, cette Charte a également reçu le soutien de 11 bailleurs de fonds.

Les gouvernements et les bailleurs de fonds ont un rôle primordial à jouer pour soutenir l’engagement des acteurs humanitaires à réduire leurs impacts environnementaux négatifs et maximiser leurs impacts positifs.

Les initiatives collectives des bailleurs à ce sujet restent encore limitées, et leurs approches demeurent principalement individuelles. Cela soulève des questions légitimes :

- Les politiques environnementales des bailleurs de fonds proposent-elles des approches et niveaux d’exigence harmonisés ? La multiplication de ces politiques aura-t-elle un impact sur les capacités des ONG à les mettre en œuvre ?
- Ces politiques proposent-elles des objectifs prioritaires, permettant aux ONG d’orienter leurs efforts ?
- Le financement nécessaire à la mise en œuvre de ces politiques sera-t-il assuré par des mécanismes appropriés ?

PERIMETRE DE L’ANALYSE

Ce qui est intégré dans l’analyse

Afin de répondre à ces questions et mieux comprendre les attentes des bailleurs en terme d’enjeux climatiques et environnementaux, ACF a réalisé un travail de recensement et d’analyse des principales politiques relatives à ces sujets. Les bailleurs ayant fait l’objet de cette étude sont la Direction générale pour la protection civile et les opérations d’aide humanitaire européennes de la Commission européenne

¹ ACTED, ACF-France, ALIMA, CARE-France, Electriciens Sans Frontières (ESF), Groupe URD, MDM, PUI, SIF, Solidarités International

² <https://www.environnementhumanitaire.org/ressource/publication-declaration-dengagement-des-organisations-humanitaires-sur-le-climat/>

(DG-ECHO), Global Affairs Canada (GAC), Swedish International Development Cooperation Agency (SIDA), United States Agency for International Development (USAID) et le Programme Alimentaire Mondial (PAM). Ils ont été retenus en raison de la part qu'ils représentent dans le financement d'ACF et/ou de leur engagement de long terme sur les questions climatiques et environnementales.

Au total 23 politiques³ développées par cinq bailleurs ont ainsi été recensées et intégrées à une base de données regroupant leurs recommandations et exigences en matière environnementale.

Ce qui n'est pas intégré

D'autres bailleurs tels que l'Agence Française de Développement (AFD) et le Foreign, Commonwealth & Development Office (FCDO), bien qu'étant des partenaires importants d'ACF ne sont pas intégrés dans l'analyse car ils n'ont à ce jour diffusé que des documents de principe ou des guides généraux sur la prise en compte des enjeux environnementaux, mais aucune politique comprenant des recommandations opérationnelles.

L'analyse réalisée concerne donc uniquement des politiques bailleurs proposant des actions concrètes pour l'intégration des enjeux environnementaux dans les programmes. Certains guides sectoriels spécifiques aux activités support (comme les guides sur les « achats responsables ») n'ont donc pas été pris en compte. Cependant, ces guides font déjà l'objet d'analyses dans le cadre d'autres initiatives.⁴

Enfin, cette étude ayant initialement un objectif interne pour ACF, les politiques liées à des secteurs qui ne font pas partie du mandat d'ACF n'ont pas été incluses. C'est le cas des politiques sectorielles (ou des sections spécifiques dans les politiques multisectorielles) concernant notamment les secteurs Abris, Education, Coordination et gestion des camps, etc.

CE QUI APPARAÎT DANS LES POLITIQUES DES BAILLEURS

La formalisation de l'engagement des bailleurs envers la protection de l'environnement a commencé à des périodes différentes et sous des formes variées :

- GAC publie des recommandations environnementales depuis le milieu des années 1980 ;
- SIDA était également précurseur sur ces sujets et continue de développer de nombreux documents pour accompagner ses partenaires de mise en œuvre. Plusieurs notes de cadrage ont notamment été publiées en 2022 ;
- USAID a développé et publié des politiques depuis la fin des années 1990, avec des mises à jour régulières ;
- La DG-ECHO a publié une première politique dédiée à l'environnement en 2022.

Ces politiques environnementales adoptent différents formats et approches, même au sein d'un même bailleur. Cependant, certains points communs peuvent être identifiés. On retrouve généralement les thématiques suivantes :

- Les **principaux risques d'impacts environnementaux** liés à la mise en place de programmes humanitaires et/ou de développement sont identifiés dans les politiques ;

³ Détails disponibles en fin de document

⁴ Voir l'étude sur les politiques d'achats responsables menée par la Joint Initiative sur la gestion des déchets et les emballages - <https://eecentre.org/wp-content/uploads/2023/01/Multi-Donor-Policy-Landscape-Analysis.pdf>

- Pour chaque risque, des « **recommandations** » sont formulées par les bailleurs, sous forme d'objectifs à atteindre par les organisations de mise en œuvre
- Dans la majorité des cas, pour chacune de ces recommandations, des **mesures d'atténuation** de l'empreinte environnementale sont également proposées par les bailleurs;
- Des **indicateurs et/ou des moyens de vérification** sont suggérés.

Au total : 359 recommandations et plus de 1400 mesures d'atténuation ont été recensées. 42% des recommandations sont accompagnées d'indicateurs.

La suite de cette section se concentrera sur la synthèse des principaux contenus de ces politiques des bailleurs.

DES IMPACTS ENVIRONNEMENTAUX MULTIPLES

Un large focus sur les impacts négatifs

Ces politiques environnementales considèrent les impacts environnementaux des projets comme étant par nature négatifs. La majorité des bailleurs se concentrent donc sur l'évitement et l'atténuation de ces impacts négatifs des projets. On y trouve peu, voire pas du tout, de mesures visant à maximiser les impacts positifs des interventions humanitaires. Seul GAC reconnaît l'importance de prendre en compte les effets positifs sur l'environnement que les projets peuvent générer, notamment à travers des activités spécifiques telles que la conservation d'espaces naturels protégés. La maximisation des impacts positifs est absente de la quasi-totalité des politiques environnementales des bailleurs.

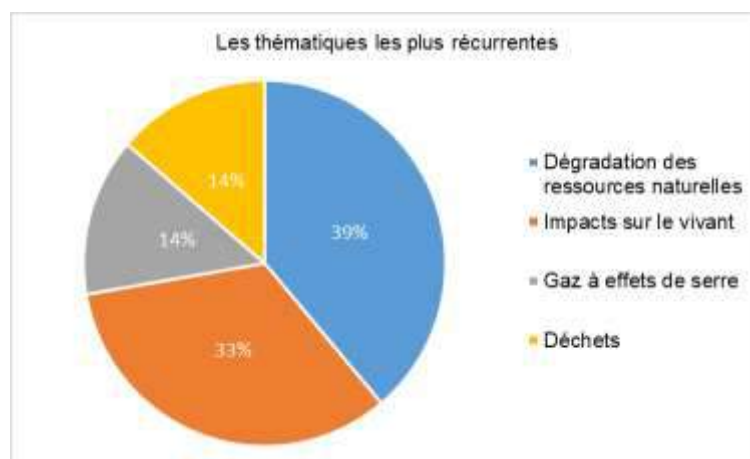
Cette forte orientation des politiques environnementales vers la réduction des impacts négatifs devrait logiquement se refléter dans les choix de financement des différents bailleurs. En conséquence, la plupart des bailleurs privilégieraient a priori des versions "vertes" ou "atténuées" de projets humanitaires classiques, tandis que peu d'entre eux semblent davantage enclin à financer des activités ayant spécifiquement des impacts environnementaux positifs.

Des risques variés selon les activités proposées

La mise en œuvre de projets humanitaires et de développement induit des risques d'impacts sur l'environnement en raison des transports, déchets, pollutions potentielles, etc., qui y sont associés.

Les principales catégories d'impacts abordés dans les politiques bailleurs concernent la dégradation de milieux ou ressources naturels, suivi par les impacts sur le vivant (humains, faune et flore).

Les politiques incluent également les impacts liés aux émissions de gaz à effet de serre et à la production de déchets.



De façon plus détaillée, sur la base du nombre d'occurrence⁵, les impacts les plus représentés dans les politiques analysées sont les suivants:



Ce panel d'impacts potentiels de l'action humanitaire, qu'il soit présenté de manière simplifiée ou détaillée, met en évidence les différences existantes dans la nature même de ces impacts.

Face à cette large gamme d'impacts potentiels, les organisations humanitaires doivent faire des choix et établir des priorités. Cependant, la volonté de prendre en compte l'ensemble de ces impacts potentiels, en plus de représenter une charge de travail importante, confronte les organisations à des choix complexes : chaque modification d'activité visant à réduire un impact direct, pouvant engendrer un autre type d'impact (direct ou indirect).

Par exemple, l'utilisation de matériaux biosourcés pour la construction permet de réduire la consommation de ciment et les émissions de GES associées à sa production et son transport. Cependant, si l'origine des matériaux biosourcés n'est pas contrôlée, leur utilisation peut entraîner un épuisement de ressources naturelles et la destruction d'habitats de la faune et de la flore.

DES RECOMMANDATIONS EN TANT QU'OBJECTIFS A ATTEINDRE

Des recommandations principalement programmatiques

Pour chaque type d'impact potentiel, les bailleurs proposent des recommandations générales afin de les atténuer ou de les éviter.

Les politiques bailleurs recensées dans le cadre de cette analyse se concentrent principalement sur des recommandations programmatiques. Près de 97% des recommandations proposées dans les 23 politiques bailleurs analysées concernent donc les activités humanitaires de terrain. Seule une faible part, en termes de nombre de recommandations, concerne les services support et les modifications à apporter au niveau du fonctionnement des bureaux, entrepôts ou flottes de véhicules.

Il est toutefois important de noter que ces 3% de recommandations non liées aux programmes peuvent représenter des coûts et un volume de travail proportionnellement plus élevés. Par exemple, la

⁵ Une occurrence est comptabilisée comme telle chaque fois qu'une recommandation est associée à un risque.

recommandation « *Enhance the sustainability of facilities and warehouses – Invest in solar or wind energy consumption* »⁶ peut représenter à elle seule plusieurs centaines de milliers d'euros d'investissement à l'échelle d'un pays d'intervention.

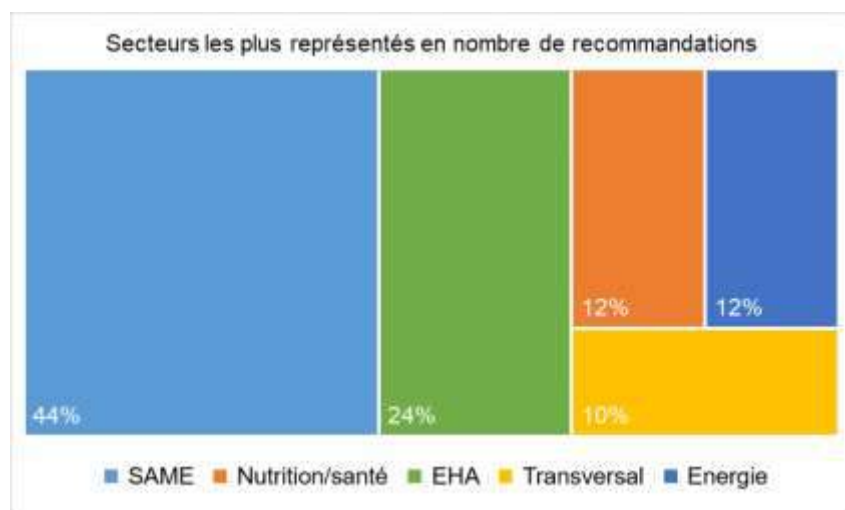
Il est également à noter que ces 3% de recommandations visant le fonctionnement des organisations font l'objet d'une analyse spécifique réalisée par la Joint Initiative For Sustainable Humanitarian Assistance Packaging Waste Management :

<https://eecentre.org/wp-content/uploads/2023/01/Multi-Donor-Policy-Landscape-Analysis.pdf>



Des recommandations organisées par secteurs d'intervention

Les recommandations sont majoritairement organisées par secteur. Seule la DG-ECHO a également inclus des recommandations transversales concernant le genre, la protection, le Nexus, la gestion des déchets, etc.



Les secteurs pour lesquels le plus grand nombre de recommandations a été formulé sont la SAME (Sécurité Alimentaire et Moyens d'Existence), et l'EHA (Eau, Hygiène & Assainissement). Les recommandations concernant les programmes de nutrition et de santé sont moins nombreuses, et il n'y a pas de recommandations spécifiques aux activités de santé mentale et de soutien psychosocial.

Par ailleurs, les recommandations relatives à l'énergie sont principalement axées sur des programmes de production d'énergie (biogaz, bioénergie, éolien, hydro-énergie, ...), ainsi que sur la solarisation d'infrastructures programmes. Elles ne portent pas principalement sur les sources et volumes de consommation d'énergie des ONG.

⁶ DG-ECHO, *Guidance on the operationalisation of the minimum environmental requirements and recommendations for EU-funded humanitarian aid operations*, p.30.

DES EXEMPLES DE MESURES D'ATTENUATION

Des mesures majoritairement exprimées sous forme de propositions non obligatoires

Les bailleurs proposent un éventail de mesures d'atténuation (également appelées mesures de réduction), parmi lesquelles les organisations peuvent sélectionner celles qui conviennent le mieux à chaque contexte d'intervention. Le partenaire a la possibilité de choisir des mesures provenant de cette liste et/ou de proposer de nouvelles mesures.

Les mesures recensées sont de l'ordre de la proposition, et n'ont pas de valeur obligatoire à ce stade. A ce jour, seule la DG-ECHO rend obligatoire l'intégration d'un certain nombre de recommandations dans les projets (clairement spécifiées pour chaque secteur).

Les mesures de réduction, qu'elles proviennent de listes suggérées par le bailleur ou qu'elles soient élaborées directement par le partenaire, deviennent obligatoires uniquement lorsqu'elles sont intégrées dans le rapport d'évaluation environnementale⁷, qui est à soumettre avec la proposition de projet.

Des attentes techniques parfois élevées

Dans certains cas, les mesures proposées par le bailleur nécessitent la venue d'un-e expert-e (écologue, ingénieur-e, etc.) pour mener des évaluations approfondies avant la mise en œuvre d'une activité. Par exemple, dans sa politique environnementale concernant les constructions, USAID demande la venue d'un-e écologue pour mener une étude sur site afin d'identifier la biodiversité et les zones sensibles, permettant ainsi la mise en place de mesures d'atténuation ciblées⁸.

Étant donné que l'échelle et le type d'infrastructures visés ne sont pas précisés dans la politique, cette mesure peut être interprétée comme applicable à tout type et à toute échelle d'infrastructure, ou perçue comme optionnelle.

De même, certains indicateurs proposés ne peuvent être mesurés que par des expert-e-s. Un exemple à ce sujet peut également être trouvé dans la politique d'USAID concernant les constructions, où il est suggéré de développer un document de description écologique pour chaque site, comprenant des photographies et la liste des espèces végétales et animales⁹.

Il est important de noter que ces propositions de la part des bailleurs restent à ce jour optionnelles. Toutefois, si elles devaient devenir obligatoires à l'avenir ou dans le cadre de projets à risques environnementaux élevés, des précisions sur des conditions de mise en œuvre seraient attendues de la part du bailleur concerné.

La majorité des bureaux-pays des organisations humanitaires ne possèdent pas ce type d'expertise sur le terrain. Cependant, certains bailleurs, comme la DG-ECHO, ont déjà mentionné dans leur politique la possibilité d'allouer un budget dédié à l'intervention de tel-le-s expert-e-s.¹⁰

⁷ Ce rapport sert à définir les dimensions environnementales (biophysiques, culturelles, socio-économiques ...) d'un projet et à identifier les mesures nécessaires pour éviter que les activités ne causent des dommages écologiques et n'engendrent des coûts sociaux.

⁸ USAID, *Sector Environmental Guideline – Construction*, p.61

⁹ idem

¹⁰ DG-ECHO, *Guidance on the operationalisation of the minimum environmental requirements and recommendations for EU-funded humanitarian aid operations*, p.8

Des mesures d'atténuation centrées sur un périmètre local

Les mesures proposées sont généralement suggérées par les bailleurs pour leurs impacts sur l'environnement local. L'ensemble du cycle de vie des produits et matériaux (impacts de la production, importation, déchets produits, ...) est bien a minima officiellement pris en compte par la DG-ECHO, USAID et WFP. Toutefois, aucune pondération ou priorisation n'est proposée entre impacts locaux et globaux.

Par exemple, dans une politique sectorielle relative à l'EHA ou à la SAME, il peut être recommandé de mettre en place un système d'irrigation enterré afin de réaliser des systèmes de micro-irrigation¹¹. Cela aura un impact positif au niveau local, sur le champ concerné. Cependant, au-delà du périmètre local, les impacts de la production et de l'approvisionnement des tuyaux nécessaires à cette installation, tout comme les impacts liés aux déchets produits, ne sont pas mentionnés. Dans un tel cas, une recommandation qui semble pouvoir réduire localement un risque de dégradation des sols peut entraîner des impacts négatifs délocalisés proportionnellement plus importants (émissions de GES, production de déchets, ...).

Un autre exemple concerne les denrées alimentaires, pour lesquelles des impacts locaux tels que la consommation de ressources locales (bois pour la cuisson, par exemple) doivent être pris en compte. Cependant, des impacts délocalisés se produisent également, de la production à la gestion en fin de vie (résidus et pertes de conservation, utilisation éventuelle de produits phytosanitaires lors de la production, transport, transformation, etc.). Or, ces impacts délocalisés ne font l'objet d'aucune recommandation spécifique de la part des bailleurs.

En l'absence de priorisation proposée par les bailleurs entre impact global du cycle de vie (dont l'impact délocalisé) et impact local, cette décision reste à la liberté de l'ONG, qui peut choisir de privilégier la réduction des impacts négatifs locaux (lieu de consommation, d'utilisation) ou délocalisés (lieu des phases de production) en fonction de son approche environnementale, des contraintes locales, etc. Ainsi, deux ONG peuvent proposer des mesures différentes et potentiellement contradictoires, toutes deux cherchant à répondre à la même recommandation d'atténuation, l'une privilégiant la réduction de l'impact local, tandis que l'autre privilégie la réduction de l'impact global.

DES EXEMPLES D'INDICATEURS ET MOYENS DE VERIFICATION

Les indicateurs proposés dans les politiques des bailleurs sont, selon les cas :

- Associés à une mesure d'atténuation précise
- Associés à une gamme de mesures d'atténuation
- Associés à une recommandation, un objectif

Ces indicateurs projets¹² sont principalement proposés dans les politiques d'USAID, GAC et SIDA. Un travail de formulation des indicateurs est en cours de finalisation à la DG-ECHO (en 2023).

Tout comme les recommandations et mesures d'atténuation, les indicateurs mentionnés dans les politiques des bailleurs n'ont pas de valeur obligatoire. A l'heure de la présente étude, il semblerait que seuls les indicateurs proposés par la DG-ECHO seraient pour partie à intégrer à la proposition de projet¹³. Ce mode de fonctionnement pour les indicateurs environnementaux est similaire à celui déjà en place chez

¹¹ GAC, *Additional Resources - Accompanying Document of the Environment Handbook for Community Development Initiatives*, p.94

¹² Telles que "Vérifications hebdomadaires du fonctionnement de l'équipement par le comité de l'eau", "Suivi du niveau des eaux souterraines", "Proportion de terres forestières replantées", etc.

¹³ Il s'agit d'un travail en cours de finalisation au sein de la DG-ECHO.

ce bailleur pour les différents secteurs d'activités. Une partie des indicateurs devra être sélectionnée dans une liste prédéfinie par la DG-ECHO, tandis que le reste des indicateurs sera à la discrétion de l'ONG.

Enfin, certains bailleurs ont proposé des moyens de vérification pour les indicateurs suggérés.

L'INTEGRATION DANS LE DEVELOPPEMENT DE PROJET

Une intégration des aspects environnementaux au plus tôt du cycle de projet

Afin de déterminer les risques environnementaux d'un projet et, par conséquent, le niveau de mesures d'évitement et d'atténuation à mettre en place, les bailleurs fonctionnent sur la base d'une catégorisation des projets, généralement réalisée en amont du dépôt des propositions. Bien que leurs systèmes de catégorisation diffèrent légèrement, le fonctionnement général reste très similaire.

Avant de soumettre une proposition de projets, les principaux axes d'intervention doivent être présentés au bailleur. Sur la base de critères propres à chaque bailleur¹⁴, le projet est alors catégorisé comme présentant un risque environnemental élevé, substantiel, modéré ou faible.

Le recours à des évaluations environnementales

Selon cette catégorisation, il sera nécessaire de réaliser une évaluation environnementale plus ou moins approfondie au moment de la soumission de la proposition de projet (ou au démarrage du projet, selon le bailleur). Plus le projet sera considéré à risque, plus l'évaluation environnementale devra être approfondie, et plus les mesures d'évitement et de réduction proposées doivent être détaillées.

Pour les projets financés par la DG-ECHO, une évaluation environnementale est obligatoire pour les projets Abris et EHA. A ce jour, elle n'est pas obligatoire pour les autres types de projets.

Les mesures d'atténuation proposées par l'ONG doivent être incluses dans le rapport d'évaluation environnementale et/ou dans un plan d'engagement de réduction des risques environnementaux. Une fois que des mesures d'atténuation ont été soumises dans le cadre de la proposition de projet, elles deviennent une obligation légale dès lors que le projet est accepté.

Par la suite, les mesures proposées doivent faire l'objet d'un suivi régulier lors de la mise en œuvre du projet. Ce suivi doit être documenté dans les rapports d'activités et peut également faire l'objet de vérifications lors de visites sur le terrain effectuées par des représentants du bailleur, qu'elles soient spécifiques ou non.

¹⁴ Ces critères sont toutefois similaires, et disponibles sur les sites internet de chacun des bailleurs mettant en place ce système (GAC, SIDA, AFD,...).

CE QU'IL MANQUE DANS LES POLITIQUES BAILLEURS

DES OBJECTIFS ET PRIORITES CONCERTES

Pas d'objectifs stratégiques communs et harmonisés entre bailleurs

Tel que souligné dans la section « Des risques variés selon les activités proposées », les ONG doivent prendre en compte de nombreux enjeux. A ce jour, les objectifs stratégiques de réduction des impacts négatifs ne sont pas définis de manière harmonisée entre bailleurs. Ce manque d'harmonisation ne permet pas aux ONG de structurer leur approche et de prioriser leurs efforts.

Il semble donc nécessaire que les bailleurs définissent collectivement des objectifs généraux pour une approche environnementale harmonisée et efficace, et qu'ils s'accordent sur les objectifs prioritaires afin d'accélérer la transition environnementale des organisations qu'ils soutiennent. Ainsi, les ONG pourront se focaliser sur les activités visant à atteindre les objectifs reconnus par tous, sans avoir à se disperser pour répondre à des directives discordantes de leurs différents bailleurs.

Prenons l'exemple d'une situation où les bailleurs s'accorderaient pour faire de la réduction des émissions de GES une priorité. Chaque organisation pourrait alors choisir les stratégies les plus adaptées pour réduire les émissions de ses activités les plus polluantes. Ces stratégies pourraient varier selon les zones d'intervention afin d'être les plus efficaces possibles. Dans cet exemple et en fonction du contexte, elles pourraient prendre la forme de mesures de réduction de la mobilité internationale, de la mobilité nationale, du transport de marchandise et/ou de la consommation d'énergie, etc.

Manque de directives sur les types d'impacts à réduire prioritairement

Le degré de liberté laissé aux ONG pour atténuer leur empreinte environnementale est louable. Cependant, le manque de directives concernant les types d'impacts à réduire en priorité – surtout lorsque la lutte contre un impact peut entraîner d'autres conséquences négatives – ne permet pas aux organisations de choisir entre deux impacts. Cela peut mener à des propositions variées d'une ONG à l'autre. Par exemple :

- Une organisation comme ACF, qui accorde une importance particulière à la pollution des sols et à leur capacité de production à long-terme, sera encline à privilégier des denrées alimentaires produites sans l'utilisation d'intrants phytosanitaires.
- Une autre organisation, accordant moins d'importance aux pollutions liées à la production et accordant une plus grande importance à la réduction des émissions de GES, pourra quant à elle proposer des denrées produites de manière conventionnelle, utilisant des intrants phytosanitaires pour réduire le travail mécanique, majoritairement réalisé à partir d'énergie fossile.

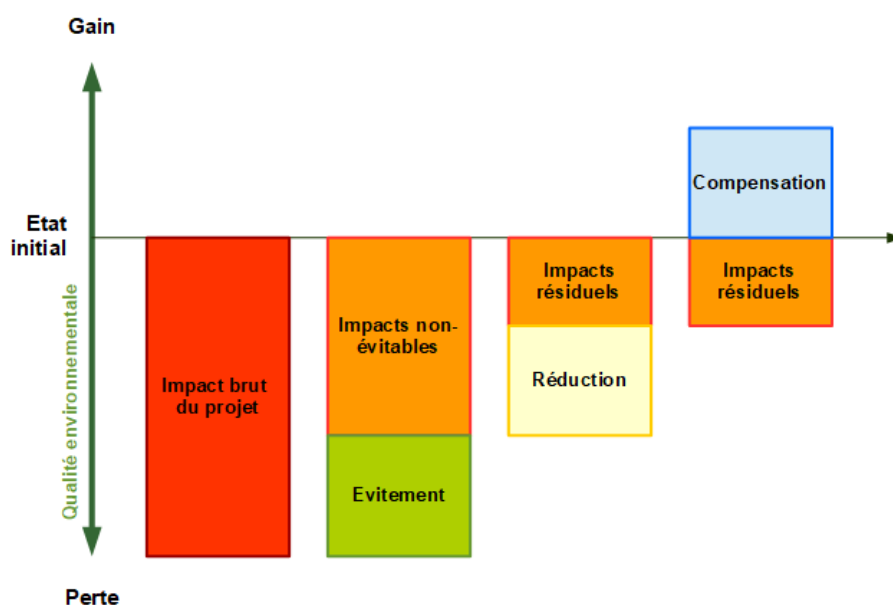
L'absence d'orientation concernant la priorisation dans la lutte contre les impacts négatifs, et les propositions variées qui en découlent de la part des ONG, peuvent entraîner d'importantes variations de coûts pour des projets confrontés aux mêmes types de risques.

De plus, comme mentionné dans la section « Des mesures d'atténuation centrées sur un périmètre local », les bailleurs ne proposent pas de priorisation d'évitement ou de réduction des impacts entre le niveau local et le niveau global. Cette priorisation est donc laissée à la discrétion des ONG, ce qui peut aboutir à des actions contradictoires entre des organisations prétendant pourtant répondre aux mêmes recommandations de réduction des impacts.

UNE SEQUENCE EVITER-REDUIRE-COMPENSER SOLIDE ET COHERENTE

Des mesures d'évitement non évoquées

La séquence « Eviter-Réduire-Compenser », dite ERC, est une approche technique et opérationnelle en réponse aux engagements internationaux, communautaires ou nationaux pris par la France pour la préservation des milieux naturels. L'objectif de cette séquence est d'intégrer la prise en compte de l'environnement dès la conception d'un projet, afin de minimiser au maximum ses impacts négatifs.



Source: Ministère de la Transition écologique et de la cohérence des territoires

Cette intégration est essentielle pour donner la priorité aux étapes d'évitement des impacts en premier lieu, puis à la réduction, et enfin à la compensation des impacts résiduels du projet ou du programme, si les deux premières étapes n'ont pas permis de les éliminer.

Les mesures d'atténuation ne doivent être envisagées qu'après avoir identifié et mis en place toutes les mesures d'évitement des impacts. Cependant, les politiques des bailleurs analysées mettent directement l'accent sur les mesures de réduction, sans inciter les ONG à envisager en premier lieu toutes les options d'évitement.

Pas de niveau minimum obligatoire d'intégration des mesures environnementales pour les projets financés

Les politiques élaborées par les bailleurs se concentrent principalement sur des recommandations et des mesures d'atténuation à ajouter aux programmes habituels. En d'autres termes, les opérations humanitaires telles qu'elles existent actuellement sont simplement appelées à modifier légèrement leurs activités ou à ajouter quelques activités supplémentaires pour réduire leur impact environnemental. Par conséquent, les acteurs humanitaires sur le terrain pourraient malheureusement considérer les mesures d'atténuation recommandées comme des mesures "optionnelles", c'est-à-dire des mesures que le projet peut ou non intégrer et que le bailleur peut ou non financer.

Par exemple, un volet de gestion de déchets peut être ajouté pour assurer la gestion des emballages d'une activité de distribution. Ce volet peut alors être envisagé par certains acteurs comme un coût supplémentaire optionnel par rapport à un scénario de référence où aucune mesure d'atténuation de l'impact environnemental n'est mise en place. Dans cette vision « optionnelle », ce coût peut être financé ou non, sans que cela n'impacte la mise en œuvre de l'activité. Si le volet n'est pas financé, le projet peut tout de même être mis en œuvre, les déchets de la distribution étant alors supposés pris en charge par l'infrastructure de gestion de déchet présente sur zone, si elle existe.

Ce mode de fonctionnement et de financement par des mesures "additionnelles" pose problème car il vient concurrencer des mesures d'atténuation systémiques. Une mesure systémique, par exemple, modifierait la nature même des produits distribués afin d'éliminer le besoin d'emballages à la source, rendant ainsi toute mesure "additionnelle" de gestion des déchets d'emballages inutile. Cependant, les mesures de type "systémique" sont peu présentes dans les politiques analysées. Il conviendrait de leur redonner une place de premier plan dans les politiques environnementales des bailleurs.

DES MECANISMES DE FINANCEMENT CLAIRS ET ADAPTES

Un accompagnement financier insuffisant face aux surcoûts des projets respectueux de l'environnement

La DG-ECHO spécifie dans sa politique environnementale qu'elle contribuera aux mesures offrant un avantage environnemental conforme aux exigences minimales mais qui n'entraînent pas d'économies dans le temps au travers une prise en charge financière plafonnée à 10% du coût total du projet.¹⁵ Il est cependant important de noter que ce financement est limité à certaines mesures d'atténuation spécifiques telles que la venue d'experts, la mise en œuvre de systèmes de gestion des déchets et/ou l'achat de fertilisants organiques. La validation de ces éventuels coûts supplémentaires n'est pas automatique, la DG-ECHO se réservant la possibilité de refuser les mesures proposées.

Les politiques des autres bailleurs qui ont fait l'objet de cette analyse ne mentionnent pas spécifiquement la prise en charge des coûts supplémentaires liées à la mise en œuvre de mesures d'atténuation. Des échanges supplémentaires entre les ONG et leurs principaux bailleurs de fonds seraient nécessaires pour identifier si de tels financements sont prévus.

¹⁵ DG-ECHO, *Guidance on the operationalisation of the minimum environmental requirements and recommendations for EU-funded humanitarian aid operations*, p.8

UNE COHERENCE AVEC LE CYCLE DE PROJET

Mise en œuvre et suivi des mesures hors projet

Certaines activités visant à réduire les impacts environnementaux néfastes ou à maximiser les impacts positifs peuvent nécessiter une durée de mise en œuvre supérieure à la durée moyenne des projets des organisations humanitaires.

Par exemple :

- L'acheminement de matériel en privilégiant les transports maritimes plutôt que les transports aériens nécessite une anticipation de plusieurs mois avant le démarrage du projet.
- Des activités telles que de l'afforestation, la reforestation ou l'agroécologie, nécessitent un suivi sur plusieurs années pour assurer leur réussite complète.

Dans ces divers cas, les actions à entreprendre se situent en dehors du cycle projet et/ou de la durée des contrats. De nombreuses solutions sont possibles, mais elles nécessitent des échanges approfondis avec les bailleurs pour définir les possibilités de prise en compte de telles anticipation ou d'in suivi à long terme des opérations.

Pas de classification entre recommandations pour des projets long terme ou court terme

Mis à part pour certaines mesures spécifiques liées aux activités de Réduction des Risques de Catastrophes, les bailleurs ne précisent pas dans leurs politiques si les mesures d'atténuation qu'ils proposent sont adaptées à des projets de court terme ou des projets de développement. Une analyse approfondie des mesures serait nécessaire afin de déterminer lesquelles sont applicables à des projets d'une durée inférieure à un an, lesquelles sont spécifiques aux projets pluriannuels, etc.

LA LOCALISATION DE L'AIDE

Prise en compte des parties prenantes locales

Dans l'ensemble des politiques analysées pour cette étude, peu de recommandations concernent la prise en compte des impacts environnementaux des activités des parties prenantes externes telles que les fournisseurs, les contractants, les autorités locales, les partenaires locaux, etc.

L'ajout de recommandations spécifiques pour ces acteurs externes semble nécessaire. En effet, ces parties prenantes locales ont leurs spécificités, ces recommandations devraient donc s'adapter à leurs contraintes et définir le niveau de redevabilité attendu en fonction de leurs capacités.

Toutes les parties prenantes locales ne sont pas en mesure de rendre compte de leur empreinte environnementale. Même celles qui en ont la capacité rencontrent souvent d'importants obstacles financiers ou techniques pour mettre en œuvre des actions visant à réduire leur empreinte. Il est donc essentiel que les bailleurs et les ONG clarifient les éventuelles différences dans les niveaux de responsabilité attendus en matière de réduction de l'empreinte, en fonction du contexte et de la typologie des parties prenantes.

A ce jour, les recommandations proposées sont majoritairement applicables aux organisations internationales et/ou possédant une stabilité et un volume important d'activités. Dès lors, si les politiques environnementales bailleurs s'appliquent à l'ensemble des partenaires, y compris les structures locales, ces dernières se trouveront confrontées à des politiques dont elles ne seront pas en mesure de mettre en œuvre une grande partie des recommandations.

CONCLUSION

Action contre la Faim salue le développement et les mises à jour récentes des politiques environnementales par plusieurs des principaux bailleurs institutionnels publics du secteur humanitaire. Cette attention croissante accordée à la question environnementale est encourageante et témoigne de l'importance accordée à ce sujet.

Dans les politiques analysées, un large éventail de sujets est abordé, avec de nombreuses recommandations et mesures d'atténuation proposées. Ces recommandations sont principalement organisées par secteur d'intervention, ce qui facilite leur intégration.

Il est toutefois important de souligner que si la quasi-totalité (97%) des recommandations est axée sur les activités des programmes, les **activités liées au fonctionnement des ONG** peuvent représenter la majorité des investissements à consentir.

De même, peu de recommandations visent à maximiser les **impacts positifs** des interventions. La plupart se concentrent uniquement sur la réduction des impacts négatifs, qui, bien que nécessaire, doit aussi s'accompagner d'une promotion des initiatives vertueuses pour l'environnement.

Enfin, ne pas générer d'impacts négatifs, en lien avec le principe humanitaire de "Ne pas nuire", devrait être la première des mesures portées par les politiques environnementales. Or ces **mesures d'évitement** sont quasiment absentes, au profit de mesures d'atténuation qui s'appliquent sur des impacts négatifs déjà existants.

Face à cette multitude de recommandations et à la complexité de mise en œuvre de certaines d'entre elles, il est louable que leur application se fasse de manière progressive, via un caractère pour le moment facultatif : la transformation des pratiques nécessitera en effet un temps considérable et devra être intégrée progressivement, sur plusieurs années, dans le cycle des projets.

Ce caractère progressif et facultatif présente néanmoins l'inconvénient majeur de ne pas fixer de **niveau minimal** ni de **déla**i pour l'intégration des mesures considérées comme prioritaires. Cela masque également l'absence de **mécanismes de financement** associés à la mise en œuvre de ces politiques. Or, si cette mise en œuvre repose uniquement sur les fonds et la volonté propres des ONG, la protection de l'environnement restera de facto "optionnelle" et ne pourra pas être pleinement effective.

Pour assurer leur pleine efficacité, les politiques des bailleurs devraient évoluer vers une mise en avant de **priorités communes et une harmonisation** des exigences entre les différents bailleurs. Sans un tel effort pour orienter les actions des ONG, la mise en œuvre des politiques des bailleurs risque d'être incohérente et de limiter les résultats globaux.

Le défi est immense, car il nécessite une modification des pratiques du secteur pour que la protection de l'environnement devienne une réalité dans les actions humanitaires. En collaboration avec les autres acteurs du secteur, Action contre la Faim souhaite continuer à participer activement à l'évolution des politiques des bailleurs et à leur harmonisation, en apportant des idées constructives et en partageant son expérience, afin de contribuer aux efforts concernant notamment à la priorisation des impacts environnementaux négatifs à éviter puis réduire, à la définition de mécanismes de financement appropriés et à la mise en œuvre de stratégie de suivi adaptées.

BIBLIOGRAPHIE

Bailleur	Secteur	Politique	Date de publication (ou dernière MàJ)
ECHO	Multi-sectoriel	Guidance on the operationalization of the minimum environmental requirements and recommendations	2022
GAC	Multi-sectoriel	Environment Handbook for Community Development Initiatives	2014
	Multi-sectoriel	Additional Resources - Accompanying Document of the Environment Handbook for Community Development Initiatives	2005
SIDA	Multi-sectoriel	Step-by-step guide : Environmental integration into Sida's operations	2022
	Sécurité alimentaire	Biodiversity Marker Guide – Agriculture	2022
	Moyens d'Existence	Biodiversity Marker Guide – Fisheries	2022
	Moyens d'Existence	Biodiversity Marker Guide – Forestry	2022
	Santé	Biodiversity Marker Guide – Health	2022
	EHA	Biodiversity Marker Guide – Water and Sanitation	2022
	Multi-sectoriel	Environmental and Climate Change Indicators - Guidance at country and sector level	2010
	Multi-sectoriel	Guidelines for the Review of Environmental Impact Assessments – Sustainable Development?	2002
USAID	EHA	Sector environmental guidelines - Water Supply and Sanitation	2017
	Multi-sectoriel	Sector environmental guidelines - Solid Waste management	2018
	Sécurité alimentaire et Moyens d'Existence	Sector environmental guidelines - Crop Production	2019
	Sécurité alimentaire et Moyens d'Existence	Sector environmental guidelines - Livestock	2015
	Multi-sectoriel	Sector environmental guidelines - Construction	2017
	Multi-sectoriel	Sector environmental guidelines - Energy	2018
	Santé	Sector environmental guidelines - Healthcare waste	2019
	Santé	Sector environmental guidelines - Small healthcare facilities	2015
	Sécurité alimentaire et Moyens d'Existence	Sector environmental guidelines – Small-scale dryland agriculture	2014
	Sécurité alimentaire et Moyens d'Existence	Sector Environmental guidelines – Wild-caught fisheries and aquaculture	2018
PAM	Multi-sectoriel	Environmental and Social Sustainability Framework - Module 2: WFP Environmental and Social Standards	2014

ANNEXE – Liste complète des recommandations identifiées, en anglais

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
ECHO Reco	Degradation of surface or groundwater quantity and/or quality	Water supply - water conservation	Ensure monitoring and recharge of the water sources	Link up the water extraction activities to a groundwater monitoring initiative, if it exists or set up a new one	
ECHO Reco	Degradation of surface or groundwater quantity and/or quality	Water supply - water conservation	Ensure IWRM includes practices at watershed level	Wherever possible, water usage monitoring systems should be installed or good practices established in consultation with the local communities and local water authorities	
ECHO Reco	Degradation of surface or groundwater quantity and/or quality	Water supply - water conservation	Water conservation should be prioritised and promoted as much as possible.		
ECHO Reco	Degradation of surface or groundwater quantity and/or quality	Water supply - water conservation	Consider including environmental training and water conservation awareness sessions into WASH programmes to build knowledge and skills necessary to address environmental issues and sustainable resource management.		
ECHO Reco	Waste accumulation	Waste management - Disposal	Establish waste separation systems , preferably at the household and facilities level	<ul style="list-style-type: none"> Some of the options for organic waste processing include composting, vermi-composting and anaerobic digestion. If applicable, the use of different types of disposal containers for recyclable material (different colours and/or material), will encourage their use. 	
ECHO Reco	Waste accumulation	Waste management - Strategy	Undertake a waste audit to understand waste volumes and types, this is necessary to inform the potential for waste recycling and any related livelihoods activities.		
ECHO Reco	Waste accumulation	Waste management - Disposal	Organise proper reverse logistics to support end-of-life management of items	<ul style="list-style-type: none"> Reverse logistics when: <ul style="list-style-type: none"> items have already been purchased but the programmes get down-scaled or suspended items were found faulty, damaged, expired, substandard, returned due to quality control issues items were rejected by people due to improper needs assessment; items are no longer useful to the programme due to incorrect and/or delayed orders; For item value recovery (reuse, refurbish, repurpose, recycle items) Can be linked with an income generation activity for affected persons (collection of waste), which could be extended beyond the project cycle in cooperation with private enterprises, or linked to the national level. 	
ECHO Reco	Waste accumulation	Waste management - Disposal	Organise periodic or targeted solid waste clean-up activities in collaboration with the affected community.		
ECHO Reco	Waste accumulation	Waste management - Disposal	Set up MoU with local partners/NGOs or organisations specialised in waste re-valorisation (repair, repurpose, reuse) different types of unused or disposed items and materials.	<ul style="list-style-type: none"> up-cycling wooden pallets into furniture down-cycling of car tires into safety surfaces for playgrounds or running tracks 	
ECHO Reco	Adverse health and/or safety effects	Waste management - Awareness	Include safe waste management education into projects	To be understood as a more regular and integrated activity than the "Sensitisation/awareness campaigns on waste management" ECHO's requirement. <ul style="list-style-type: none"> Why sustainable waste management and preserving the environment is beneficial in terms of protection and health aspects How individual behaviours of all the stakeholders involved can contribute to environmental protection and a healthier living environment Health hazards from burning plastic and other waste Chemicals that are hazardous to children and pregnant women in particular 	
ECHO Reco	GHG emissions	Cash and voucher - MEB	For Cash and Voucher, include environmental considerations in the Minimum Expenditure Basket , in addition to the risk and mitigation analysis.	<ul style="list-style-type: none"> Take into consideration the risks related to the purchase of imported products, the use of single-use items, or non-renewable, dirty fuel sources, etc. Include potentially more expensive and more durable alternatives in the MEB 	
ECHO Reco	GHG emissions	Cash and voucher - impacts	Promote continued monitoring of the environmental impact of purchases made to detect any behaviours or choices incentivised by cash and vouchers that may be environmentally damaging and then introduce mechanisms to manage these situations where feasible.	<ul style="list-style-type: none"> whether persons are primarily buying locally produced products whether the items purchased lead to water or air pollution whether persons have to resort to collecting firewood from their environment whether persons have to use resources from the natural environment to construct shelters "What is important to you when you select your products or/and services in the market (cost, quality/durability a mix of both)?" "How do you try to minimise expenses (for example, do you recycle, reuse products/materials or prioritise expenses)?" 	
ECHO Reco	Global ecosystem degradation (air, soil, water and biodiversity)	Cash and voucher - Financial service providers	Prioritise Financial Service Providers that do not invest in environmentally harmful sectors and if they exist, that invest in environmentally beneficial projects .		
ECHO Reco	GHG emissions	Cash and voucher - impacts	Promote complementary approaches outlining environmental considerations and risks of cash and voucher assistance	<ul style="list-style-type: none"> Market support interventions and/or linking with development actors implementing market system development activities Work with local suppliers to improve the environmental sustainability of the produces available on the local markets. 	
ECHO Reco	Food insecurity	Food assistance	Ensure collaboration and coordination of efforts with development actors to address food insecurity issues on a longer term by promoting regenerative, durable, and economically adaptive food systems .	The humanitarian food assistance programmes should integrate longer-term resilience enhancing projects, especially in protracted situations experiencing cyclical disasters. These should be based on sustainable agriculture including farming, livestock breeding and fishing practices, regenerative approaches and rehabilitation of local food production systems.	
ECHO Reco	Global ecosystem degradation (air, soil, water and biodiversity)	Sustainable farming	Promote programmes of sustainable farming and discourage the use of water intensive practices by providing capacity building activities to promote the incorporation of biological as well as ecological processes into agricultural and food production practices.	<ul style="list-style-type: none"> prioritising local inputs (crop varieties, livestock breeds, locally produced and traditional tools, etc.) over imported ones introduction of trainings on Community Supported Agriculture (CSA) conservation practices integrated pest management (IPM) 	
ECHO Reco	Global ecosystem degradation (air, soil, water and biodiversity)	Food assistance - Pesticide - Fertilizer	In projects with pesticide and fertiliser distribution , prioritise indigenous means and techniques over chemical-based products and avoid entirely the use of highly hazardous pesticides.	Encourage the use of locally available organic fertilisers and bio-pesticides/biological pest control.	
ECHO Reco	Waste accumulation	Food assistance - distribution - waste management	Incentivise a locally led return system to ensure that packaging is collected and re-used (this can also be a source of income), in cases where a market assessment has shown a consistent supply of both recyclable materials and demand.	Establishment of a local 'plastic/packaging recycling/reuse initiatives'	
ECHO Reco	Depletion of resources	Deforestation - improved stoves	If new cooking stoves and energy alternatives are introduced, they have to be accompanied by sensitisation campaigns and trainings on appropriate fuel management and use as well as maintenance of specific cooking stoves.	Include training and messaging on energy-efficient cooking habits as part of food distribution programmes, recognising that this is also dependent on the NFIs/kitchen kits that are distributed, which should also be familiar and acceptable to the community.	
ECHO Reco	GHG emissions	Food assistance - energy	Distribute pre-processed food or include pre-processing options on site.	Distribution of milled grain, processed cassava, parboiled rice	
ECHO Reco	Waste accumulation	Food assistance - waste management	Repurpose organic waste as compost	Compost can be used for: <ul style="list-style-type: none"> providing nutrients to crops, servicing as fertiliser, acting as a soil conditioner, increasing the humus or humic acid contents of the soil. introducing beneficial colonies of microbes that help to suppress pathogens in the soil reducing expenses related to purchase of commercial chemical fertilisers land/stream reclamation, wetland construction, and landfill cover 	
ECHO Reco	Global ecosystem degradation (air, soil, water and biodiversity)	Livelihoods	Promote environmentally sustainable economic activities	<ul style="list-style-type: none"> Support the setup of savings and loan associations as a means towards organisational strengthening and contributing to their empowerment through environmentally sustainable economic activities Training / information of the benefits of using the savings on environmentally sustainable solutions. 	
ECHO Reco	Global ecosystem degradation (air, soil, water and biodiversity)	Livelihoods - Renewable energy	Provide renewable energy for businesses and support market-based long-term recovery energy interventions, in cooperation with development actors and the private sector.		
ECHO Reco	Waste accumulation	Health facility - waste management	Use health facility safety assessment tools as an opportunity/entry point for looking at waste management.		

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
ECHO Reco	Adverse health and/or safety effects	Health - Awareness	Promote education and awareness programmes for professionals working in healthcare settings on the link between health and environment and effectively prepare for the additional health risks posed by climate change.	Suggested training content: <ul style="list-style-type: none"> Environmental responsibilities (on individual and organisation's level) Environmental risks Environmental Management Systems and environmental targets Measures and strategies to mitigate environmental risks with focus on waste reduction Session on One Health and Planetary Health approach, which looks at the interconnections between hierarchically organised systems of human, animal, and environmental health. 	
ECHO Reco	Waste accumulation	Health facility - waste management	Enhance the sustainability of health facilities in terms of food serving	<ul style="list-style-type: none"> Sustainable food plan and procurement of locally produced foods. Eliminating or reducing the use of disposable products in food services. Reducing the use of non-food service paper products or using efficient dispensing systems. Eliminating or reducing the use of bottled water for patients. Examining ways to reduce food waste. Organic garden onsite and/or a compost pile. 	
ECHO Reco	Degradation of surface or groundwater quantity and/or quality	Health facility - Water conservation	Enhance the sustainability of health facilities in terms of water use reduction	<ul style="list-style-type: none"> Establishing baseline water usage needs, taking into consideration the rainfall patterns and climate change trends. Channelling drainage to soak pits, harvesting rainwater from roofs and excess channelled to soak pits Proper maintenance and regular clearing of drains to reduce flooding risks. Installing a rainwater capture system and accessing and upgrading plumbing to allow captured rainwater to be used for non-potable uses. Setting up greywater reuse systems for sanitary purposes such as flushing toilets. Equipping the facility with high-efficiency plumbing fixtures, low-flow faucets, dual-flush toilets or other innovative technologies to maximise water savings 	
ECHO Reco	GHG emissions	Health facility - Energy	Enhance the sustainability of health facilities in terms of energy supply	<ul style="list-style-type: none"> Considering adopting solar power (PV) systems to power health centres. Replacing inefficient equipment/fixtures/devices and features with energy efficient ones, preferably using renewable energy (e.g., LED bulbs, solar fridges for vaccination, solar lamps). Distributions of solar lamps and other electric appliances should however come hand in hand with considerations on repair shops, favouring supply of repairable and recyclable good quality devices over other cheaper shorter-lived options. 	
ECHO Reco	Waste accumulation	Health facility - waste management	Establish a storage system and segregate waste when it is generated and set up a routine that ensures the use of medicine according to the 'First Expiring First Out' principle.		
ECHO Reco	Waste accumulation	Health facility - waste management	Promote circular healthcare systems, by optimising raw materials and minimising waste through up and downcycling medical materials and developing sustainable procurement guidelines in collaboration with suppliers.		
ECHO Reco	GHG emissions	Crosscutting - Procurement	Favour and promote procurement of products from localised producers as long as quality and environmental sustainability can be ensured, with reduced or recyclable packaging .	<ul style="list-style-type: none"> sourcing raw ingredients from sustainable plantations. limiting use of chemicals during production. promoting recyclability or facilitating reuse or recycling of packaging 	
ECHO Reco	Waste accumulation	Nutrition - waste management	Establish a bring-back system for used sachets of RUTF, RUSF and fortified flours to facilitate management of the waste they produce.	<ul style="list-style-type: none"> Encourage people to bring back used sachets to receive new rations. In case mothers or carers are unable to bring back the sachets, they would still receive the new ration. Accompany the collection of solid waste by either a local method of management and disposal of waste or a waste valorisation (recycling or reuse) programme. 	
ECHO Reco	Global ecosystem degradation (air, soil, water and biodiversity)	Crosscutting - Advocacy	Integrate environmental considerations in protection evidence-based advocacy and enhance the protection of the natural environment in pervasive violence and armed conflict contexts.		
ECHO Reco	Waste accumulation	Protection - Waste management	When designing protection facilities like Child-Friendly Spaces (CFS) and Women and Girls' Safe Spaces (WGSS), ensure collaboration with other sectors, including WASH, supply and logistics, to develop joint approaches in addressing waste management, as well as investing in renewable sources and managing power consumption, supporting water conservation and water harvesting/greywater reuse systems.		
ECHO Reco	Adverse effects on human populations	Crosscutting - Preparedness	Prepare or seek out existing environmental profiles of the given site of intervention to inform preparedness measures and to support informed decision-making of humanitarian interventions to respond and recover during and after a disaster/crisis.	Example of environmental sheet	
ECHO Reco	Global ecosystem degradation (air, soil, water and biodiversity)	Crosscutting - Preparedness	Integrate natural resource management into the project frameworks alongside disaster preparedness objectives.	Farmer Managed Natural Regeneration (FMNR)	
ECHO Reco	Degradation of surface or groundwater quantity and/or quality	Construction - Water conservation	Integrate rainwater capture and greywater capture into shelter and facilities designs .		
ECHO Reco	GHG emissions	Crosscutting - Procurement	Consider opportunities to strengthen the capacity of local communities and supply markets to support local market actors and develop opportunities for local production and procurement, while considering the need to procure environmentally friendly humanitarian items .	Engaging local stakeholders by procuring locally, through either direct or cash-based assistance, and supporting local markets and businesses, can be an important source of economic recovery.	
ECHO Reco	GHG emissions	Procurement - Life cycle of products	Consider the environmental impact of products throughout their full life cycle when similar products from different origins are compared. Comparison of different items and services through a multi-criteria decision analysis with the aim of finding the best compromise between costs, environmental impacts and functionality.	<ul style="list-style-type: none"> clean production, material no use and emission of substances of concern through the use and end of life phases of products 	
ECHO Reco	Waste accumulation	Crosscutting- Waste management	Plan for reducing packaging materials as much as possible, then plan on recovering and recycling unavoidable packaging locally or even returning them to the vendor for re-use.	<ul style="list-style-type: none"> Reduce or eliminate single use plastic bulk packaging, and do not employ single-use plastic wrapping around individual NFIs, unless it is essential to the quality/sterility of the item. Ensuring waste collection and management of packaging at distribution points Recover packaging materials, reusing them locally 	
ECHO Reco	GHG emissions	Procurement - contracts	Explore pooling opportunities and consider joint procurement of goods and services with peer organisations as a leverage on producers and suppliers to use more environmentally friendly approaches to production and transport.	<ul style="list-style-type: none"> using existing contracts of other organisations procuring from other organisations joint procurement 	
ECHO Reco	GHG emissions	Crosscutting - Procurement	Include environmental Requirements in suppliers'/vendors'/contractors Expressions of Interest (EOIs), Statements of Work (SOWs), tender documents, and contracts. Create and apply selection criteria that matches the environmental Requirements.	The revised technical specifications of products should consider: <ul style="list-style-type: none"> - the impacts of packaging. - transport/location of production facilities. - the materials used - the processes of production - the product end of life management 	
ECHO Reco	GHG emissions	Offices - Energy	Enhance the sustainability of facilities and warehouses. Invest in solar or wind power sources and reduce energy consumption.	<ul style="list-style-type: none"> Using water efficient taps, leak prevention and water recycling methods. Installing energy efficient light bulbs and other energy efficient equipment Phasing out of ozone-depleting gases from air conditioning systems in warehouses and compounds. If storage facilities are going to be used for more than 2 years, investment in renewable power sources should be considered 	
ECHO Requirement	Degradation of surface or groundwater quantity and/or quality	WASH - environmental impact assessment	For shelters and WASH projects, conduct a project-level environmental screening/assessment in coordination with fellow partners	use the Nexus Environmental Assessment Tool (NEAT+), or a similar tool to identify negative environmental impacts of the planned interventions considering also the impacts on the host populations' current and future needs for natural resources.	
ECHO Requirement	Degradation of surface or groundwater quantity and/or quality	WASH - environmental impact assessment	Prepare an environmental report based on the findings of the environmental screening/assessment	outline the environmental risks associated with the response and the measures planned to mitigate them.	
ECHO Requirement	Degradation of surface or groundwater quantity and/or quality	WASH - environmental impact assessment	Include environmental parameters or mitigation measures in the Monitoring and Evaluation plans of WASH programmes	Base it on the environmental risks and potential negative impacts identified through the risk analysis and in line with the environmental requirements applied for that context.	
ECHO Requirement	Degradation of surface or groundwater quantity and/or quality	Water supply - water conservation	Ensure Sustainable integrated water resource management at the catchment level	Calculate water balance (supply vs demand) based on principles of sustainable integrated water resource management at the catchment level taking into consideration demand from both displaced and host populations.	
ECHO Requirement	Degradation of surface or groundwater quantity and/or quality	Water supply - water conservation	Identify the most appropriate groundwater or surface water source taking into account possible environmental threats	Identify the most appropriate groundwater or surface water source taking into account possible environmental threats. Consider all water uses, domestic water and water for livelihoods, the seasonal variations and mechanisms for accessing drinking water. Ensure information sharing and linkages between different sectors to estimate usage and capacity of Page 2/25 de l'annexe	

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
ECHO Requirement	Degradation of surface or groundwater quantity and/or quality	Water supply - water conservation	Include future needs for sustainable water access	Work with stakeholders to locate water points and establish maintenance strategies with clear responsibilities and include future needs for sustainable water access. Include community consultation to understand needs, cultural and traditional practices regarding local water use, including those of women and marginalised groups will provide a solid base to design a sustainable and inclusive response.	
ECHO Requirement	Increased risks of future natural hazards	Water supply - water conservation	Favour rehabilitation of existing water points and sanitation facilities with DRR-inclusive measures	WASH interventions should be influenced by the type of hazard faced and level of vulnerability, hence be risk-informed, meaning that analysis and design should be based on a sound assessment of risks and the intervention should seek to reduce immediate and future risks. <ul style="list-style-type: none"> • increasing rainwater collection potential • improving water distribution targeting • reducing water use wastage • addressing water scarcity through an integrated approach 	• monitoring of groundwater depletion
ECHO Requirement	Degradation of surface or groundwater quantity and/or quality	Water supply - water conservation	Ensure appropriate water point drainage and look for sustainable opportunities to reuse water. If possible, ensure that greywater is separated from septic systems to facilitate its reuse.	<ul style="list-style-type: none"> • Greywater can be reemployed for watering vegetable gardens, for brick-making, for irrigation and in sanitation facilities, as long as measures are taken to prevent greywater from going septic • Constructed wetlands can be used to treat sewage, greywater, storm water runoff... They act as a bio-filter and can remove a range of pollutants to the point it is safe for irrigating crops and can even be made potable with a few additional treatment processes. 	
ECHO Requirement	Degradation of surface or groundwater quantity and/or quality	Water supply - water conservation	Ensure as much as possible that runoff/spent water from boreholes, hand pumps and wells is productively reused	<ul style="list-style-type: none"> • Reusing for irrigation 	
ECHO Requirement	Degradation of surface or groundwater quantity and/or quality	WASH - renewable energy	Prioritise the use of renewable energy in the operation and maintenance of the provided water services	<ul style="list-style-type: none"> • Solar Powered Water Schemes (SPWS) • Use of wind for electricity generation • Provide training for follow up and for ensuring proper maintenance/small repairs. In cases where renewable energy is not suitable (this should be justified), ensure that the generators used for water pumping are of well-suited size and storage tanks, pumps and pipes used for water pumping are designed jointly to maximise energy and cost efficiency of the system.	
ECHO Requirement	Degradation of surface or groundwater quantity and/or quality	Water trucking	If water trucking is included in the programme, provide a justification. If accepted as justified, ensure that the renewal of the water source can be ensured and ensure an exit strategy from water trucking in the short to medium term.	Water trucking should be reviewed for alternatives every 6 months.	
ECHO Requirement	Waste accumulation	WASH - waste management	Prioritise treating water over bottled water. Exceptions for using bottled water can be made for the short term in specific contexts (people on the move).	Exceptions for using bottled water can be made for the short term in specific contexts (people on the move). In this case, favour larger bottles over smaller ones and consider the use of reusable bottles. If bottled water is delivered, an appropriate waste management system for the bottles must be established.	
ECHO Requirement	Degradation of surface or groundwater quantity and/or quality	Water treatment - Chemicals	Where surface water is used and treated with chemicals , ensure that the residual sludge is properly disposed of, including in instances when filtration membranes are used.		
ECHO Requirement	Degradation of surface or groundwater quantity and/or quality	WASH - Excreta management	Design and build excreta management facilities based on risk assessment of potential contamination of nearby surface or ground water source, taking into consideration current and future climate related risks.	<ul style="list-style-type: none"> • Proper disposal of human and animal excreta • Properly functioning toilets. • Lids on the squatting hole of pit toilets The sanitation facilities should be planned based on an assessment of the local topography, ground conditions as well as groundwater and surface water	
ECHO Requirement	Adverse health and/or safety effects	WASH - Pest management	Maintaining a clean environment in and out of facilities to control infections and pests as well as the use of natural products and planning for a integrated pest management .	<ul style="list-style-type: none"> • Proper disposal of human and animal excreta, properly functioning toilets, and keeping lids on the squatting hole of pit toilets; • Proper disposal of solid waste to control insects and rodents • Ensuring good drainage in settlements • Draining standing water and clearing vegetation around open canals and ponds to control mosquitoes 	
ECHO Requirement	Degradation of surface or groundwater quantity and/or quality	WASH - Water efficiency	Integrate water efficiency measures into programme design (water saving technologies)	<ul style="list-style-type: none"> • Monitor, repair or notify authorities regarding leaks. • Use water-efficient fittings and equipment and put in place a proper monitoring system for usage and leak detection: <ul style="list-style-type: none"> - Above ground pipes to allow for easy maintenance and repair - Low flush toilets, dry toilets, waterless urinals and water efficient shower heads - Self-closing taps 	
ECHO Requirement	Degradation of surface or groundwater quantity and/or quality	Water access - National standard	Apply existing national standards and ensure that any extra sanitation load placed on existing systems does not affect the environment or the communities.		
ECHO Requirement	Degradation of surface or groundwater quantity and/or quality	Sanitation - Excreta management	Where Faecal Sludge Management (FSM) facilities/transport/treatment are required, favour nature-based solutions and ensure a risk-based approach based on the most suitable disposal or reuse route of the liquid and solid components of the treated faecal sludge.	<ul style="list-style-type: none"> • Agreement with local authorities for the use of land for off-site treatments and disposal • Nature-based treatments plants • Ways such as biological additives and earthworms to reduce the rate at which latrines fill up with faecal sludge and need to be emptied 	
ECHO Requirement	Waste accumulation	WASH - waste management	Ensure that sanitation facilities include appropriate waste disposal options for menstrual products and other hygiene items. Ensure local practices are identified and taken into consideration, to avoid unnecessary waste.	<ul style="list-style-type: none"> • Where appropriate and available, include reusable menstrual products and ensure information is provided on how to use them. • Provide the necessary equipment and appropriate facilities for the adequate washing and drying of menstrual products. 	
ECHO Requirement	Degradation of surface or groundwater quantity and/or quality	IWRM - wastewater	Proper disposal of wastewater so it does not pose a health or environmental hazard	In case landfills & wastewater treatment plants are necessary: <ol style="list-style-type: none"> 1- Justification to ECHO 2- Classification of project risks (taking into consideration size, location, future climate change related risks) 3- Environmental Impact Assessment 4- Set up/construction in coordination with local government and other relevant actors 5- Management plan for once the operation is over 	
ECHO Requirement	Degradation of surface or groundwater quantity and/or quality	Excreta management	Under no circumstances dispose of any treated or untreated biological waste like faecal sludge into surface water like lakes or rivers.		
ECHO Requirement	Waste accumulation	Waste management - Strategy	When implementing any type of project, establish new or upgrade existing practices for environmentally sustainable waste management in collaboration with the WASH sector, the Health sector, the local authorities and other stakeholders.	<ul style="list-style-type: none"> • If local health standards or policies on solid waste management exist, the humanitarian response should comply with them as quickly as possible. • Uncontrolled disposal and low-quality incinerators are not acceptable as they produce toxic emissions and air pollutants. 	
ECHO Requirement	Waste accumulation	Waste management - Strategy	Work with local authorities and service providers to integrate waste management into already existing systems and infrastructure and make sure they are not overloaded. Ensure the integrated waste management strategy is in line with local rules and regulations , unless the organisation has its own regulatory frameworks that are more stringent.	<ul style="list-style-type: none"> • Waste reduction and reuse at source • Separating reusable and recyclable materials from the rest of the waste and sorting them by type reduces the related costs, determines the final disposal strategies and ensures the recycling material is of a higher quality and has higher financial value • Recycling • Composting organic waste 	
ECHO Requirement	Waste accumulation	Waste management - Supply	Plan supply chain and procurement taking into account waste management options for the waste produced and the related costs, as well as roles and responsibilities for the key stakeholders.		
ECHO Requirement	Waste accumulation	Waste management - Strategy	Carry out an assessment based on public health risks on waste generated by households, institutions and existing practices. Assess capacities for local reuse, recycling, re-purposing and composting and support community-based waste management initiatives. Based on the assessment outcomes, and following the waste hierarchy include an integrated solid waste management strategy on a project level, which covers both liquid and solid waste, and explains why the chosen waste management options were opted for.	<ul style="list-style-type: none"> • Waste reduction and reuse at source • Separating reusable and recyclable materials from the rest of the waste and sorting them by type reduces the related costs, determines the final disposal strategies and ensures the recycling material is of a higher quality and has higher financial value • Recycle and ensure less waste is sent to landfill, giving further reductions in pollution. • Composting organic waste 	
ECHO Requirement	Waste accumulation	Waste management - Disposal	Provide clearly marked as well as fenced storage that include also elements of vector control, for waste generated in communal areas (market places, distribution, registration and transit centres,...). Organise and maintain regular solid waste management practices from designated public collection points .	<ul style="list-style-type: none"> • If applicable, the use of different types of disposal containers for recyclable material (different colours and/or material), will encourage their use. • Controlled disposal includes barriers between landfill and the external environment, such as soil and water, and if possible, air. 	
ECHO Requirement	Waste accumulation	Waste management - Awareness	Ensure adequate information is provided to affected persons to ensure that they are aware of the available disposal mechanisms for packaging and NFIs once they have reached the end of their lifespan.		

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
ECHO Requirement	Waste accumulation	Waste management - Awareness	Organise periodic or targeted sensitisation environmental campaigns with the affected populations and host communities to raise awareness and encourage behaviour change on waste management	<ul style="list-style-type: none"> Why sustainable waste management and preserving the environment is beneficial in terms of protection and health aspects How individual behaviours of all the stakeholders involved can contribute to environmental protection and a healthier living environment Health hazards from burning plastic and other waste Chemicals that are hazardous to children and pregnant women in particular 	
ECHO Requirement	Global ecosystem degradation (air, soil, water and biodiversity)	Waste management - Chemicals	Prevent expired chemicals building up in contexts where disposal is difficult	<ul style="list-style-type: none"> Purchase and stockpiling of chemicals should be done according to a roll out plan, where the quantity of chemical products is accurately calculated taking into consideration the expiry date and the disposal options in the areas of delivery Develop and apply a usetracker of chemicals 	
ECHO Requirement	Global ecosystem degradation (air, soil, water and biodiversity)	Waste management - Hazardous waste	Prevent and control hazardous waste which can harm people and the environment	<ul style="list-style-type: none"> Separate all hazardous waste (including asbestos) which can harm people and the environment. Store hazardous waste securely until it is safely disposed. 	
ECHO Requirement	Food insecurity	Food assistance - Waste management	Prevent food waste by distributing culturally appropriate food and ensuring its proper food storage, handling, and expiration date management.	<ul style="list-style-type: none"> procurement focused on locally produced foods, where possible coordination and collaboration with food aid suppliers, packaging suppliers, transporters to identify the most sustainable packaging 	
ECHO Requirement	Waste accumulation	Waste management - Strategy	Organise a solid waste management plan to collect and manage waste regularly from designated household or settlement level collection points.	<ul style="list-style-type: none"> Waste reduction and reuse at source Separating reusable and recyclable materials from the rest of the waste and sorting them by type reduces the related costs, determines the final disposal strategies and ensures the recycling material is of a higher quality and has higher financial value Recycle and ensure less waste is sent to landfill, giving further reductions in pollution. Composting organic waste 	
ECHO Requirement	Depletion of resources	Food assistance - Waste management	In collaboration with suppliers, promote sustainable food value chains , which minimise ecological damage, the depletion of resources and production of solid waste.	<ul style="list-style-type: none"> Favour locally produced products Discourage the use of single use plastic items linked to packaging. 	
ECHO Requirement	Food insecurity	Food assistance	Promote sustainable methods of consumption by favouring locally produced foods, supporting self-reliance and self-sufficiency of affected persons.	Food should be procured as much as possible from local sources. Cash-based approaches should be prioritised to give more flexibility and support local food systems and supply chains	
ECHO Requirement	Depletion of resources	Deforestation - improved stoves	Avoid establishing dependency on locally harvested biomass for cooking energy	<ul style="list-style-type: none"> Distribution of clean cooking energy and energy efficient cooking stoves as standard items (through in-kind or cash based). When providing cooking stoves, the efficiency and durability of the items should play the most important part for ensuring environmental sustainability Give preference to clean cooking energy over firewood or other traditional solid fuels that are affordable, sustainable, safe, and appropriate in the longer term. In contexts where firewood and charcoal are utilised as the main cooking energy source, Liquefied Petroleum Gas should be prioritised as a transitional, cleaner solution 	
ECHO Requirement	Global ecosystem degradation (air, soil, water and biodiversity)	Livelihoods	Enhance the enabling environment for the economic inclusion of affected persons, rather than developing parallel systems that may generate waste, damage ecosystems and have a limited impact on livelihoods	Providing sustainable livelihoods interventions in general, and/or cash transfers where possible, can be a buffer to avoid negative coping mechanisms that are damaging to the environment	
ECHO Requirement	Depletion of resources	Livelihoods	Promote livelihoods and income-generating activities that are resource-efficient	<ul style="list-style-type: none"> Ensure that environmental criteria are considered as part of sector selection when conducting value chain analysis and identifying viable income generating activities Assess whether items distributed to support livelihoods will lead to overexploitation or pollution of natural resources and assess whether more climate friendly alternatives exist. 	
ECHO Requirement	Degradation of surface or groundwater quantity and/or quality	Agriculture - Water conservation	In agricultural programmes , ensure inputs are sustainable and efficiently managed, including efficient water management and limit water trucking to emergency livestock management and new tree planting.	<ul style="list-style-type: none"> traditional rain-fed agricultural systems rainwater harvest improved planting technologies (mulching, Zai-holes) 	
ECHO Requirement	GHG emissions	Livelihoods	Avoid charcoal making as a livelihood or income generation activity as much as possible. Instead, favour alternative and more sustainable solutions that are context relevant and disaster risk and conflict sensitive.	Where the use of charcoal is unavoidable: <ul style="list-style-type: none"> using species to make the charcoal, such as <i>typha</i> or <i>Prosopis juliflora</i>, where available monitoring the impact of wood harvesting for firewood and charcoal production to see if wood is being harvested faster than it can regenerate. 	
ECHO Requirement	Depletion of resources	Livelihoods	Livelihoods : Promote trainings focussing on environmentally positive activities or ones that diminish environmental impacts. Avoid giving trainings that can lead to the over-extraction of natural resources or are harmful to the environment.	<ul style="list-style-type: none"> sustainable management of natural resources efficient use of fertilisers and agrichemicals, safe storage and disposal, Integrated Pest Management regenerative agriculture and focus on soil conservation and soil health use of organic fertilisers and biopesticides efficient use of water and water recycling/rainwater collection where possible climate change-informed agricultural decision making 	
ECHO Requirement	Depletion of resources	Livelihoods	Livelihoods and income-generating programmes that involve use of natural resources (wood, water, soil, sand, etc.) should include monitoring, also by the affected people, to ensure the renewal capacity of the natural resources, to avoid contributing to shortages and over-exploitation of resources.	Monitoring should include coordination with other humanitarian and development organisations regarding their livelihoods and local development programmes to prevent focussing on one or few types of livelihoods or income-generating activities that cumulatively might put too much pressure on the natural environment	
ECHO Requirement	Global ecosystem degradation (air, soil, water and biodiversity)	Livelihoods	Promote environmentally sustainable job opportunities ('green jobs'). If green jobs were not prioritised in livelihoods or income-generation projects , explain why other types of income-generating activities were opted for. Ensure ongoing market assessment in order to map the potential for environmentally friendly businesses and economy.	<ul style="list-style-type: none"> Waste collection/management (excluding medical or hazardous waste) Waste valorisation schemes including repair and reuse businesses, focusing on electrical components and appliances (solar lamps, solar home systems...) Fabrication and use of recycled bricks in construction Clean energy production (e.g. set up and maintenance of renewable energy systems, production of cooking energy alternatives) Water conservation and management activities Forest management and monitoring (reforestation and afforestation, fire management) Land and ecosystem management, restoration, including soil restoration and conservation Agroecology, agroforestry (including Farmer Managed Natural Regeneration), climate smart agriculture, organic farming and conservation agriculture, production of organic fertiliser, composting, beekeeping Construction of DRR infrastructure, including nature-based solutions prioritised by communities 	
ECHO Requirement	Global ecosystem degradation (air, soil, water and biodiversity)	Public health	Promote systematic integration of WASH, Health, Logistics and other relevant sectors while responding to public health emergencies, to develop comprehensive approaches in addressing health risks and to promote environmentally sustainable practices		
ECHO Requirement	Waste accumulation	Health facility - waste management	In contexts where collection and disposal depend on external actors, at least ensure segregation and separate storage inside the healthcare facility , while working with the HF managers to set up safe health waste disposal in or outside the HF. In cases where waste is collected and transported to locations with a dedicated facility for the safe disposal of medical waste, safe transportation of contaminated waste should be ensured.		
ECHO Requirement	Waste accumulation	Health facility - waste management	Plan waste treatment at health facility level in accordance with environmental laws and structures ruling the territory to the extent possible, unless the organisation has its own regulatory frameworks pertaining to waste treatment that are more stringent.	Where those are absent, use relevant international standards, guidelines and policies and/or the organisation's standards, guidelines and policies according to the most stringent Requirements and link with local waste management.	
ECHO Requirement	Air pollution	Health - Air pollution	In health facilities, low-quality incinerators are not acceptable as they produce toxic emissions and air pollutants, and do not completely sterilise. Instead, invest in improved, local incinerators, centralised treatment and ideally non-burn technologies.	<ul style="list-style-type: none"> Good practices in incinerator design, construction, operation (e.g., pre-heating and not overloading the incinerator, incinerating only at temperatures above 800°C), maintenance and lowest emissions; The use of waste segregation and waste minimisation practices to restrict incineration to appropriate infectious wastes; Availability of good practices and tools, including dimensional construction plans, clear operational guidelines, etc.; Correction of current deficiencies in operator training and management support, which leads to poor operation of incinerators; Materials containing chlorine such as polyvinyl chloride products or heavy metals such as mercury should never be incinerated. 	

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
ECHO Requirement	Waste accumulation	Health facility - waste management	Ensure adequate drug management and supply to reduce expiration of medical products. Ensure appropriate destruction of expired drugs and/or damaged medical consumables in accordance with national protocols and World Health Organisation (WHO) recommendations.	<ul style="list-style-type: none"> On the manufacturer level, extending the medications' shelf-life, choosing the most sustainable storage conditions and adjusting package sizes Stock management optimisation and loosening shelf-life policies, involving "first-in - first out" stock management and expiry date monitoring. Pharmaceuticals should be ordered on an as-needed basis to minimise expiration and disposal of unused portions. Investigate whether or not suppliers/manufacturers are willing to take back un-dispensed and/or expired pharmaceuticals for safe disposal. Prescribing practices should be rationalised, including consideration of prescription quantities and prescriptions for shorter durations. Products that generate less waste should be prioritised, meaning less wrapping material and packaging. Suppliers who take back empty containers for refilling are to be preferred 	
ECHO Requirement	Global ecosystem degradation (air, soil, water and biodiversity)	Crosscutting - Nexus - Emergency	Set the necessary foundations for the HDP nexus to ensure an access to services as early as possible and avoid environmental impacts associated with some of the temporary solutions implemented during the acute emergency phase .		
ECHO Requirement	Global ecosystem degradation (air, soil, water and biodiversity)	Crosscutting - awareness	Mainstream awareness on reduction of environmental impacts and climate change adaptation across the regular activities that support project implementation activities.		
ECHO Requirement	Waste accumulation	Nutrition - waste management	When designing nutrition programmes encourage the collaboration with other sectors, including WASH, health, food, supply and logistics, to develop integrated approaches in addressing waste management	Collection points can be set up at distribution centres/clinics/health centres, but also on a household level	
ECHO Requirement	Waste accumulation	Crosscutting - Waste management	Protection activities, such as information dissemination, capacity building or NFI distributions, should limit the use of non-reusable plastic and non-recyclable materials and adequately manage waste produced	<ul style="list-style-type: none"> Work in collaboration with other sectors, including WASH, health, supply and logistics, to set up waste management mechanisms Establish, whenever possible, a bring-back system for unused items or its packaging 	
ECHO Requirement	Adverse effects on human populations	Protection - Traditional ecological knowledge	A risk analysis should be carried out to identify the most vulnerable and marginalised populations and ensure that also their specific needs are meaningfully integrated in new, more sustainable and environment-friendly solutions proposed .	Over-exploitation of the natural resources in the area (e.g., wood, water, soil, sand) can exacerbate intra and intercommunal conflicts or not addressing peoples' energy needs for cooking or other activities as part of humanitarian response not only can lead to environmental degradation, but it is also a major protection risk.	
ECHO Requirement	Future natural hazards	Risks analysis	Ensure that activities are based on integrated natural hazards risk analysis and planning . Do not aggravate risks or vulnerabilities and work towards reducing them to the extent possible.	Risks analysis of natural hazards (storms, floods, earthquakes, tsunamis) and their potential long-lasting impacts on natural resources (surface and underground water bodies, soil, vegetation cover) and increased need of waster management (esp. debris)	
ECHO Requirement	Future natural hazards	Risks analysis	Acknowledge that environmental degradation is a risk driver, together with natural hazards, threats, climate change and violence/conflict & include context-specific environmental degradation amongst the risks assessed .	<ul style="list-style-type: none"> Slow-onset extreme weather events exacerbated by climate change (desertification; acidification of the ocean; salinisation of soils) Rapid-onset extreme weather events exacerbated by climate change (tropical storms; floods; forest fires) Environmental degradation linked to the activities implemented during a humanitarian response (natural resource depletion; air, water, or land pollution; erosion) 	
ECHO Requirement	Adverse effects on human populations	Crosscutting - Settlement	If new humanitarian settlements, or extensions of existing ones are planned, ensure as much as possible they are linked to existing infrastructure, facilities and livelihoods.		
ECHO Requirement	Erosion of biodiversity (wildlife and/or habitats)	Constuction	During programme implementation, avoid building and construction works in areas of special scientific interest - areas of land and water considered to represent natural heritage in terms of their: flora, fauna, animals, geology, and geomorphology.		
ECHO Requirement	Land use change	Construction - Deforestation	When implementing construction programmes, avoid deforestation and removal of vegetation as much as possible to maximise shading effects, protect from winds, and reduce erosion and flooding. To the maximum extent possible, avoid major land transformations.	Maintain the existing groundcover and establish appropriate drainage systems and soil retention engineering techniques.	
ECHO Requirement	Depletion of resources	Construction - Resources conservation	When conceiving the design of different structures (as communal facilities) favour sustainable materials and practices that do not deplete local natural resources or contribute to long-term environmental damage.	<ul style="list-style-type: none"> Avoiding using scarce or non-renewable materials; Ensuring restoration and replenishment of renewable construction materials (e.g., reforestation) through sustainable resource management; Re-use materials or components in situ, hence reducing transport of materials and associated carbon emissions; Use materials or components produced with little processing (with low embodied energy); 	
ECHO Requirement	Erosion of biodiversity (wildlife and/or habitats)	Deforestation - procurement	When procuring timber, bamboo or any related products be aware of the environmental impact and ensure procurement from local or international certified suppliers where possible.	<ul style="list-style-type: none"> Procurement from certified local or international suppliers (Forest Stewardship Council-FSC, Sustainable Forestry initiative-SFI, American Tree Farm system-ATFS). If certification cannot be obtained, humanitarian organisations should seek expert advice on sourcing, to ensure the timber procured is sourced uncontrolled or illegally, causing forest loss. 	
ECHO Requirement	Waste accumulation	Construction - waste management	Wherever possible, unused building materials can be sorted and stored so that they can be recycled, reused, or repurposed .	Reuse and recycling of tarpaulins should also be practiced if possible.	
ECHO Requirement	GHG emissions	Procurement - shipments	Plan procurement to reduce air shipments of goods and items, which are responsible for higher emissions than sea shipments and land transport.		
ECHO Requirement	GHG emissions	Fleet maintenance	Measure the movements, costs and maintenance of vehicles and means of transport to gather data about their use. Include maintenance of the vehicles in the project plan. Ensure the most sustainable and environmentally friendly performance of vehicles for the given context.	<ul style="list-style-type: none"> Fuel efficient vehicles and right-sizing of fleets. Use of locally available brands/types of vehicles, avoiding external dependency on spare parts or maintenance Sustainability analysis before donating vehicles to local organisations Monitoring of fuel consumption Monitoring of vehicle utilisation (payload and empty running) Conduction of preventative maintenance Disposing of used tyre casings, batteries, motor oil and other vehicle waste responsibly Shuttle and car-sharing services for organisations working in the same areas 	
ECHO Requirement	Waste accumulation	Waste management - waste reduction	Reduce and optimise secondary and tertiary packaging of food and NFIs. Reduce or eliminate single use plastic bulk packaging, and do not employ single-use plastic wrapping around individual NFIs (blankets, etc.), unless it is essential to the quality/sterility of the item.	<ul style="list-style-type: none"> Using biodegradable and/or recycled materials over plastic packaging Reducing the size of packaging, requiring less space to store and less fuel to transport 	
ECHO Requirement	Waste accumulation	Waste management - waste reduction	Avoid procuring single-use disposable items where applicable, and favour products with greater durability and high recycled content.	Tackling excessive use of single use items in packaging is crucial to reduce waste while at the same time optimising storage/transport space requirements and decreasing items cost as well as GHG emissions linked to transport. Reviewing technical specifications of products to make them less plastic intensive and to optimise their packaging, will facilitate this process .	
ECHO Requirement	Waste accumulation	Crosscutting - Procurement - Waste management	Ensure right-size procurement . Accurately calculate and plan the number of items needed, size and frequency of procurement and distribution in order to prevent unnecessary waste and environmental impacts from overproduction and over-procurement.	<ul style="list-style-type: none"> Virtual and/or white stocks agreements with suppliers (especially relevant in cases of volatile and unstable environments where programmes can get down-scaled, suspended or diverted) In case of over-procurement, reverse logistics should also be considered. Over-procurement can be also tackled through joint procurement approaches with other humanitarian actors. 	
ECHO Requirement	GHG emissions	Procurement - Local products	If their supply, durability, adequacy and environmental sustainability can be ensured, favour procurement of locally-produced items , when they provide more benefits than the importing option (considering delivery lead-times, cost and emission of transport).	Local procurement of medicines and medical supplies can occur only on condition that local markets have been assessed and stringent quality assurance is in place to avoid procurement of sub-standard or counterfeit products.	
GAC	Global ecosystem degradation (air, soil, water and biodiversity)	Environmental screening	Define the category of the initiative depending on its environmental risks and opportunities	Use the Global Affairs Canada's screening tool	
GAC	Global ecosystem degradation (air, soil, water and biodiversity)	Environmental assessment	Environmental analysis	To determine the depth of environmental analysis that is required for an initiative, use the Global Affairs Canada's screening tool. Category A (high environmental risk) initiatives require in-depth environmental analysis, and category B (low and moderate environmental risk) initiatives require an lighter environmental analysis. Category C (negligible environmental risk) and D (emergency projects) are exempted.	
GAC	Global ecosystem degradation (air, soil, water and biodiversity)	Environmental assessment	In-depth environmental analysis	To determine the depth of environmental analysis that is required for an initiative, use the Global Affairs Canada's screening tool. Category A (high environmental risk) initiatives require in-depth environmental analysis, and category B (low and moderate environmental risk) initiatives require an lighter environmental analysis. Category C (negligible environmental risk) and D (emergency projects) are exempted.	

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GAC	Degradation of surface or groundwater quantity and/or quality	Livestock - Manure Water conservation	Fencing of water sources to avoid contamination from livestock manure	<ul style="list-style-type: none"> Inspection of fence constructions by the monitoring committee Check of the condition of fencing at water points by the farmers and other community members 	<ul style="list-style-type: none"> Number of new water pumps Number of water sources protected by fencing Number of complaints about drinking water contamination Level of satisfaction with drinking water quality
GAC	Air pollution	Livestock - Manure	Proper collection and use of manure	<ul style="list-style-type: none"> Check manure collection and storage procedures (away from water sources, slopes, and residential areas) Evaluate manure uses 	
GAC	Degradation of surface or groundwater quantity and/or quality	Livestock - water conservation	Early warning of reduced water quality	Check water quality at water sources (surveys on the quantity of water collected per household and per water source; number of diarrhea cases; perceptions). Analyse possible fecal contamination of water samples.	
GAC	Global ecosystem degradation (air, soil, water and biodiversity)	Building and construction works	<ul style="list-style-type: none"> Minimize vegetation clearing Avoid inappropriate use of heavy machinery Promote soil erosion control measures Ensure proper and timely management of construction materials and wastes (promote the re-use of products when possible) Establish and enforce design and construction standards to ensure that the building is able to withstand extreme weather-related or geology-related events 	Soil erosion control measures: balance cut and fill for minimum deposition of earth; minimize time when soil surfaces are exposed to rain and wind; stabilize soil for example with mulch on vulnerable surfaces; resurface and revegetate exposed areas; implement buffer zones of vegetation on slopes and surrounding bodies of water; implement soil stability structures; keep the mining of clay and limestone for brick making to a minimum, and ensure adequate drainage control and water recycling for this type of activity, etc	<ul style="list-style-type: none"> Surface water characteristics (suspended sediments, pH, transparency, chemicals) Soil texture and composition characteristics Increase in vegetative cover Quantities of solid waste generated Quantities of reused or recycled products
GAC	Global ecosystem degradation (air, soil, water and biodiversity)	Building and construction works	<ul style="list-style-type: none"> Avoid creating stagnant water ponds which can be highly odorous and provide breeding grounds for mosquitoes Promote proper health and safety training, equipment (e.g. masks, earplugs, gloves, boots, and so on), workspace layout, and work periods Implement proper cleanliness, maintenance, accident, spill, overheating, fire and/or explosion control measures Ensure proper training on environmental issues and waste management Implement conservation and efficiency measures for energy, water and other natural resources / raw materials Implement pollution prevention or control devices to limit the harmful effects of pollutants (liquid, solid, or atmospheric) Ensure that sanitation facilities are located away from water sources, steep slopes, and vulnerable areas Promote waste segregation practices to enable the re-use of certain products, recycling of other products, composting of biodegradable wastes, and appropriate storage, transportation, treatment and disposal of other wastes 	<ul style="list-style-type: none"> Efficiency measures: use, prevention of overflow by shut-offs to system, regulation of water flows with valves or high-pressure nozzles, biological and equitable certification, environmentally friendly packaging, etc Pollution prevention and control: biological wastewater treatment, drainage systems, air filters, proper ventilation, improved stoves, alternative energy sources (for example, solar energy), recycling of scraps, minimal use of dangerous products (e.g. chemicals, laboratory products, solvents, lubricants, oil, batteries, dyes, glue, acids, heavy metals, radioactive substances, and so on) and their appropriate management (e.g. secured storage areas away from vulnerable elements, storage of flammable products away from all sources of heat or ignition, labelled leakproof containers with covers that are understandable locally), etc 	<ul style="list-style-type: none"> Surface water characteristics (suspended sediments, pH, transparency, chemicals) Soil texture and composition characteristics Increase in vegetative cover Rate of water use Quantities of solid waste generated Quantities of reused or recycled products Incidence of human illness or disease Frequency of accidents during the building's operational activities
GAC	Conflicts over land uses or natural resources	Water supply	<ul style="list-style-type: none"> Develop supply sources where water availability is adequate and the initiative will not conflict with existing human, livestock or wildlife water uses (especially during dry seasons) and so that withdrawals do not lead to major alterations of the surface water hydrology or exceed the groundwater recharge rate 	<ul style="list-style-type: none"> Consider water conservation measures instead of or in addition to a new water supply initiative, for example by upgrading or renovating existing systems (e.g. deepen and clean existing wells, reduce leakage, evaporation and seepage losses, and so on) and by promoting water recycling and re-use, where appropriate Determine and maintain adequate water flow levels to ensure continued access to water of downstream populations (and ecosystem health) Community participation and organization: a community management committee, including local representatives from different user groups and affected areas; community prioritization of intended uses; upstream/downstream user agreements; user fees, etc) 	<ul style="list-style-type: none"> Water flows and groundwater table levels in area Number of persons trained in environmental issues (such as water conservation and water quality monitoring)
GAC	Adverse health and/or safety effects	Water supply - health	<ul style="list-style-type: none"> Avoid creating stagnant water ponds Ensure locally adapted water treatment where water potability may present issues Avoid the entry of contaminants into the water source / supply system 	<ul style="list-style-type: none"> Ensure good drainage around water supply points Construct a spigot or similar system that prevents people from touching impounded water with their hands or mouths Monitor disease occurrence and other public health indicators related to water-borne diseases and infections, and take corrective measures as needed (e.g. physical changes to water supply and sanitation systems, public education, medical intervention) Ensure water is fit for drinking, for example, based on World Health Organization (WHO) guidelines, and ensure regular ongoing water testing by the community (of the water source and at various points along the water supply system) Ensure locally adapted water purification where water potability may present issues 	<ul style="list-style-type: none"> Incidence of human illness or disease (associated with water-borne diseases) Access to potable water Water quality (e.g. contaminants, salinity, transparency, suspended sediments, oxygen)
GAC	Degradation of surface or groundwater quantity and/or quality	Water supply - water conservation	<ul style="list-style-type: none"> Promote water conservation practices Limit diversion of surface waters and alterations to hydrology in fish migration and spawning areas Ensure that the water supply system is in line with siltation patterns, flow rates, and flood cycles of the surface waters Avoid salinization from groundwater use that exceeds its recharge rate (consider spacing and number of wells) Avoid the entry of contaminants into the water source / supply system 	<ul style="list-style-type: none"> Reduce possible leakage, evaporation, and seepage losses through appropriate design, installation, use, and maintenance of structures Implement a community education, training, and capacity building program to properly operate and maintain the system, as well as to improve hygiene and sanitation practices Ensure activities associated with chemical inputs are not taking place in the vicinity of the water source and supply system Locate latrines, septic systems (or other similar activities) and animal pens or areas of livestock concentration at least 30 m away from water source and supply system Locate water system well away from waste-generating activities or waste disposal areas Ensure that water extraction for crop production, bathing, laundering, and animal watering takes place in adequate predetermined areas Protect the water source and supply system from run-off or seepage of contaminants by using lids or covers on wells, well casing above ground level, fences, lined distribution pipes and wells, covered drains, soak-away pits for domestic grey waters or spillage from wells, treatment systems, etc 	<ul style="list-style-type: none"> Water quality (e.g. contaminants, salinity, transparency, suspended sediments, oxygen) Surface water flows and groundwater table levels in area Rate of water use Number of persons trained in environmental issues (such as water conservation and water quality monitoring) Monitoring of water levels in wells or impoundment structures
GAC	Soil degradation	Water supply - Soil conservation	<ul style="list-style-type: none"> Minimize soil exposition Implement soil protection measures and anti-erosion measures around the water source or the water supply system Promote a watershed or river bank or water source improvement program to enhance retention capacities in soils 	<ul style="list-style-type: none"> Minimize vegetation clearing and/or time when soil surfaces are exposed to rain and wind; Reforestation and revegetation Implement buffer zones of vegetation Use proper bedding materials for pipes Ensure proper use of heavy machinery Small-scale contouring or terracing Drainage structures with cobbled stone, gravel, or concrete, etc 	<ul style="list-style-type: none"> Rate of increase in vegetative cover of the watershed Variations in erosion of the watershed Surface water flows and groundwater table levels in area;
GAC	Soil degradation	Sanitation systems Soil conservation	<ul style="list-style-type: none"> Minimize soil exposition during construction of structures If there are risks of soil instability, another choice of location or stability structures/lining are usually required Implement soil protection measures and anti-erosion structures around the sanitation systems 	<ul style="list-style-type: none"> Minimize vegetation clearing and/or time when soil surfaces are exposed to rain and wind; Reforestation and revegetation Implement buffer zones of vegetation Use proper bedding materials for pipes Drainage structures with cobbled stone, gravel, or concrete, etc 	
GAC	Adverse health and/or safety effects	Sanitation systems - health	<ul style="list-style-type: none"> Avoid creating stagnant water ponds to reduce risks of water-borne diseases Avoid defecation in open areas and disposal of excreta or wastewater directly on land or into water sources without adequate treatment Avoid seepage, infiltration and direct contact with contaminants from sanitation systems 	<ul style="list-style-type: none"> Monitor disease occurrence and other public health indicators related to water-borne diseases and gastro-intestinal diseases, and take corrective measures as needed (e.g. physical changes to water supply and sanitation systems, public education, medical intervention) Ensure existing water sources remain fit for drinking (e.g. based on WHO guidelines) and ensure regular ongoing water testing by the community (of the water source and at various points along the water supply system) Various wastewater treatment options exist for domestic grey waters, ranging from soak-away pits and other physical filtering drainage systems to wastewater stabilization ponds, controlled release lagoons, and engineered wetlands with native and adapted species Ensure daily cleaning and adequate ventilation in latrines, for example the design of VIP (ventilated improved pit) latrines includes a ventilation pipe or air inlet and a mesh or flyscreen at its exterior extremity as a barrier for insects 	<ul style="list-style-type: none"> Water quality (e.g. fecal matter or coliforms, suspended sediments, oxygen, etc) Number of persons trained in environmental issues (such as hygiene, sanitation system maintenance, water quality monitoring) Incidence of human illness or disease (associated with gastro-intestinal diseases) Number of complaints of foul odours

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
GAC	Degradation of surface or groundwater quantity and/or quality	Sanitation systems - latrines	<ul style="list-style-type: none"> Avoid defecation in open areas and disposal of excreta or wastewater directly on land or into water sources without adequate treatment. Ensure that the sanitation systems are used specifically for biodegradable human wastes Avoid locating sanitation systems where the water table is high or where soils have a high clay or sand content (which is typically a sign of permeability). Avoid the entry of contaminants from the sanitation system into the water source / supply system. Locate latrines at least 30 m away from all surface waters and the water supply system, as well as downhill from the water supply. Protect water source and supply system from run-off or seepage of contaminants by using lids or covers on wells, well casing above ground level, fences, lined distribution pipes and wells, covered drains, soak-away pits for domestic grey waters or spillage from wells, treatment systems, and so on. In the case of latrines not specifically designed for composting, it is usually recommended that latrines be used in alternation so that natural decomposition of the excreta and elimination of pathogens can occur Ensure a proper resting period or decommissioning of latrines when they are filled to 0.5 m from the top 	<ul style="list-style-type: none"> Ensure adequate spacing between latrines and soak-away pits Implement a community education, training, and capacity building program to properly use, operate, and maintain the sanitation systems, as well as to improve hygiene attitudes and behaviour Ensure that maintenance workers are also trained in first-aid measures and relevant occupational health and security topics Ensure that the material collected from latrines or septic tanks is adequately treated, not directly applied on soils, and not disposed of improperly Ensure the use of a reliable and safe system for emptying latrines or septic tanks and transporting the collected material off-site for treatment 	<ul style="list-style-type: none"> Water quality (e.g. fecal matter or coliforms, suspended sediments, oxygen, etc) Number of persons trained in environmental issues (such as hygiene, sanitation system maintenance, water quality monitoring) Incidence of human illness or disease (associated with gastro-intestinal diseases) Number of complaints of foul odours
GAC	Soil degradation	Forestry - Resources conservation	<ul style="list-style-type: none"> Ensure the protection of natural forests and conserve vegetation on steep slopes and fragile soils Avoid inappropriate monoculture systems Avoid soil salinization from groundwater use that exceeds its recharge rate and from improper irrigation practices (see irrigation, water supply, and sanitation sectoral tools). Avoid improper use of heavy machinery and use low-impact equipment and methods for management and harvesting 	<ul style="list-style-type: none"> Rejuvenate soils through the use of compost (proper design, siting, training, fencing, and aeration are required to avoid pollution and nuisances) Plan harvesting activities outside of extreme seasons Implement anti-erosion structures and use techniques such as bunding or mulch to control erosion and enhance water infiltration Promote selective, sustainable, and careful harvesting of trees in small, unconnected blocks to minimize exposed soils and enhance opportunities for natural regeneration from adjacent forest, and respect the mosaic and diversity of the wooded area Minimize skid trail distances, construct tracks during the dry season, keep road gradients low but sufficient for natural drainage, locate access roads far away from vulnerable areas, leave vegetated strips along roadsides, and reseed or revegetate disturbed areas 	<ul style="list-style-type: none"> Soil quality (e.g. fertility, texture, chemicals)
GAC	Erosion of biodiversity (wildlife and/or habitats)	Forestry	Promote sustainable forestry and silviculture based on land-use capacity and vocation	<ul style="list-style-type: none"> Choose species and their management/harvesting in accordance with the carrying capacity of ecosystems (i.e. what an ecosystem and its components can sustain without compromising their growth, regeneration, and roles in ecological regulatory functions) Promote multi-purpose systems and fast-growing endemic, culturally significant and/or locally adapted species Promote intercropping, companion planting, and agroforestry 	<ul style="list-style-type: none"> Rate of increase in mixed vegetative cover Net rate of increase in forest cover (through natural regeneration and/or tree planting) Degree of biodiversity in the watershed (number of species and an appreciation of their populations) Extent of critical habitats (in hectares, for example)
GAC	Degradation of surface or groundwater quantity and/or quality	Forestry - water conservation	<ul style="list-style-type: none"> Promote water conservation practices into forestry programmes (consider availability and renewal of water, other uses, etc) 	<ul style="list-style-type: none"> Use tree species adapted to the local climatic, soil, and water characteristics Ensure chemical inputs, such as fertilizers, pesticides, and other dangerous products, are appropriately used 	<ul style="list-style-type: none"> Liquid effluent and receiving water quality (e.g. nutrients, chemicals, suspended sediments, transparency) Surface water flows and groundwater table levels in area
GAC	Global ecosystem degradation (air, soil, water and biodiversity)	Forestry - Chemicals	<ul style="list-style-type: none"> Avoid broad-spectrum pesticides and pesticides that can lead to bioaccumulation of toxic products in the food chain Do not use banned or unauthorized pesticides Do not apply any type of chemical product too close to steep slopes, streams, other water bodies, and drinking water sources. Do not wash any type of chemical product container in water bodies or drinking water sources, and do not use any type of chemical product container for storing food or water. 	<ul style="list-style-type: none"> Promote composting and use the adequate fertilizer for the species and the type of soil Promote the study of pests, their abundance, habitats, life cycle and resistance to pesticides Promote efforts to manage pests, rather than eliminate them, and promote the principles of integrated pest management Use physical and biological alternatives to these pesticide (e.g. traps, bait, weeding, crop rotation, companion planting, natural enemies, attractants or repellents, etc) 	
GAC	Adverse health and/or safety effects	Forestry - Chemicals	Reduce use of chemicals in forestry programmes	<ul style="list-style-type: none"> Ensure that phytosanitary labels and chemical labels, on leakproof containers with covers in secured storage areas, are understood and contextually relevant. Implement a training program in the safe and rational storage, handling, use, and disposal of all types of chemical products that may be used (e.g. fertilizers, pesticides, lubricants, oil, fossil fuels, glues, varnishes, preservation products, etc) Apply fertilizers and pesticides at the correct time, in correct amounts, and with appropriate equipment and measures (e.g. overalls, gloves, glasses, masks, ear plugs, etc) 	Incidence of human illness or disease (associated with chemical inputs)
GAC	Erosion of biodiversity (wildlife and/or habitats)	Forestry - Resources conservation	Ensure that the intensity and characteristics of harvesting respect the carrying capacity of local ecosystems, that is, what an ecosystem and its components can sustain without compromising their growth, regeneration, and roles in ecological regulatory functions	<ul style="list-style-type: none"> Implement an environmental training program on the importance of integrated, responsible, and long-term management (including regeneration aspects) of forests and woodlands 	<ul style="list-style-type: none"> Rate of increase in mixed vegetative cover Net rate of increase in forest cover (through natural regeneration and/or tree planting) Number of persons trained in environmental issues and responsible forest management
GAC	Global ecosystem degradation (air, soil, water and biodiversity)	Forestry - pollution	In forestry programmes, implement pollution prevention or control devices to limit the harmful effects of pollutants (liquid, solid or atmospheric) and of nuisances (dust, noise, and vibrations)		
GAC	Adverse health and/or safety effects	Forestry - Safety	Implement proper cleanliness, maintenance, accident, spill, overheating, fire and/or explosion control measures	<ul style="list-style-type: none"> Promote environmental awareness and training in the safe and appropriate maintenance and use of extraction equipment 	<ul style="list-style-type: none"> Incidence of accidents Incidence of fires
GAC	Soil degradation	Crop production - Soil conservation	<ul style="list-style-type: none"> Minimize vegetation clearing Avoid overly frequent soil tillage, inappropriate burns, and improper clearing techniques Avoid monoculture systems and annual field crops on vast areas which expose soils to risks of erosion Avoid use of groundwater that exceeds its recharge rate and avoid improper irrigation practices Choose the quantity and spacing of species in accordance with the carrying capacity of soils 	<ul style="list-style-type: none"> Rejuvenate soils through the use of agricultural residues, compost, or green fertilizers; for composting activities, proper design, siting, training, fencing, and aeration are required to avoid pollution by runoff and to avoid nuisances (e.g. odours, vermin, etc). Create fallow lands, multiple purpose systems / locally adapted diverse crops, crop rotation, intercropping, and companion planting. Plant live fences, windbreaks, fruit trees, nitrogen-fixing plants and implement anti-erosion structures (e.g. side hill ditches, diversion structures, gully plugs, small-scale contouring or terracing, etc) Plan harvesting activities outside of extreme seasons 	<ul style="list-style-type: none"> Incidence of human illness or water-borne diseases Liquid effluent and receiving water quality (e.g. nutrients, chemicals, salinity, pH, transparency, etc) Soil quality (e.g. fertility, texture, chemicals, etc) Qualitative appreciation of the productivity of aquatic environments receiving liquid waste Rate of vegetation clearing or deforestation Rate of increase in mixed vegetative cover
GAC	Degradation of surface or groundwater quantity and/or quality	Crop production - water conservation	<ul style="list-style-type: none"> In crop production projects, promote water conservation practices and appropriate technologies that minimize water needs and reduce water loss (e.g. consider availability and source of water supplies, groundwater recharge rate, other uses by the community, etc) 	<ul style="list-style-type: none"> Use crops that are adapted to local climatic, soil, and water characteristics Ensure that chemical inputs, such as fertilizers and pesticides, and organic inputs are appropriately used 	<ul style="list-style-type: none"> Liquid effluent and receiving water quality (e.g. nutrients, chemicals, salinity, pH, transparency, etc) Surface water flows and groundwater table levels in area
GAC	Global ecosystem degradation (air, soil, water and biodiversity)	Crop production - Chemicals	<ul style="list-style-type: none"> Minimize chemical inputs by using physical and biological alternatives to these dangerous products Avoid broad-spectrum pesticides and pesticides that can lead to bioaccumulation of toxic products in the food chain Do not use banned or unauthorized pesticides Use the appropriate fertilizer for the crops and in accordance with the type of soil Do not apply organic or chemical inputs too close to steep slopes, streams, ponds, other water bodies, and drinking water sources Do not wash chemical product containers in water bodies or drinking water sources 	<ul style="list-style-type: none"> Promote and provide training in organic agriculture and the appropriate use of organic inputs Promote the study of pests, their abundance, habitats, life cycle, and resistance to pesticides Apply organic inputs, fertilizers, and pesticides at the correct time (before field crops are planted for fertilizers, and when the study of pest abundance warrants it for pesticides; avoid windy conditions), in correct amounts, and with appropriate application measures Promote efforts to manage pests rather than eliminate them, and promote the principles of integrated pest management 	<ul style="list-style-type: none"> Incidence of human illness or water-borne diseases Liquid effluent and receiving water quality (e.g. nutrients, chemicals, salinity, pH, transparency, etc) Soil quality (e.g. fertility, texture, chemicals, etc) Number of farmers trained in environmental issues (such as pesticide use) Ratio of surface areas where pesticides are used Number of farmers applying organic farming practices
GAC	Adverse health and/or safety effects	Crop production - Chemicals	Reduce use of chemicals in crop production programmes	<ul style="list-style-type: none"> Do not use chemical product containers for storing food or water Promote the use of protective clothing (e.g. overalls, gloves, glasses, masks, etc). Ensure that phytosanitary labels are understood and contextually relevant Promote environmental awareness and training in the safe and rational storage, handling, use, and disposal of chemical products 	<ul style="list-style-type: none"> Incidence of human illness or disease associated with chemical inputs Number of farmers trained in environmental issues (such as pesticide use)
GAC	Soil degradation	Livestock - Soil conservation	<ul style="list-style-type: none"> When cultivating feed: create fallow lands, multiple purpose systems / locally adapted diverse crops Promote soil erosion control measures 	<ul style="list-style-type: none"> Plant live fences or windbreaks; promote reforestation and vegetated buffer strips; promote the reseeding of grasses; implement anti-erosion structures, such as terracing, etc Control the length of grazing time and succession of use in particular areas Restrict animal access to unstable/fragile areas by defining and fencing off critical areas Use cut-and-carry feed from elsewhere Limit animal numbers, mix species to maximize use of forage potential and choose the size and the composition of herds according to the seasonal and temporal availability of water and plants 	<ul style="list-style-type: none"> Soil quality (e.g. fertility, texture, chemicals, etc) Rate of vegetation clearing or desertification Rate of increase in mixed vegetative cover Rate of fodder use from cultivated areas and from "natural" ecosystems Ratio of surface areas where compost/manure is applied Number of breeders trained on environmental issues

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
GAC	Degradation of surface or groundwater quantity and/or quality	Livestock - water conservation	<ul style="list-style-type: none"> In livestock production programmes, promote water conservation practices (e.g. consider availability, other uses by the community, ect) 	<ul style="list-style-type: none"> Develop many small-capacity water points, place them strategically to spread the effect, and control their use Fence off permanent water sources from animals, especially when temporary sources are available during the wet season Ensure that manure and chemical inputs, such as fertilizers and pesticides, are appropriately used 	<ul style="list-style-type: none"> Liquid effluent and receiving water quality (e.g. nutrients, chemicals, salinity, pH, transparency, etc) Rate of water use Surface water flows and groundwater table levels in area Qualitative appreciation of the productivity of aquatic environments receiving liquid waste
GAC	Global ecosystem degradation (air, soil, water and biodiversity)	Livestock - chemicals	<ul style="list-style-type: none"> Avoid broad-spectrum pesticides and pesticides that can lead to bioaccumulation of toxic products in the food chain Do not use banned or unauthorized pesticides Use the appropriate fertilizer for the crops and in accordance with the type of soil Do not apply manure and chemical inputs too close to steep slopes, streams, water bodies, and drinking water sources Do not wash chemical product containers in water bodies or drinking water sources, and do not use chemical product containers for storing food or water 	<ul style="list-style-type: none"> Study pests, their abundance, habitats, life cycle, and resistance to pesticides Promote efforts to manage pests rather than eliminate them, and promote the principles of integrated pest management Apply manure, fertilizers, and pesticides at the correct time (when the study of pest abundance warrants it for pesticides; avoid windy conditions), in correct amounts and with appropriate application measures. 	<ul style="list-style-type: none"> Liquid effluent and receiving water quality (e.g. nutrients, chemicals, salinity, pH, transparency, etc) Soil quality (e.g. fertility, texture, chemicals, etc) Number of breeders trained on environmental issues
GAC	Erosion of biodiversity (wildlife and/or habitats)	Livestock - Habitats conservation	Prevent and control the degradation of wildlife habitats associated with animal husbandry	<ul style="list-style-type: none"> Avoid creating stagnant water ponds (e.g. site and orient water works, fields, and furrows to ensure adequate natural drainage of surface water; use spigots, lined canals, and pipes; avoid unsuitable gradients; construct straight or only slightly curved canals; install gates at canal ends to allow flushing; ensure adequate sub-surface drainage of fields; avoid over-irrigation; maintain water works, and clear sediments and weeds regularly; use intermittent drying-out periods, etc) Ensure alternate facilities for drinking and domestic water supply, bathing, and wastewater disposal Monitor disease occurrence and other public health indicators related to water-borne diseases and infections, and take corrective measures as needed (e.g. modifications to water works, education, medical action) Implement a training program for farmers and other community members in irrigation health risks; the efficient use of irrigation water; the maintenance of irrigation and drainage works; various agro-ecological methods; proper storage, handling, use, and disposal of agro-chemicals; and integrated pest management Avoid nutrient loading of waters and the entry of agro-chemicals and other contaminants into the system 	<ul style="list-style-type: none"> Incidence of wildlife habitats (for example, in hectares)
GAC	Conflicts over land uses or natural resources	Irrigation	Upgrading or renovate existing systems (reduce evaporation, seepage losses, and so on) and promote water recycling and re-use, where appropriate.	<ul style="list-style-type: none"> Consider water conservation measures instead of, or in addition to, a new irrigation initiative Ensure community involvement for effective planning and management of the irrigation system, and for equitable water distribution (e.g. with a community management committee; volume-based user fees; upstream/downstream user agreements,etc) Encourage crops with lower water demands Locate and size irrigation systems where water availability is adequate and the initiative will not conflict with existing human, livestock and wildlife water uses (especially during the dry season), and so that withdrawals do not lead to major alterations of the surface water hydrology or exceed the groundwater recharge rate 	<ul style="list-style-type: none"> Access to irrigation water and potable water
GAC	Degradation of surface or groundwater quantity and/or quality	Irrigation - chemicals	Avoid nutrient loading of waters and the entry of agro-chemicals and other contaminants into the system	<ul style="list-style-type: none"> Avoid creating stagnant water ponds Ensure alternate facilities for drinking and domestic water supply, bathing, and wastewater disposal Monitor disease occurrence and other public health indicators related to water-borne diseases and infections, and take corrective measures as needed Implement a training program for farmers and other community members in irrigation health risks; the efficient use of irrigation water; the maintenance of irrigation and drainage works; various agro-ecological methods; proper storage, handling, use, and disposal of agro-chemicals; and integrated pest management 	<ul style="list-style-type: none"> Incidence of human illness or disease (associated with water-borne diseases) Access to potable water
GAC	Degradation of surface or groundwater quantity and/or quality	Irrigation - water conservation	<ul style="list-style-type: none"> In irrigation programmes, promote water conservation practices Limit diversion of surface waters and alterations to hydrology, as well as blockage of fish migration and fish access to spawning areas (where there are reservoirs, water releases and/or habitat improvements may be required to sustain fish populations) Ensure irrigation system (and its reservoirs and spillways) is in line with silting patterns, flow rates, and flood cycles of the surface waters Avoid deterioration of reservoir water by extracting and using vegetation from the reservoir area before flooding and by avoiding entry of eroded soils and agro-chemicals Avoid salinization from groundwater use that exceeds its recharge rate, or from saline intrusion at the mouth of a waterway or in coastal or island areas 	<ul style="list-style-type: none"> Reduce possible leakage, evaporation, and seepage losses through appropriate design, installation, use, and maintenance of structures Protect water source from run-off or seepage of contaminants (e.g. by using lined distribution pipes, covered drains, soak-away pits) and prevent surface drainage of fields into water bodies 	<ul style="list-style-type: none"> Water quality (e.g. nutrients, agrochemicals, salinity, suspended sediments, and so on) in water sources and irrigation canals Reservoir oxygen levels Variations in erosion of the watershed Surface water flows and groundwater table levels in area Rate of water use Degree of biodiversity Variations in fish populations or number of fish deaths Number of persons trained in environmental issues
GAC	Soil degradation	Irrigation - Soil conservation	<ul style="list-style-type: none"> In irrigation activities, minimize soil exposition Implement soil protection and anti-erosion measures around the water source and the irrigation system Avoid waterlogging of soils Avoid salinization of soils 	<ul style="list-style-type: none"> Minimize vegetation clearing; minimize time when soil surfaces are exposed to rain and wind; resurface and revegetate exposed areas; implement buffer zones of vegetation; promote watershed and river bank restoration; use proper bedding materials for pipes, etc Avoid improper use of heavy machinery; avoiding unsuitable gradients and over-irrigation; appropriate design and layout of furrows; use of sediment traps in fields and canals to capture sediment for return to fields where appropriate; reforestation and revegetation; drainage structures with cobbled stone, gravel, or concrete; small-scale terracing and other agricultural / soil moisture conservation strategies Implementation of water conservation practices, adequate surface and sub-surface drainage, and lined canals or pipes Implementation of water conservation practices, mulching of exposed soil surfaces to reduce evaporation and the regular flushing of irrigated land 	<ul style="list-style-type: none"> Physical and chemical properties of irrigated soils Variations in erosion of the watershed Surface water flows and groundwater table levels in area Degree of biodiversity Number of persons trained in environmental issues
GAC	Conflicts over land uses or natural resources	Fish farming - habitats protection	<ul style="list-style-type: none"> Consider protection and restoration of natural habitats and fisheries instead of "artificial" means of production or the introduction of new species. Encourage the use of existing cleared land, depressions, hollows, and ditches to create artificial ponds. 	<ul style="list-style-type: none"> Limit areas converted to ponds, as well as surface area of ponds and enclosures. Avoid premature abandonment and digging of new ponds by optimizing the design, construction, and maintenance of the planned production system. Locate and size production systems where water availability is adequate and the initiative will not conflict with existing various water uses, and so that water withdrawals do not lead to major alterations of the surface water hydrology or exceed the groundwater recharge rate Combine water uses and promote water conservation practices, recycling, and re-use, where appropriate (e.g. appropriately treated pond water used for irrigation of crops; consider the availability and source of water supplies, groundwater recharge rate, other uses, and so on). Ensure community involvement for effective planning, operation, and management of the production system. 	<ul style="list-style-type: none"> Number of persons trained on environmental issues and responsible aquaculture management Groundwater recharge rate
GAC	Degradation of surface or groundwater quantity and/or quality	Fish farming - water conservation	<ul style="list-style-type: none"> Promote water conservation practices. Avoid deterioration of pond water by extracting and using vegetation from pond area before flooding, where applicable. Do not use banned products, and minimize the use of chemical inputs, antibiotics, drugs, hormones, etc Avoid broad-spectrum pesticides and substances that can lead to bioaccumulation of toxic products in the food chain. Ensure that chemical labels on leakproof containers with covers in secured storage areas are understood and contextually relevant. Avoid an increase in sedimentation and/or eutrophication (including toxic algal blooms) caused by the high input of particles, wastes and changes in the nutrient cycle generated by high stock concentrations, longline cultures of crustaceans, and certain structures such as floats and piers 	<ul style="list-style-type: none"> Keep species densities in enclosures and ponds at moderate levels. Line bottoms and sides of ponds, levees, and canals with impervious material; and design the structures to prevent overflow discharges, and storm and flood damage Ensure training in the safe and rational storage, handling, use, and disposal of all types of chemical products that may be used (including fuel and oil for boats). Use quality feed with low waste generation; use feed of the appropriate size for the age of the stock; feed the right amounts at the right time; distribute feed evenly; and use feed pellets designed to float longer in the water column Maintain water quality with aeration or other destratifying methods, sustainable stocking rates, controlled feeding rates and minimal chemical inputs, as well as with water exchanges. Release pond water into water body with adequate dilution and dispersal capability and after adequate settling and/or treatment. Time water releases with period of high water levels or flows and use shorter retention time of water Periodically move enclosures to different locations; manage stock wastes through bag systems, fallowing, vacuuming, or harrowing, where appropriate Alternate freshwater ponds, where appropriate, and allow ponds to dry out, lie fallow, or grow a crop to reduce the need for sludge and nutrient removal 	<ul style="list-style-type: none"> Water quality in pond drainage and/or effluents (e.g. nutrients, chemicals, suspended solids, transparency, turbidity, salinity, oxygen, etc) Surface water flows and groundwater table levels in area Rate of water use Number of persons trained on environmental issues and responsible aquaculture management

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
GAC	Erosion of biodiversity (wildlife and/or habitats)	Fish farming	<ul style="list-style-type: none"> Ensure protection of natural habitats and species Avoid large-scale aquaculture systems Choose species and their management/harvesting in accordance with the carrying capacity of ecosystems (i.e. what an ecosystem and its components can sustain without compromising their growth, regeneration, and roles in ecological regulatory functions) and while respecting the mosaic and diversity of the area Use hatchery stock where possible Promote the use of locally adapted species, indigenous species and/or culturally significant species rather than introduced species as stock and consider cultivating herbivorous species Avoid loss of ground cover and erosion Choose sites with soils that will retain water and be suitable for building dikes (clay-loam or sandy-clay soils, preferably); soils should be alkaline (acidic organic soils are not suitable). Avoid disturbing water flows to and from wetlands Avoid inappropriate stake or longline cultures that slow water movements and cause a subsequent accumulation of sand 	<ul style="list-style-type: none"> Ensure stock is kept healthy (isolation of diseased individuals may be required) and confined (with screens at the entrances and exits of structures) Implement pollution prevention or control measures to limit pollutants, nuisances, and risks of accidents or to health and occupational safety associated with cultivating, harvesting, processing, storage, and transportation Ensure environmental training in the importance of integrated, responsible and long-term management as well as in safe and appropriate harvesting, processing, storage, and transportation methods (including proper cleanliness, waste management, maintenance, accident and spill prevention, and emergency response) Leave the most productive mangroves intact; site ponds on the landward side of mangroves Limit diversion of surface waters and alterations to hydrology as well as blockage of migration, feeding, spawning, and nursery areas with piers or floats Ensure that the production system is in line with siltation patterns, flow rates, tidal movements, currents, and flood cycles of the surface waters; situate ponds away from tidal areas subject to flooding; avoid shallow waters and areas with aquatic vegetation; Consider double nets or other techniques to avoid predation by birds and aquatic species; choose a size of net mesh that will prevent entanglement of wild species; use properly tensioned net pen lines, thick ropes or protective netting and weights to avoid entanglement of wild species 	<ul style="list-style-type: none"> Degree of biodiversity in the aquatic and riverine habitats (e.g. number of species and an appreciation of their populations) Extent of critical habitats
GAC	Conflicts over land uses or natural resources	Solid waste management - treatment sites	<ul style="list-style-type: none"> Ensure community involvement in locating and preparing the initiative's sites and access routes, as well as in developing responsibilities for managing the initiative's operations Design the initiative to provide alternatives for affected individuals 	<ul style="list-style-type: none"> Community involvement in the operation, through collection fees Local employment or alternate livelihoods for affected individuals 	<ul style="list-style-type: none"> Number of persons trained on environmental issues
GAC	Adverse health and/or safety effects	Solid waste management - health risks	<ul style="list-style-type: none"> Plan site preparation/construction activities and operations according to a schedule compatible with the climate and the population's activities. Locate solid waste management site(s) well away from and downwind of human settlements and vulnerable areas. Minimize the handling of waste and quantities of waste to be disposed of; ensure adequate solid waste segregation; and maximize containment. Provide specific enclosed areas for vehicle unloading and refuse sorting; ensure good ventilation, dust suppression, ground impermeability, and worker protection, as well as accident and emergency preparedness; and avoid excessive traffic. 	<ul style="list-style-type: none"> Promote environmental training, health and safety training, as well as the use of adequate protective clothing and equipment Prevent access to solid waste management site(s) by unauthorized persons and wildlife (through vigilance, control of incoming and outgoing traffic, warning signs, security fences). Provide specific and regularly cleaned and maintained enclosed collection vehicles or carts (with tarpaulin covers), and ensure collection is sufficiently frequent. Ensure adequate composition, aeration, and maintenance of compost. Solid waste landfills: spread and compact adequately sorted incoming refuse, and cover with soil, daily; provide for safe ventilation, recovery, and treatment of decomposition gases, and consider their possible use as an alternative energy source (biogas). Solid waste incinerators: install appropriate, effective equipment for complete combustion and air pollution control, ensure that only wastes adequate for incineration are burnt Study disease carriers and monitor disease occurrence and other public health indicators, and take corrective measures as needed. 	<ul style="list-style-type: none"> Concentrations of pollutants in air Concentrations of pollutants in surface and groundwaters Noise and dust levels Incidence of human illness or disease Frequency of accidents
GAC	Soil degradation	Solid waste management - Soil conservation	<ul style="list-style-type: none"> Implement appropriate erosion control measures during site preparation Maintain erosion and drainage control during operations Minimize vegetation clearing Avoid inappropriate use of heavy machinery 	<ul style="list-style-type: none"> Ensure training in soil degradation control Minimize time of exposure of areas cleared or excavated, especially during rainy and windy periods; stabilize and revegetate disturbed areas When stockpiling soil, promote the creation of small mounds Implement buffer zones of vegetation Install adequate surface drainage control measures 	<ul style="list-style-type: none"> Quantities of re-used or recycled products Increase in composting activities Number of persons trained on environmental issues
GAC	Global ecosystem degradation (air, soil, water and biodiversity)	Waste management	<ul style="list-style-type: none"> Promote reduction of wastes at source as well as waste segregation to enable the re-use of certain products, recycling of other products, composting of biodegradable wastes and appropriate collection, storage, transportation, treatment, and disposal of other wastes. Implement pollution prevention or control devices to limit the harmful effects of pollutants, as well as leachate recovery and treatment systems Ensure a proper choice solid waste landfills siting 	<ul style="list-style-type: none"> Ensure separate collection, storage, transportation, treatment, and disposal of hazardous wastes (e.g. biomedical, heavy metals, tires, oil, batteries, paint, solvents, acidic solutions, and so on) Develop a leachate treatment system through physical, chemical, or biological means, for example, with a sewage treatment facility, recirculation that sprays leachate from the bottom of the landfill onto its surface, evaporation of leachate through a series of open ponds or lagoons, etc Ensure training in environmental issues, solid waste management, as well as health and safety topics, and raise community awareness of the importance of waste reduction, recovery/re-use and recycling to reduce waste disposal requirements and extend the life of disposal sites For solid waste landfills: siting where the underlying soils are relatively impermeable and have a high capability for containing contaminants; well above the underground water table and where topography is relatively flat; use a landfill liner/sealer if leachate risks entering groundwater; siting well away and down gradient from surface waters and groundwater recharge areas or sources; install test well(s) at landfill perimeter 	<ul style="list-style-type: none"> Concentrations of pollutants in surface and groundwaters Number of persons trained on environmental issues Monitoring of water quality during operations, for early identification and mitigation of emerging adverse effects
GAC	Soil degradation	Construction - Soil conservation	Environmental ethics during construction work	<ul style="list-style-type: none"> Minimize vegetation clearing Protect disturbed soils from wind and rain Minimize use of heavy machinery Use anti-erosion or soil stability structures 	
GAC	GHG emissions	Deforestation - improved stoves	Improved stoves to reduce deforestation and adverse health effects of greenhouse gas emissions and air pollution from firewood combustion		
GAC	GHG emissions	Energy	Alternative energies (such as solar energy) instead of fossil fuels		
GAC	Depletion of resources	Reforestation	Awareness or training in forest conservation		
GAC	Depletion of resources	Reforestation	Reforestation with indigenous (locally adapted) species		
GAC	Soil degradation	Crop production - Soil conservation	In crop production programmes, reduce erosion and conserve soils	<ul style="list-style-type: none"> Soil amendment Live hedges and agroforestry Anti-erosion structures 	
GAC	Soil degradation	Crop production - Soil conservation	Appropriate crop rotation		
GAC	Soil degradation	Crop production - Soil conservation	Use of locally adapted crop species or those that can restore nutrients to soil		
GAC	Soil degradation	Crop production - Soil conservation	Environmental awareness or training in organic agriculture techniques		
GAC	Degradation of surface or groundwater quantity and/or quality	Water supply - Water conservation	Protect water bodies	<ul style="list-style-type: none"> Monitoring water quality and flow Rehabilitating banks with vegetation Creating buffer zones Collecting garbage 	
GAC	Degradation of surface or groundwater quantity and/or quality	Sanitation - Water conservation	Protect water bodies in sanitation activities	Locating latrines and other pollution sources away from water bodies and steep slopes	
GAC	Waste accumulation	Waste management - Strategy	Environmentally friendly waste management practices	<ul style="list-style-type: none"> Re-using paper and other products Recycling Source separation of biomedical wastes and their proper disposal) 	
GAC	Global ecosystem degradation (air, soil, water and biodiversity)	Agriculture - Fertilizer	Composting organic wastes and use as a fertilizer		
GAC	Degradation of surface or groundwater quantity and/or quality	WASH - supply and committees	Joint committees of local representatives to ensure fair distribution of the initiative's benefits and/or compensation to downstream users		
GAC	Degradation of surface or groundwater quantity and/or quality	WASH - access to water	Determine and maintain adequate flow levels to ensure continued access to water of downstream populations (and ecosystem health)		
GAC	Increased risks of future natural hazards	Settlements - natural hazards	Land-use planning that guides the expansion of human settlements away from high hazard zones		
GAC	Increased risks of future natural hazards	Construction - natural hazards	Establishment and enforcement of design and construction standards to ensure that the buildings are able to withstand extreme weather- or geology-related events		
GAC	Global ecosystem degradation (air, soil, water and biodiversity)	Agriculture	Agricultural and land management practices that protect soils and water		
GAC	Increased risks of future natural hazards	Forest - Flood hazard	Forest management and watershed protection to reduce flood hazard		
GAC	Adverse health and/or safety effects	Livestock - Manure	Minimize contamination from manure	<ul style="list-style-type: none"> Keep manure and urine away from household areas and water bodies, and adequately collect and store manure for composting Consider using a biogas system (methane) Avoid creating stagnant water ponds Implement disease control measures 	Incidence of human and animal illness or disease (associated with chemical inputs, diseases, pests)

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
GAC	Adverse health and/or safety effects	Livestock - chemicals	Reduce use of chemicals in livestock production programmes	<ul style="list-style-type: none"> Promote and provide protective clothing and equipment (e.g. overalls, gloves, glasses, masks, and so on) to minimize danger to field workers applying agro-chemicals. Promote and provide training in organic agriculture and the appropriate use of manure Ensure that phytosanitary labels are understood and contextually relevant Implement a training program in the safe and rational storage, handling, use, and disposal of chemical inputs 	Incidence of human and animal illness or disease (associated with chemical inputs, diseases, pests)
GAC	Adverse health and/or safety effects	Fish farming - Chemicals	Ensure adequate water quality, e.g. ensure chemical inputs, antibiotics, drugs, growth hormones, and other dangerous products are appropriately chosen, used, and stored	<ul style="list-style-type: none"> Assess ecology of water-borne disease vectors Ensure good drainage around water supply, ponds, and drainage works. Promote the use of filter feeders and species that feed on disease vectors Monitor disease occurrence and other public health indicators related to water-borne diseases and infections, and take corrective measures as needed 	Incidence of human illness or disease (associated with chemical inputs and water-borne diseases and infections)
GAC	Adverse health and/or safety effects	WASH - Health	Avoiding the creation of stagnant water ponds to reduce risks of water-borne diseases		
SIDA	Global ecosystem degradation (air, soil, water and biodiversity)	Environmental screening	Project environmental impacts to be screening using the SIDA's screening tool to define the level of environmental risks		
SIDA	Global ecosystem degradation (air, soil, water and biodiversity)	Environmental impact assessment	Conduct a simple environmental assessment of the project/programme with a minor environmental impact	During the planning or appraisal phase, Sida requests that the partner makes an environmental assessment of the programme/project. This shall be done for all contributions, based on the results of the SIDA's screening tool.	
SIDA	Global ecosystem degradation (air, soil, water and biodiversity)	Environmental impact assessment	Conduct a major environmental assessment of the project/programme	During the planning or appraisal phase, Sida requests that the partner makes an environmental assessment of the programme/project. This shall be done for all contributions, based on the results of the SIDA's screening tool.	
SIDA	Degradation of surface or groundwater quantity and/or quality	WASH - IWRM	Implementation of Integrated Water Resource Management	Where IWRM is not used in decision-making processes on freshwater management there is a risk that the aspects of less powerful stakeholders like local fishing communities are not adhered to and, implicitly, to the detriment of biodiversity.	<ul style="list-style-type: none"> Annual freshwater extraction for various activities (domestic, agricultural, industrial etc). Number of persons/households with access to safe drinking water. Water losses/unaccounted for water in, for example, mains supplies.
SIDA	Degradation of surface or groundwater quantity and/or quality	WASH - water flows	Accelerate implementation of environmental flows	<ul style="list-style-type: none"> Applying environmental flows is an action whereby a river's need for water, debris and sediment to ensure that aquatic ecosystems stay healthy and provide benefits to people. Integrating flow management into river basin development provides the means to make consensus-based decisions on how to manage trade-offs between infrastructure development (including for agriculture and hydropower), livelihoods and ecosystems. 	<ul style="list-style-type: none"> Changes in water flows (average, max, min) Pollution level in a river Level of species diversity in a given area Phosphorus – as phosphorus loss, for example kg phosphorus/hectare and year. Gives an indication of the amounts of nutrients entering recipient water courses. Nitrogen – as nitrogen loss, for example kg N/hectare per year gives an indication of the amount of nutrients in recipient water courses.
SIDA	Erosion of biodiversity (wildlife and/or habitats)	WASH - water quality	Improve water quality to sustain aquatic life	<ul style="list-style-type: none"> Improved wastewater treatment or reuse Regulation of polluting industries Market instruments that reflect downstream pollution costs Improved agricultural practices Nature-based solutions such as floodplain wetland restoration or riparian buffer zones. Potential mitigation of emerging contaminants includes advanced treatment of municipal wastewaters and source reductions. 	<ul style="list-style-type: none"> Pollution level in a river Level of species diversity in a given area Persistent Organic Pollutants (i.e DDT, PCB and organic compounds with heavy metals). Measurements of fish tissue give an indication of pollution from industries, agriculture etc. Oxygen status – low levels of oxygen indicate low levels of biological activity.
SIDA	Erosion of biodiversity (wildlife and/or habitats)	WASH - Habitats conservation	Protect and restore critical habitats	<ul style="list-style-type: none"> Community conservation of habitats for flagship, keystone, or culturally important species Formal protected area designations Land-use planning (often linked with markets for ecosystem services) Habitat restoration programs 	Population growth of a sensitive species
SIDA	Erosion of biodiversity (wildlife and/or habitats)	Advocacy - Fishery	Manage exploitation of freshwater species and riverine aggregates	Policy frameworks to guide harvests of freshwater species are often insufficient, and enforcement is also poor, making sustainable management difficult. A good example of a policy framework is FAO's Rome Declaration from 2016, which describes the steps needed for sustainable freshwater fisheries.	Changes in catches of fish that are important for the local population, or of other aquatic organisms of importance for the livelihoods of the local population.
SIDA	Erosion of biodiversity (wildlife and/or habitats)	WASH - non-native species	Prevent and control non-native species invasions in freshwater habitats	Identifying major introduction pathways, such as trade in live organisms, ballast-water transfers from ships, releases of unwanted animals from aquariums, and aquaculture and horticulture escapes.	
SIDA	Erosion of biodiversity (wildlife and/or habitats)	WASH - hydropower - water storage	Safeguard and restore freshwater connectivity	Coherent planning for energy and water along the IWRM principles, including strategic siting of new infrastructure, can balance connectivity maintenance with hydropower generation or water storage .	
SIDA	Degradation of surface or groundwater quantity and/or quality	WASH - advocacy	Source-to-sea approach	Implementing a Source-to-sea approach on freshwater biodiversity management implies directly addressing the linkages between land, water, delta, estuary, coast, nearshore and ocean ecosystems in support of holistic natural resources management and economic development.	
SIDA	Erosion of biodiversity (wildlife and/or habitats)	WASH - water management	Transboundary water management	Applying the UN Watercourses Convention is an appropriate policy framework for states sharing a common water resource to promote sustainable management of freshwater biodiversity across international borders.	
SIDA	Degradation of surface or groundwater quantity and/or quality	WASH - Reforestation	Tree planting	Along rivers and lakes to reduce erosion and the amount of sediment and pollution entering the water source while at the same time helping the groundwater level to remain stable. The trees might also attract birds and other fauna that can increase the biodiversity along the watershed.	<ul style="list-style-type: none"> Proportion of land covered by forest Proportion of replanted forest land Pollution level in a river Level of species diversity in a given area Soil erosion rates (e.g. tonnes/hectare and year) Changes in groundwater level
SIDA	Erosion of biodiversity (wildlife and/or habitats)	WASH - wetlands	Restore wetlands which can then become a feeding ground for birds, fish, mussels, snails and the like thus promoting biodiversity.	<ul style="list-style-type: none"> Draining clogged rivers and streams providing water to the wetlands and blocking man-made channels that have dried out the wetland Diverting wastewater to the wetland from the settlement, a natural cleaning process (i.e. Nature based Solution) will be initiated by the vegetation that will absorb excessive nutrients and bacteria. Regular removal of the vegetation to be composted or burnt 	<ul style="list-style-type: none"> Phosphorus – as phosphorus loss, for example kg phosphorus/hectare and year. Gives an indication of the amounts of nutrients entering recipient water courses. Nitrogen – as nitrogen loss, for example kg N/hectare per year gives an indication of the amount of nutrients in recipient water courses.
SIDA	Erosion of biodiversity (wildlife and/or habitats)	WASH - watershed	Initiate zoning around the watershed that indicates areas where activities might harm the biodiversity of the watershed – and thus its capability to provide healthy drinking water.	Activities not being allowed close to the watershed could include conventional agriculture, polluting industries, untreated wastewater releases from households, unregulated and/or commercial hunting and fishing.	
SIDA	Erosion of biodiversity (wildlife and/or habitats)	Deforestation - watershed	Sustain and improve biodiversity in watersheds upstream of settlements		<ul style="list-style-type: none"> Proportion of forest land that has been converted into, for example, agricultural land - Rate of conversion Quantity of disease-generating organisms in the drinking water (recent research has found that reduced tree cover upstream is associated with a higher probability of diarrheal disease among children in downstream communities)
SIDA	Depletion of resources	Deforestation - rural areas - nutrition	Make sure to preserve biodiverse forests in rural areas to support adequate nutrition	For rural populations that are difficult to reach through conventional treatment systems, wild foods from intact ecosystems might provide an excellent source of essential micronutrients. USAID-funded research has found that high exposure to forests causes children to have at least 25 percent greater dietary diversity compared to lack of exposure. This results is comparable to the impacts of some nutrition-sensitive agricultural programs. Specifically, proximity to forests could help reduce vitamin A and iron deficiencies.	<ul style="list-style-type: none"> Changes in land use (hectares, description). Proportion of forest land that has been converted into, for example, agricultural land. Rate of conversion?
SIDA	Global ecosystem degradation (air, soil, water and biodiversity)	Agriculture	Reduce and limit unsustainable agricultural practices and promote sustainable biodiverse nutritious agriculture	Soil and water pollution from overuse of fertilizers, pesticides and herbicides is a serious problem affecting ecosystem services, underpinned by biodiversity, and thus health and will in the long-term affect food security while biodiverse agriculture and forestry systems such as agroforestry can contribute to both biodiversity and nutritious food.	<ul style="list-style-type: none"> Consumption of different types of chemicals, collection and treatment of residual chemicals and other types of waste (tonnes, % production, description). Persistent Organic Pollutants (i.e DDT, PCB and organic compounds with heavy metals). Measurements of fish tissue give an indication of pollution from industries, agriculture etc.
SIDA	Global ecosystem degradation (air, soil, water and biodiversity)	Agriculture - Pesticides	Reduce the use of pesticides with a long-term plan to phase them out	Pest control is a key service provided by natural ecosystems and a vital benefit of protecting biodiversity in agricultural landscapes. Furthermore, 75 % of the world's food crops depend at least in part on pollination, and 40 % of these pollinator species are facing extinction. Excessive use of pesticides will mean that these services are endangered.	<ul style="list-style-type: none"> Consumption of different types of chemicals. Collection and treatment of residual chemicals and other types of waste (tonnes, % production, description).
SIDA	Erosion of biodiversity (wildlife and/or habitats)	Agriculture - Conservation of biodiversity	Promote agriculture systems and practices that contributes to sustainable use and conservation of biodiversity and fair and equitable sharing of the benefits arising out of the utilization of genetic resources.	Agroecological practices such as Agroforestry (i.e. integrate trees and shrubs on the same land that is used for crop production and/or animal husbandry).	
SIDA	Soil degradation	Agriculture - Compost	Encourage beneficiaries to introduce and apply composting practices	Accumulation and proper arrangement/mixing of animal manure, crop residues, weeds and organic household waste in pits in the ground so that they can be broken down into compost, which is used as a soil conditioner	
SIDA	Global ecosystem degradation (air, soil, water and biodiversity)	Agriculture - Forestry	Capacity building on agriculture (including livestock farming) and forestry	Strengthening the capacity of agricultural or forest institutions, local authorities, universities and small-scale farmers	Is knowledge of the environment integrated into capacity building programmes? (yes/no)

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
SIDA	GHG emissions	Offices - Energy - Waste management	Developing a greener office	Improving the waste management; introducing solar panels to increase the use of renewable energy or similar, etc.	<ul style="list-style-type: none"> Proportion of electricity produced with fossil fuels (including nuclear power) in relation to flowing or renewable sources of energy such as wind, sun, waves and water Emission of greenhouse gases (tonnes/year)
SIDA	Global ecosystem degradation (air, soil, water and biodiversity)	Waste management - Chemicals	Prevent and control chemicals waste which can harm people and the environment	<ul style="list-style-type: none"> Different types of waste separate, depending on their properties Recycling or incineration for energy purposes Measures to ensure that any sludge, nutritive salts, waste from latrines or other types of waste, for example household waste and construction material, are returned to an ecocycle or are taken care of in an environmentally acceptable manner Only trained personnel handle chemicals and/or hazardous waste Training personnel in chemicals and/or waste management and providing them with protective equipment and suitable facilities for the storage of chemicals and waste 	<ul style="list-style-type: none"> Amount of waste and types of waste Degree of recycling and for what purposes (per cent of the total amount produced) Amount of household waste generated per capita Size of the area contaminated by hazardous waste Proportion of funds allocated to waste management For incineration plants – controls of flue gases and quantities of ash and how they are taken care of
SIDA	GHG emissions	Energy	Sustainable energy systems based on renewable energy		<ul style="list-style-type: none"> Proportion of electricity produced with fossil fuels (including nuclear power) in relation to flowing or renewable sources of energy such as wind, sun, waves and water Emission of greenhouse gases (tonnes/year) Proportion of the population that has access to electricity Energy consumption/capita
SIDA	Global ecosystem degradation (air, soil, water and biodiversity)	Fishery - Resources conservation	Support ecosystem-based approaches to fisheries management	see FAO's Code of Conduct for Responsible Fisheries	
SIDA	Erosion of biodiversity (wildlife and/or habitats)	Fishery - Biodiversity protection	Encourage practices that reduce bycatch	Bycatch mortalities can often be reduced by modifying fishing gear so that fewer non-target species are caught or so that non-target species can escape	
SIDA	Erosion of biodiversity (wildlife and/or habitats)	Fishery - Biodiversity protection	Combat illegal, unreported and unregulated (IUU) fishing	The partner could therefore interact with the national representative of FAO in order to learn how they can join the efforts to combat IUU.	
SIDA	Conflicts over land uses or natural resources	Fishery - rights	Address and promote tenure rights for local communities in marine and inland fisheries	<ul style="list-style-type: none"> Secure and equitable access to and management of fisheries, both inland and marine. Effective governance of tenure and user rights to fight extreme poverty and hunger for communities that depend on these natural resources and avoid overfishing by commercial actors that can roam fishing grounds used by local communities with impunity. Appropriate tenure systems, including clear access and user rights, are thus fundamental elements of securing biodiversity in fisheries. 	
USAID	Soil degradation	Livelihoods - Livestock	Sustain and improve land productivity: <ul style="list-style-type: none"> Maintain and enhance soil fertility and nutrient cycling Improve fodder production Improve animal production 	<ul style="list-style-type: none"> Sustain vegetation cover as much as possible Retain animal manure on the land Sustain indigenous shrubs and trees to act as nutrient pumps, especially indigenous leguminous plants Maintain habitat diversity for ecosystem stability Prevent overgrazing Manage access to pastures (through herding, fencing, rotation) so that desirable plants (especially perennial grasses) are not eradicated through over-use. Retain large shrubs and trees (pods/leaves) as sources of fodder. Prevent soil degradation/erosion, frequent fires. Allow flexibility in grazing systems – e.g., animal movements or marketing in response to fodder availability and climatic responses. Use indigenous breeds or cross-breeds that are hardier with respect to disease and demand less in terms of quantity and quality of fodder and water. Encourage a diversity of herbivores (including both grazers and browsers) to maximize use of all available plant resources. 	
USAID	Erosion of biodiversity (wildlife and/or habitats)	Livelihoods - Livestock - Biodiversity conservation	When implementing livestock programmes, maintain ecosystem integrity by: <ul style="list-style-type: none"> Preventing, mitigating and rehabilitating land degradation Maintaining/Improving biodiversity Choosing 'climate smart' practices and policies 	<ul style="list-style-type: none"> Encourage any measures that improve soil cover, enhance growth of perennial grasses, and allow seasonal rest of pastures Select management measures that help mitigate/rehabilitate damaged land e.g., rock fill erosion gullies, wind breaks Practice integrated pest management e.g., encourage natural predators of parasites such as oxpeckers, egrets Promote livestock genetic diversity Where possible, promote combined wildlife and livestock grazing systems 	
USAID	Degradation of surface or groundwater quantity and/or quality	Water supply - Water conservation	<ul style="list-style-type: none"> During project design, calculate yield and extraction rates in relation to other area water uses and available supply Evaluate how the project will impact water flows, particularly in the context of climate change. Survey for, and avoid, wetlands, estuaries, or other ecologically sensitive sites in the project area. 	<ul style="list-style-type: none"> Identify nearby areas that contain endangered species and get professional assessment of species' sensitivity to construction at site. Establish water committee to oversee usage and quality, educate committee members on ecosystem services. Build fences or equivalent to keep livestock from grazing uphill of the water supply and from drinking from the water source. 	<ul style="list-style-type: none"> Water quality reports Presence of fence or equivalent Water yield and extraction reports Monitoring of water table Monitoring of nearby wetlands Gauge data from streams Water committee established
USAID	Degradation of surface or groundwater quantity and/or quality	Water supply - Water conservation	<ul style="list-style-type: none"> Evaluate depth to water table, including seasonal fluctuations, groundwater hydrology and any changes expected due to climate change. Pit latrines should not be installed where the water table is shallow or where the composition of the overlying deposits makes groundwater vulnerable to contamination. Ensure that a reliable system is used for safely emptying latrines, toilets, and septic tanks and transporting the collected material off-site for treatment. Ensure that collected material is adequately treated and not directly applied to fields or otherwise disposed of improperly. Ensure adequate supply chain services are in place to sustain the sanitation improvements 	<ul style="list-style-type: none"> Built latrines at a minimum of 30 m from water sources Properly decommission pit latrines. Do not leave pits open. Fill in unused capacity with rocks or soil Assess water quality upstream and downstream to establish a baseline so that any degradation can be detected. Train community members in cleaning and maintaining latrines. 	<ul style="list-style-type: none"> Water quality reports Number of latrines where water table level has been verified and documented Number of latrines located less than 30 m from nearest water source System in place for removing and treating effluent Number of community members trained in cleaning and maintenance
USAID	Air pollution	Waste management - Pollution	Control emissions from landfills	By installing a gas collection system and combusting the collected gas (e.g., flares or gas engines)	Emissions of CH4 and NMOCs at site boundary or sensitive receptors
USAID	Air pollution	Waste management - Pollution	<ul style="list-style-type: none"> Control emissions from open burning of waste through prevention of fires. Stockpiling of large volumes of flammable materials should be avoided or carefully managed, and open burning should be especially prevented where hazardous materials are present or nearby. Effective fire control measures 	<ul style="list-style-type: none"> Installation of landfill gas collection systems Development of fire prevention and response plans, communication with emergency responders (where available), training of operator staff, and provision of firefighting equipment 	Thermal monitoring to identify subsurface fires at landfill
USAID	Air pollution	Waste management - Pollution	Install Pollution Prevention Systems (PPS)	Installation of PPS where exhausts (e.g., chimneys from incinerators and gas engines, generators or ventilation) may cause releases to air which exceed statutory limits or cause ambient air quality standards to be exceeded. Examples of PPS technologies are filters, catalysts, scrubbers, condensers and pressure swing adsorption.	Continuous monitoring of emissions from incinerators (using Centralized Emissions Monitoring System (CEMS)).
USAID	Air pollution	Waste management - Pollution	Reduce dust generation at exposed areas, working areas and stockpiles at waste sites (e.g., landfills, transfer stations)	<ul style="list-style-type: none"> Coverage of exposed areas of ground and stockpiles to prevent windborne dust (temporarily with tarp, mulch, or gravel, or the earth compacted, grassed/vegetated or paved). Vehicles carrying waste should also be covered; Use of fixed water sprayers, hoses, or water bowser trucks to damp the stockpiles, landfill working face and haul roads (during the loading or tipping of dusty materials, and during excavation or leveling works); Installation of natural or artificial wind breakers to prevent erosion of stockpiles and exposed areas, or around dust generating activities; Limitation of dust generating activities during high wind conditions Speed restrictions for vehicles on unpaved roads or areas. Reducing speed from 45 to 35 mph can reduce dust emissions up to 22 percent. 	Dust monitoring (e.g., Total Particulate Matter (TPM), Particulate Matter <10 microns diameter (PM10), and Respirable Suspended Particulates (RSP) – PM2.5.
USAID	Air pollution	Waste management - Pollution	Reduce / Prevent odors	By enclosing waste facilities and vehicles. Facilities can be operated at negative pressure using extractive fans and exhaust systems. The air in the exhaust systems can be treated by various methods including biofilters, scrubbers and UV light. Scented additives are sometimes used to mask odor, but preventative measures should be prioritized.	Direct monitoring of odor at boundary/sensitive receptors or recording of complaints.
USAID	Noise	Waste management - noise	Reduction of noise and vibration during operation of plant and equipment at waste facilities	<ul style="list-style-type: none"> Locate noisy equipment and activities away from sensitive receivers, and avoid clustering of noisy plant / processes in one area; Screen noise using permanent or temporary barriers, or existing structures / natural features; Carrying out noisy activities (e.g., unloading, compaction) within enclosed areas; Select quiet plant and processes wherever feasible; Maintain plant and equipment in good working condition; Turn off machinery when not in use; Train staff to raise their awareness of noise impacts and management. 	<ul style="list-style-type: none"> Noise level checks on equipment and background. Offsite Traffic Noise: Noise emission checks on vehicles. Vibration monitoring.

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
USAID	Noise	Waste management - noise	Reduction of noise and vibration of for mobile plant/vehicles at waste facilities and during transportation	<ul style="list-style-type: none"> Implement speed restrictions to keep vehicle speeds as low as practical in facilities and during waste transportation; Minimize vehicle movements (e.g., practice backloading); Reduce vehicle movements and noise during night-time and early mornings; Route deliveries away from urban areas where practicable; Use quiet and well-maintained vehicles; Appropriate surfacing of access roads and operational areas can also reduce noise; Train drivers on operational noise control measures (e.g., vehicle speeds, controlled acceleration, use of horn, correct access/egress to sites, and limiting idling/revving of engines). 	<ul style="list-style-type: none"> Noise level checks on equipment and background. Offsite Traffic Noise: Noise emission checks on vehicles. Vibration monitoring.
USAID	Global ecosystem degradation (air, soil, water and biodiversity)	Waste management - Water conservation	Control or manage water and groundwater pollution impacts from waste sites	<ul style="list-style-type: none"> Prevent run-on from flowing onto site and contacting waste, and ensure the site is protected from flooding; Control runoff so that it is diverted from active waste management areas and does not create pools or saturated soil; Erosion and sedimentation control measures, such as minimizing activities during heavy rain, reducing, compacting, covering or vegetating areas of exposed soil; Provide and regularly maintain stormwater drainage system, including sediment control Install containment in high-risk areas Locate and manage waste stockpiles to reduce runoff impacts; Regularly clean waste sites and provide cleaning and wheel wash facilities for vehicles at site access/egress; suspended solids should be removed from used washing water prior to disposal; Prevent, control and clean up litter to prevent it entering nearby waters; Emergency plans should be developed to deal with accidental spillages and leakages. Leaks and spills should be contained and cleaned up immediately. Train staff to clean-up leaks and spills and provide clean-up equipment; Maintain equipment to prevent leaks. Maintenance of vehicles and equipment should take place on a covered hard-standing; Use of green infrastructure such as bioswales, green roofs, and water harvesting Use of fire suppression equipment which is designed to minimize impacts to ground and water from run-off 	
USAID	Degradation of surface or groundwater quantity and/or quality	Waste management - Water conservation	Avoid discharging wastewater into waters where it exceeds discharge standards or causes receiving waters to exceed (or further exceed) ambient water quality standards or objectives.	<ul style="list-style-type: none"> Where permissible, sites can be connected to the sanitary sewer system, or for small quantities effluents may be transported by tankers to municipal sewage treatment plants. Installation of on-site treatment systems can be used to bring effluents to the appropriate quality for discharge (to waters or sewer) Use of evaporation ponds, and recycling of leachates within landfill cells or processes (e.g., anaerobic digestion or composting). 	<ul style="list-style-type: none"> Monitoring of (post treatment) discharges (including stormwater and effluent) for COCs. Monitoring of receiving, or hydrologically connected, waters via sampling and testing or real-time monitoring (e.g., buoy measuring conductivity, turbidity). Visual monitoring of litter. Groundwater monitoring - installation of piezometers / monitoring wells. In-situ monitoring equipment with data-loggers, field monitoring and sampling and laboratory testing.
USAID	Degradation of surface or groundwater quantity and/or quality	Waste management - Water conservation	Prevent leachate contamination of waters and groundwater from landfills	<ul style="list-style-type: none"> Containment (impermeable lining systems and capping) Capture (i.e., leachate collection systems) Treatment (e.g., effluent treatment technologies or evaporation ponds) 	<ul style="list-style-type: none"> Monitoring of (post treatment) discharges (including stormwater and effluent) for COCs. Monitoring of receiving, or hydrologically connected, waters via sampling and testing or real-time monitoring (e.g., buoy measuring conductivity, turbidity). Visual monitoring of litter. Groundwater monitoring - installation of piezometers / monitoring wells. In-situ monitoring equipment with data-loggers, field monitoring and sampling and laboratory testing.
USAID	Degradation of surface or groundwater quantity and/or quality	Waste management - Water conservation	Control or manage water and groundwater pollution impacts caused by runoff from facilities	<ul style="list-style-type: none"> Carry out regular inspections and install leakage detection systems on underground storage tanks, above ground storage, and pipelines which represent a potential source of groundwater pollution. Where groundwater contamination is present, impacts can be reduced through well extraction in the affected area and appropriate treatment prior to discharge or reinjection. Sanitary latrines should be provided to prevent impacts from human waste, including for informal workers. These should be connected to the municipal sewage network or regularly emptied by a licensed contractor for appropriate disposal. Where impacts to waters have occurred, it may be necessary to remediate the affected waters, or provide compensation or enhancements on site, or in other areas. 	<ul style="list-style-type: none"> Monitoring of (post treatment) discharges (including stormwater and effluent) for COCs. Monitoring of receiving, or hydrologically connected, waters via sampling and testing or real-time monitoring (e.g., buoy measuring conductivity, turbidity). Visual monitoring of litter. Groundwater monitoring - installation of piezometers / monitoring wells. In-situ monitoring equipment with data-loggers, field monitoring and sampling and laboratory testing.
USAID	Soil degradation	Waste management - Pollution	<ul style="list-style-type: none"> Prevent or control contamination of soil and sediments by implementing pollution prevention and control measures/activities Where contaminated land, soil or sediment exists, and this represents a risk to human health and/or the environment, it may be necessary to implement control or remediation measures. 	<ul style="list-style-type: none"> At landfills and dumpsites, screening of incoming waste materials so that hazardous materials can be identified and appropriately managed Adoption of a waste management system, which includes good handling practices in storage, collection, transportation, recycling and disposal Where contaminated land, soil or sediment exists, and this represents a risk to human health and/or the environment, containment of the contamination (e.g., capping, lining or hydrological barrier), removal of the source of contamination or contaminated materials (e.g., hazardous wastes in a dumpsite), stabilization of materials (e.g., cement mixing) or in-situ remediation (e.g., biological, chemical or thermal treatment) Where groundwater is contaminated, pump extraction and treatment of groundwater 	<ul style="list-style-type: none"> Automatic leak detection systems for pipes and underground tanks. Carry out leachability testing of potentially contaminated soil/sediments to determine disposal risk.
USAID	Waste accumulation	Waste management	Sustainable practices in solid waste management	<ul style="list-style-type: none"> Building awareness and implementing systems to reduce, reuse, and recycle in line with the waste management hierarchy. Foster secondary markets/demand from local businesses to use recovered material and publicize prices for recoverable materials. Incentivize sustainable material use, recycling, reprocessing and energy from waste. Facilitate separation at disposal sites (e.g., integrate MRF at landfills). Promote composting and anaerobic digestion maximize landfill capacity and reduce pollution. 	<ul style="list-style-type: none"> Accurate and comprehensive records for materials recovery, recycling, and disposal Waste audits, characterization and generation studies
USAID	Erosion of biodiversity (wildlife and/or habitats)	Waste management - Biodiversity conservation	In waste sites , monitoring and mitigation of indirect impacts to ecology and habitat , such as sedimentation resulting from erosion, deterioration of water quality and disturbance from noise	<ul style="list-style-type: none"> Control of vermin, scavenging animals and birds, frequently found at waste sites Environmental training for waste management staff, which includes ecological awareness Mitigation plans in place for staff should they encounter threatened or endangered wildlife (e.g., nesting, in burrows, or trapped on the site) to avoid harm to the animal. Where water is abstracted from rivers for use at waste management sites, ensure intake pipes are screened to prevent fish take. 	<ul style="list-style-type: none"> Ongoing surveys (transects, cameras, traps/netting, visual/auditory), or incidental recording of, for example, fish, birds, bats, reptiles, and mammals; Monitoring of habitat condition against baseline (transects/aerial photography/GIS) Visual surveys for presence of invasive species. It may be necessary to carry out monitoring/surveys seasonally depending on affected species/habitats.
USAID	Adverse health and/or safety effects	Waste management - safety	Protect workers and the public from physical hazards during the operation of waste sites involves safety reviews of planned activities and the implementation of best management practice safety measures	<ul style="list-style-type: none"> Fire life-safety systems and equipment, fire detection, alarm and extinguishing systems; Safe storage of wastes/materials; Remove sources of ignition; Prevention of open burning for waste operations; Regular maintenance and cleaning program, good housekeeping practices; Provision of 'hot works' and 'hot loads' areas; Ensure adjacent community property is protected (e.g., fire breaks); Training and awareness of staff, fire prevention and control planning, and close communication with local fire department/civil defense. Screening of materials entering landfills and segregation, or rejection of hazardous materials; Appropriate storage of hazardous materials including dedicated storage area (hard-standing, bunding/drip trays, ventilation, access control, signage), provision of material data sheets and compliance with safety regulations and standards; Provision of clean up and containment materials and equipment, training of staff in their use, and preparation of emergency plans; Licensing, registration and regulation of hazardous waste collectors/service providers. Maintenance of plant and machinery at waste sites Enhanced driver training, policies and awareness Provision of safety equipment on vehicles, and regular inspection and maintenance of vehicles. Provision of PPE Limitation of access to the waste site pickers 	<ul style="list-style-type: none"> Regular health and safety inspections, audits and incident records. Record training, issuance of PPE (and enforcement of PPE use) and any non-compliance with HSE policies by workers. Carry out management review at least annually. Fire and life safety monitoring, and where necessary gas detection systems. Monitoring of slope stability can be carried out using surveys and using continuous monitoring equipment. Monitor driving standards/violations via GPS tracking of vehicles (where feasible) and/or complaints.
USAID	Increased risks of future natural hazards	Waste management - DRR	Waste sites and programs should prepare detailed emergency response and contingency planning to effectively respond to emergency incidents and events, such as flooding, typhoon/hurricanes, earthquakes, fires, landslides, disease outbreak, and security issues.	<ul style="list-style-type: none"> Development of a flood prevention strategy Structural measures (defense structures) Flood forecasting and warning measures and emergency preparedness and response planning Cleaning litter and debris from storm drains Good housekeeping and proper storage of materials 	Regional and local earthquake and flooding early warning systems (where present), and weather reports may be monitored as part of emergency planning and management at facilities.

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
USAID	Waste accumulation	Waste management - Energy	Ensure waste reduction and energy efficiency waste management facilities	<ul style="list-style-type: none"> Design energy efficient waste management facilities Prevent food waste by reducing spoilage, oversupply and over-consumption Encourage reuse of materials, reduce in consumption and encourage sustainable consumer practices via education and awareness programs Restrict plastic bags and single-use plastics Recover soil improvement materials by composting organic waste Recover recyclable materials through separate collections and recovery facilities Process recyclable materials locally (where strict environmental controls can be enforced) Encourage manufacturers to use of materials which are recyclables, or have recycled content 	
USAID	Waste accumulation	Waste management	Ensure and maximize material recovery	<ul style="list-style-type: none"> Energy recovery from incineration (with strict pollution control technology) Create refuse derived fuels for local energy needs Generate biogas through anaerobic digestion or landfill gas capture Utilize biogas for electricity / heat generation, transport fuel, gas network injection Where energy generation at landfills is uneconomic, carry out flaring of landfill gasses to prevent methane release Fuel cells, where local capacity makes this feasible to install, operate and maintain - including availability of spare parts 	
USAID	GHG emissions	Waste management - Energy	Energy recovery - Promote advanced energy generation technologies in energy from waste projects	<ul style="list-style-type: none"> Landfill gas collection and energy use (heat and power), or flaring (less preferred if energy generation viable) Reduce / eliminate landfilling of organics Carbon negative after-uses for closed landfills (e.g., tree planting, solar panels). 	
USAID	GHG emissions	Waste management	Appropriate waste disposal system	<ul style="list-style-type: none"> Use sustainable transport modes, such as barges and rail, electric vehicles, and run RCVs on green fuels Efficient collection systems. Use transfer stations, match services supply to demand, discourage double handling and encourage backhauling Proximity principle - manage waste at source location. Do not export large quantities of waste and recyclables. 	
USAID	GHG emissions	Waste management - Transport	Rational and greener transport	<ul style="list-style-type: none"> Identify any sensitive receptors from the outset Obtain baseline air quality information Minimize extent of material handling, and avoid double handling Design, install, and apply a simple, linear layout for materials-handling operations to reduce the need for multiple transfer points Use mobile and fixed-belt transport and conveyors to haul materials by trucks through internal roads (enclosed rubber-belt conveyors for dusty materials are recommended in conjunction with cleaning devices) where practicable Consider the prevailing wind direction when siting stockpiles to reduce the likelihood of affecting sensitive receptors Plan site layout - machinery and dust-causing components (e.g., access roads, stockpiles) should be located away from the site boundary and sensitive receptors where practicable Provide personal protective equipment (PPE) such as dust masks to workers on-site, where dust levels are likely to be excessive Locate activities and rock/earth stockpiles away from sensitive receptors Cover, seed, or fence stockpiles to prevent wind whipping Bund and seal topsoil and subsoils stockpiles Keep stockpiles for the shortest possible time No bonfires or burning of waste material Seal or re-vegetate completed earthworks as soon as reasonably practicable after completion Ensure all vehicles carrying loose or potentially dusty material to or from the site are fully sheeted Minimize dust-generating activities Schedule dust creation activities during humid and low-wind times of day and when likelihood of children or bystanders near the site is low Use water as a dust suppressant where applicable (e.g., use towed water bowsters with spreader bars) and ensure an adequate water supply 	<ul style="list-style-type: none"> Screening documentation Historic air quality records Potential project impacts, where relevant Documentation of nearby receptors Documentation of material handling assessment Background information on emission-generating equipment Design drawings/plans Assessment of winds and site layout Relevant management plans Grievance mechanism complaints Daily visual site observations of materials handling for the duration of the construction period Vehicle maintenance records Exceptional dust-generating incident log Documentation of dust-minimizing material handling
USAID	Air pollution	Construction - Pollution	Minimize dust emissions	<ul style="list-style-type: none"> Identify any sensitive receptors from the outset Obtain baseline air quality information Minimize extent of material handling, and avoid double handling Design, install, and apply a simple, linear layout for materials-handling operations to reduce the need for multiple transfer points Consider the prevailing wind direction when siting stockpiles to reduce the likelihood of affecting sensitive receptors Locate activities and rock/earth stockpiles away from sensitive receptors Use well-maintained vehicle/construction fleet to minimize emissions Avoid leaving vehicles or equipment idling or running when not in use Minimize movement of construction traffic around site Implement community grievance mechanism to enable reporting of air quality issues 	<ul style="list-style-type: none"> Screening documentation Historic air quality records Potential project impacts, where relevant Documentation of nearby receptors Documentation of material handling assessment Background information on emission-generating equipment Design drawings/plans Assessment of winds and site layout Relevant management plans Grievance mechanism complaints Daily visual site observations of materials handling for the duration of the construction period
USAID	Air pollution	Construction - Pollution	Minimize fugitive gas emissions	<ul style="list-style-type: none"> Identify any sensitive receptors from the outset Obtain baseline air quality information Minimize extent of material handling, and avoid double handling Design, install, and apply a simple, linear layout for materials-handling operations to reduce the need for multiple transfer points Consider the prevailing wind direction when siting stockpiles to reduce the likelihood of affecting sensitive receptors Locate activities and rock/earth stockpiles away from sensitive receptors Use well-maintained vehicle/construction fleet to minimize emissions Avoid leaving vehicles or equipment idling or running when not in use Minimize movement of construction traffic around site Implement community grievance mechanism to enable reporting of air quality issues 	<ul style="list-style-type: none"> Screening documentation Historic air quality records Potential project impacts, where relevant Documentation of nearby receptors Documentation of material handling assessment Background information on emission-generating equipment Design drawings/plans Assessment of winds and site layout Relevant management plans Grievance mechanism complaints Daily visual site observations of materials handling for the duration of the construction period
USAID	Degradation of surface or groundwater quantity and/or quality	Construction - water contamination	Minimize impact on natural water resource use and contamination	<ul style="list-style-type: none"> Undertake preliminary hydrogeological studies, or at least define the natural drainage characteristics of the area and hydrologically link to the site Conduct or refer to a local water (surface/groundwater) resources assessment Collect baseline data e.g., analysis on water sources Understand what discharges are likely to be generated Design stormwater drainage systems in line with country technical norms and to take account of future climate variability, floods, risk of pollution and ecological linkages Provide adequate cross-drainage structures where building new roads to avoid altering drainage paths or damming waters and causing flooding. Try to replicate as closely as possible the natural drainage from a site before development Control surface water runoff by constructing temporary drainage channels terminating in sediment traps, sediment ponds, or soak-away ponds as appropriate (infiltration or evaporation) Consider climate-resilient designs Implement cross-drainage structures where building new roads or digging borrow pits Minimize hard surfaces, which can lead to flooding or increased runoff rates to areas. Consider opportunities to harvest and use rainwater close to where it falls Consider the need to put measures in place to filter out pollutants (sediment or chemical) Understand the details of any required off-site works and consents Develop a construction method statement that considers to varying degrees: effluent management; spill management; sedimentation and erosion control Prepare a borrow pit extraction plan Implement community grievance mechanism Adopt some basic management features to protect water courses: <ul style="list-style-type: none"> A) No borrow pits within 50 m of a watercourse B) No direct discharges to surface watercourses C) No discharge of contaminated substances to surface watercourses Manage silt-laden run-off from sites, especially during rainy season 	<ul style="list-style-type: none"> Preliminary hydrological studies and water resources assessment Hydrological/water quality baseline (against which construction monitoring outcomes can be compared) Screening documentation for sensitive receptors Design drawings/plans Stormwater drainage designs Runoff management plans Percentage hard surface cover Documentation of effluent management plan, spill management plan, borrow pit extraction plan, and sedimentation and erosion control plan Relevant water extraction permits Documentation of community grievance mechanism Water quality and discharge monitoring records Documentation of implementation of relevant management plans Documentation of spill response drills Documentation of periodic review of pipework, drainage, and water treatment equipment Water quality data and daily visual observations (at all discharge points) Incident log
USAID	Noise	Construction - Noise	<ul style="list-style-type: none"> Avoid nuisance generated by construction or operation noise related to a development Avoid noise nuisance from day and night affecting closest sensitive receptors 	<ul style="list-style-type: none"> Consult with local communities to identify specific events that may be sensitive to noise Prioritize selection of quiet equipment Concentrate noisiest types of work into as short a period as possible, and during least disruptive times of the day Specify allowable times for construction activities. Inform nearby dwellings on the timing and duration of works and when the noisiest stages are likely to occur Design noise barriers or other noise attenuation into the design if necessary. Screen facility with trees or fencing to control noise Position equipment as far as possible from sensitive areas Identify and implement appropriate PPE (e.g., ear plugs) Conduct spot monitoring at commencement of activities using sound level meter at the nearest residential properties; compare against standards Display warning signs about high noise levels around site boundary Record and investigate complaints using sound level meter Avoid unnecessary revving of engines. Equipment to be switched off when not used Limit vehicle speeds on site and on access roads, particularly close to the households (e.g., install speed bumps, traffic signs, one-way traffic systems) Manage traffic to avoid the need for traffic to queue up Schedule timing of deliveries to avoid disturbance Maintain access roads to minimize discontinuities in the road surfaces that may give rise to vehicle body noise 	<ul style="list-style-type: none"> Documentation of local consultation Documentation of public notices Baseline noise data (for future comparison) Assessment of need for noise barriers or noise attenuation Documentation of activity schedule preparation Relevant management plans including noise control plans Daily site audit reports Number of community noise grievances Noise monitoring data that indicate noise is within range Site operation log (recording start and stop time of work) Record of notification to community of noisy work activities Delivery logs Documentation of adherence to project activity schedule Number of transport-related grievances

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
USAID	Erosion of biodiversity (wildlife and/or habitats)	Construction	Minimize adverse impacts of building and construction works on viewshed (area visible from a given location) and landscape character	<ul style="list-style-type: none"> Identify sensitive receptors Collect baseline data (e.g., vegetation, landscape features, sensitive nearby ecosystems) Design into the landscaping plan the protection of existing trees on site serving as a source of shade, windbreak, or providing other benefits Minimize vegetation removal and excavation Plan for revegetation and replanting of removed trees and shrubs Minimize the size of stockpiles and the duration for which they are kept Design structures, including colors of materials used, to be sensitive to the surrounding visual environment Screen areas that are sensitive to visual impacts Carefully locate construction compounds and other facilities Construct installations with sustainable materials, materials to reduce the visual impact, and materials that enhance the aesthetics of the project area Plan any tree removal around ecologically sensitive periods such as bird nesting seasons Implement good housekeeping practices to maintain the appearance of the site Implement good housekeeping practices in stockpile areas and take dust suppression measures Store topsoil properly (e.g., designated area with plastic sheeting covering topsoil piles) Restrict extent of all disturbed areas as far as practicable (e.g., use visible site boundary) Revegetate disturbed areas (e.g., plant two tree saplings for every tree removed, use native species) Store all potential pollutants away from root systems (e.g., in a designated locked shed, above impermeable surface) Implement a community grievance mechanism 	<ul style="list-style-type: none"> Screening documentation with all receptors within 1 km noted (rural) Documentation of baseline features (photographs) Vegetation map (including trees/areas to be retained) Vegetation reinstatement plan Target for reforestation (1:10) Documentation of efforts to minimize size and duration of stockpiles and vegetation removal Documentation of analysis of visual impact Design drawings/plans Assessment of facility location Tree and vegetation removal plans, where necessary Slope protection mechanisms in place No evidence of soil erosion (daily visual observations) Record of daily checks for implementing dust suppression and good housekeeping measures Record of vegetation removal Documentation of community grievance mechanism complaints Borrow pits restored and vegetative cover established
USAID	Erosion of biodiversity (wildlife and/or habitats)	Construction - Biodiversity conservation	Reduce the use of raw materials and potentially finite or scarce resources	<ul style="list-style-type: none"> Seek ways to reduce raw material consumption including <ol style="list-style-type: none"> Reuse material on site Use recycled product in material Use recycled glass or debris in place of sand Design water harvesting for future irrigation use Use renewable energy solutions Substitute raw materials or inputs with less hazardous or toxic materials wherever economically and technically feasible 	<ul style="list-style-type: none"> Documentation of raw material consumption and waste generation reduction analyses Procurement and delivery policies
USAID	Waste accumulation	Construction - waste management	<ul style="list-style-type: none"> Appropriate spoil handling and disposal Planning Collect baseline data (soil quality) Screening documentation Safe handling, storage, and disposal of waste Prevention of leaks, spills, and environmental incidents 	<ul style="list-style-type: none"> Collect baseline data (soil quality) Identify waste handling facilities close to the project to accept/treat waste Review the locally available reuse/recycling facilities to ensure they can accept the waste streams Implement procurement measures such as ordering the correct amount of materials to be delivered when needed, reducing the amount of packaging used by suppliers, and establishing a take-back system with suppliers Waste prevention: Identify opportunities to prevent waste production in the first place (packaging) 	<ul style="list-style-type: none"> List of nearby waste handling and disposal facilities and the types of wastes each can accept Site waste management plan Site plans with designated wash-down and waste storage areas Designated waste handling facilities for each waste category Contingency plan Waste management area set up include clearly demarcated signs Check storage practices follow MSDS requirements Waste monitoring/ tracking records (weekly) No accumulated waste materials on site (daily inspections) Documentation of waste management trainings Hazardous material inventory and control procedures Necessary licenses for waste and hazardous material storage Number of incidents (spills)
USAID	Adverse effects on human populations	Construction - Unvoluntary displacements	<ul style="list-style-type: none"> Safeguard the well-being and improve livelihood of those whose land is acquired involuntarily Avoid the need for displacement by developing an understanding of local land use and property ownership Consider land use and property ownership in designs and site selection (e.g., community, private, church/religious, or government land) 	<ul style="list-style-type: none"> Produce baseline information about population that will experience physical or economic displacement (collect information through multiple site visits, as concerned groups may not be available on the first visit) Engage with project-affected people and affected communities, including any host community members, to design the resettlement/compensation plan Establish resettlement/compensation grievance mechanism Ensure clear, direct communication and information throughout the resettlement/compensation impact identification and planning processes Implement resettlement/compensation (preferably in-kind) plan as designed Continue ensuring clear communication and implementation of resettlement grievance mechanism Monitor implementation of resettlement plan Continue ensuring clear communication and implementation of grievance mechanisms 	<ul style="list-style-type: none"> Number of meetings with communities/families that are anticipated to experience displacement Number and types of grievances received and response Number of communications activities carried out Number of internal and external monitoring and evaluations of the resettlement process Number of affected properties, displacement impacts, according to resettlement plan Documentation of resettlement/livelihood restoration activities through internal monitoring, external monitoring, and evaluation as appropriate Number of communications activities carried out Number and types of grievances received and response
USAID	Adverse effects on human populations	Construction - Unvoluntary displacements	Safeguard the well-being of indigenous peoples	<ul style="list-style-type: none"> Avoid impacts on indigenous peoples by understanding where they live, their livelihoods, and use of land and resources through consultation Identify and consult with representatives to design consultation process Define and agree on the free, prior, and informed consent (FPIC) process with indigenous peoples Obtain FPIC for decisions that affect indigenous peoples' land, livelihoods, lives, resources, or territories Collaborate with indigenous peoples in all aspects of project design. Define mitigation and compensation measures with indigenous peoples to respond to negative impacts. Ensure that compensation is fair and culturally appropriate. Consolidate these measures into an indigenous peoples plan. Implement this plan in accordance with FPIC Avoid relocation, and if necessary, ensure correct process Monitor implementation of indigenous peoples plan in accordance with FPIC 	<ul style="list-style-type: none"> Number of indigenous groups present in the project area and % of groups impacted by the project Number of meetings with indigenous groups and documentation of agreed-upon engagement process Documentation of agreed FPIC process and agreements Documentation of collaboration process and number of considerations from indigenous peoples incorporated in project design Indigenous peoples plan Documentation of analysis of alternatives to relocation Documentation of plan implementation Number of activities or occurrences not in accordance with FPIC Number and types of grievances received from indigenous peoples and response Documentation of plan implementation
USAID	Adverse effects on human populations	Construction	Protect infrastructure and essential services	<ul style="list-style-type: none"> Identify workforce needs and availability of labor in the local market Communicate real workforce needs of the project to help minimize influx and pressure on infrastructure Plan for accommodations and services for workers and their families Identify infrastructure that might be interrupted during construction due to construction activities Continue communications about labor needs Prioritize hiring from local job market Engage with local authorities to ensure scheduling, planning, communication, and provision of alternatives to community members dependent on services that will be interrupted Communicate with community about planned interruptions Clearly post signage and/or create a barrier around communal infrastructure that is in the path of construction vehicles or other construction activities that could damage such infrastructure Continue communications about labor needs Provide accommodations and services to workers and their families Continue communications about labor needs Provide accommodations and services to workers and their families Follow timeline of infrastructure interruptions Continue communications and update if timeline changes 	<ul style="list-style-type: none"> Documentation of workforce needs and local availability Communications materials Number and type of communications, area of reach Documentation of accommodations and services plans Number, location, and characteristics of infrastructure that might be interrupted Number and types of communications, area of reach Regular worker profile documentation Number of engagement activities with local authorities Timeline of planned activities Communications materials utilized Documentation of time activities were carried out Number and types of communications activities and participants Number and types of complaints from community regarding interruption of services and response Documentation of improvements in response to complaints

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
USAID	Adverse effects on human populations	Construction	Protect the workforce	<ul style="list-style-type: none"> Prohibit forced labor and child labor at all project stages Ensure main project proponent has a human resource policy Include a project labor commitment in tenders and contracts Ensure non-discrimination, equal opportunity, and equal pay in hiring and employment processes Ensure workers' rights through fair terms and conditions of employment evidenced in contracts Verify third-party and supply chain companies to ensure avoidance of forced and child labor and adequate management of occupational health and safety risks Implement and monitor upholding of labor rights, use of contracts outlining working terms, appropriate management of overtime to avoid its excessive use, timely and relevant pay, and provision of fair, safe, and healthy working conditions Identify and respond to any issues. Incorporate any improvements into management system Provide open, free, accessible, and anonymous communication line between workers and project employer Ensure that all communications are responded to in a timely manner, that records are kept, and that resolutions or suggestions are incorporated. Resolve grievances formally, efficiently, respectfully. Monitor to ensure that retaliation or differential treatment does not occur because of labor grievances. 	<ul style="list-style-type: none"> Documentation showing commitment to and enforcement of this prohibition Human resource policy Project labor commitment Hiring and contract documentation Number of third-party monitoring assessments of supply chain and workers Human resources procedures documentation Regular workforce profiles Documentation of monitoring activities and results Number of labor protection issues raised and resolved Number of improvements incorporated into management system Documentation of grievance mechanism system Number and types of grievances received and response Number of improvements/modifications incorporated into management practices because of grievances/communications Documentation of monitoring activities and results
USAID	Erosion of biodiversity (wildlife and/or habitats)	Construction - Biodiversity conservation	<ul style="list-style-type: none"> Minimize disturbance to sensitive habitats Ensure invasive species are not introduced to the area Address vegetation reinstatement 	<ul style="list-style-type: none"> Collect baseline data (e.g., flora and fauna, year-round and seasonal habitats, wildlife corridors) Identify sensitive receptors including legally protected area or other sensitive locations of international or regional importance such as wetland, forests with high biodiversity values, areas of critical archaeological or cultural significance, or areas of importance for indigenous peoples or vulnerable groups Survey of the site prior to the commencement of site establishment to identify biodiversity and sensitive areas and to inform the implementation of targeted mitigation measures, carried out by an ecologist Minimize clearance of trees and other vegetation to the extent possible and schedule to avoid the peak period for breeding birds and fauna species Avoid fragmentation of areas of vegetation Keep working corridors as narrow as practical and marked with protective fencing where construction corridors run through dense vegetation Minimize the size of laydown areas Require appropriate procedures (licensing) for felling of trees, appropriate removal of material to avoid risks of fire Artificial lighting used on construction sites and other project facilities at night should be shaded and directed downwards to avoid light spillage and disturbance to nocturnal birds, bats, and other wildlife Prohibit excavation of sand and gravel from watercourses and lakes or other sensitive ecosystems Wherever possible use existing quarries rather than opening new ones New quarries and deposits must be supervised by the appropriate authority Conduct pre-construction clearance surveys, to be undertaken by an ecologist Implement noise and light disturbance mitigation measures Develop habitat restoration and removal plan including invasive species procedure as appropriate Ensure imported soils and aggregates are from known sources 	<ul style="list-style-type: none"> Screening documentation Ecological baseline description including photographs and species lists Site inspection records Documentation of sensitive habitats, invasive species, and watercourses on site Identification of quarries/procurement locations for sand, gravel, etc. Evaluation of site plan and laydown areas to minimize vegetation removal, habitat fragmentation, and ecological impact Tree inventory (tree removal) Identification of approved borrow pits Borrow pit extraction and closure plan Monitoring records Noise and light management plans Habitat restoration and removal plans Soil and aggregate source records Site soil and vegetation reinstatement plan Monitoring records Documentation of noise and light disturbance limitation activities Documentation of control of and education about removal of flora and hunting of wild animals and birds Revegetation and reclamation/restoration efforts Community grievances Evidence of borrow pit restoration and close-out. Post closure monitoring (first after restoration is complete and again after establishment of vegetative)
USAID	Adverse effects on human populations	Construction	Protect cultural heritage	<ul style="list-style-type: none"> Identify cultural heritage in the project area as well as potential for finds including abandoned buildings or cultural buildings in poor condition. Consult with relevant stakeholders to identify cultural heritage and uses (eg. medicinal plants, shrines, graves, homes of community leaders, sacrificial or worship sites) If critical cultural heritage exists in the proposed project area, consider alternate locations Seek to understand more than one perspective, as perspectives may change as political interests change Identify partners associated with nearby heritage sites that may assist in protecting the cultural value of a site Avoid impacts on cultural heritage through design and location alternatives Consider whether a building can be modernized/upgraded rather than replaced Engage with local community to design best management and protection measures: if impact is unavoidable, use removal as a last priority If there are cultural heritage sites used by indigenous peoples in the project area, avoid any project-related impacts to them. If unavoidable, follow agreed-upon FPIC process Discuss management plans with local communities and negotiate approaches to management, especially if future co-management is envisioned Establish protection and management procedures and train workers Define procedures for chance finds (unexpected cultural heritage finds discovered on site, e.g., archaeological remains) during construction (chance-find procedure), and train workers on chance-find procedure When safe, provide for alternative access to cultural heritage sites or resources if construction will restrict access Implement agreed-upon procedures and measures, monitor implementation In the case of chance finds, consult with a qualified archaeologist or specialist before continuing work 	<ul style="list-style-type: none"> Documentation of consultation activities Cultural heritage identified Documentation of alternatives studied Documentation of engagement process Documentation of FPIC process, if applicable Protection, management, and chance-find procedures established Number of trainings, number of participants, content Identification of alternative access routes Communications materials Numbers of communications, participants, stakeholder groups Documentation of monitoring activities, including chance finds Numbers of non-compliance cases and resolutions Communications materials Numbers of communications, participants, stakeholder groups
USAID	Land use change	Crop production	Minimize agricultural land expansion associated with an intensified production	<ul style="list-style-type: none"> Promote alternative livelihoods Maintain appropriate riparian buffers Use land in conformity with its capability Implement erosion control practices Improve land use planning Address insecure land tenure Support shifting cultivation only in sustainably managed forests/landscapes Support land clearing only with detailed assessment and thorough mitigation 	
USAID	Erosion of biodiversity (wildlife and/or habitats)	Crop production - Biodiversity conservation	Conserve land to preserve biodiversity	<ul style="list-style-type: none"> Promote alternatives to monocropping Prevent introduction of invasive species Replanting and introducing local species 	
USAID	Global ecosystem degradation (air, soil, water and biodiversity)	Crop production - pollution	<ul style="list-style-type: none"> Managing pollution from irrigation and drainage Reduce GHG emissions intensity 	<ul style="list-style-type: none"> Implement erosion/runoff control measures and riparian buffers Control leaching Control volatilization and drifts Promote alternatives to burning crop residue and farm waste 	
USAID	Soil degradation	Crop production - soil quality	Characterize soils and practice integrated soil fertility management (ISFM)	<ul style="list-style-type: none"> Prevent and manage soil waterlogging Prevent and reduce soil compaction Amend soil as indicated based on properties Use fertilizers safely Undertake manuring and composting Mulch when appropriate Identify and manage soil salinity, acidity, alkalinity, specific ion toxicity, and sodicity 	
USAID	Soil degradation	Crop production	Conserve soil moisture	<ul style="list-style-type: none"> Harvest rainwater to reduce draw on surface and groundwater Construct and maintain diversions (requires engineering oversight) 	
USAID	Soil degradation	Crop production	Planting Design and Cropping	<ul style="list-style-type: none"> Manage seeding/planting date Seed/planting material selection Rotate crops Consider Polycropping/polyculture Optimize planting density and inter-row spacing Grow cover crops Use fallow periods Establish and maintain critical area planting areas Establish and maintain field borders Use efficient, clean-burning equipment. Use synthetic fertilizers only as required Use renewable energy sources Sequester carbon on agricultural land 	
USAID	GHG emissions	Crop production - Energy	Reducing the impact of energy used in crop production	<ul style="list-style-type: none"> Identify cultural sites in the design stage Design for avoidance and monitor indirect impacts on cultural sites Understand local land tenure and land uses Incorporate a project component to strengthen land tenure Consider a community-based natural resource management (CBNRM) approach 	

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
USAID	Land use change	Crop production - Policy	Supporting Agricultural Policy	<ul style="list-style-type: none"> Building awareness among policy makers about the importance of integrating environmental, social and ecosystem services considerations into policy decisions Providing technical training to legislative or ministry staff regarding the necessary analytical tools to support such integration Collaborating with civil society actors to strengthen ability of the civil society to influence policy Efforts to bridge university research and expert knowledge into the policy making process Promoting media involvement in communicating policies and their potential social and environmental impacts. 	
USAID	Global ecosystem degradation (air, soil, water and biodiversity)	Crop production	Building crop production facilities (including irrigation) in line with environmental requirements	<ul style="list-style-type: none"> Focus on occupational health and safety and fair labor practices including compliance with all host country requirements; Appropriate sourcing of construction materials; Site-specific environmental and social review to inform site selection and design of specific mitigation measures, including identifying and addressing climate risks. 	
USAID	Global ecosystem degradation (air, soil, water and biodiversity)	Crop production - fertilizer	Support to proper Fertilizer Procurement or Use	<ul style="list-style-type: none"> Use/Promote Fertilizers Consistent with 4R Principles and Within an Integrated Soil Fertility Management (ISFM) framework. Planting cover crops. Maintaining buffers and borders. Conservation tillage Drainage water (e.g., runoff) management. Provide training on safe and appropriate fertilizer use. Provide and require PPE. Time application correctly Store separately and safely Procure quality products Use particular care in the context of irrigation. 	
USAID	Erosion of biodiversity (wildlife and/or habitats)	Crop production - Procurement	Support for Procurement of Seeds and Planting Materials adapted to the local context	<ul style="list-style-type: none"> Do not introduce invasive species Use only seeds and planting materials that meet host country sanitary and phytosanitary standards Use only species/varieties known to be appropriate for the agro-climatic zone Educate producers regarding safe handling of treated seed 	
USAID	Global ecosystem degradation (air, soil, water and biodiversity)	Crop production	Support for adapted Tools and Mechanization	<ul style="list-style-type: none"> Consider use of animal traction and/or lighter equipment (e.g., hand tractor) Strictly limit provision of land clearance/logging equipment Strictly limit provision of pesticide application equipment Store fuels and oils properly Maintain equipment/plan for maintenance Use PPE and teach safe operation Screen new tools and technologies 	
USAID	Food insecurity	Crop production - Research	Support for Crop Production Innovation/ Research and Development	<ul style="list-style-type: none"> Physical sampling should be conducted per a field manual or operating procedure addressing field team safety in addition to sample quality and integrity Containment facility research should be supported with a documented, independently reviewed risk assessment to determine the risk level, and independent expert site audit to verify conformity of the facility with requirements 	
USAID	Global ecosystem degradation (air, soil, water and biodiversity)	Crop production	Support for Mixed Farming Systems and Agroforestry	<ul style="list-style-type: none"> Use Crop Residue as Soil Cover Practice Conservation Tillage Undertake Deep Tillage / Deep Plowing / Subsoiling / Ripping Plow on the Contour to reduce the velocity of runoff and retain more water in the soils, distributed more equally across the cropland Implement Raised Bed to improve soil drainage, reduce soil compaction and allow for earlier planting. They are also useful for accessibility for people with disabilities and limited flexibility Carry Out Land Leveling to reduce evaporation, restrict field runoff and optimize fertilizer and pesticide application Properly store manure, whether liquid or solid, until the manure is field applied Identify appropriate crop fields where the manure will be applied (to be adjusted for soil type, soil analysis, and crop needs). Rotate manured fields Use good manure application techniques to stabilize the manure and manure nutrients in the soil, preferably by immediate incorporation of the manure into the soil. 	
USAID	Food insecurity	Crop production	Support to Harvest, Post-Harvest, Logistics, Storage, Marketing and Food Processing	<ul style="list-style-type: none"> Inspect to Identify EHS and Food Safety Deficits, Make Support Conditional on Corrections Promote Food Safety Research and apply relevant innovations in more sustainable harvest and post-harvest practices Review and apply as relevant the Food Processing RECP Briefing and Resource Guide Pest control Conduct environmental screening when introducing new tools and technologies 	
USAID	Degradation of surface or groundwater quantity and/or quality	Crop production - irrigation	Support to Irrigation	<ul style="list-style-type: none"> Design based on needful baseline information and informed by local knowledge and appropriate Environmental impacts assessment Irrigation management and water conservation Maintenance of irrigation systems Capacity building for irrigation management, maintenance and water conservation Preventing pollution and vector breeding by irrigation activities Integrating ecological considerations into irrigation projects design and implementation Engaging communities and taking social dynamics and potential for water conflicts into consideration 	
USAID	Land use change	Construction - Energy	Changes in hydropower, solar, and wind potential	<ul style="list-style-type: none"> Small-scale PV systems should be constructed on household or building roofs when possible Prioritize hydro, solar and wind energy generation 	
USAID	Global ecosystem degradation (air, soil, water and biodiversity)	Waste management - Photovoltaic systems	Develop a specific waste management plan for photovoltaic systems	<ul style="list-style-type: none"> Develop and assess waste management and disposal plans with vendors and end users at the concept and design stage Ensure old PV batteries are separated from other solid wastes and disposed of with other hazardous waste materials, e.g., paints and toxic chemicals. The waste management plan should account for all such potentially hazardous wastes in full Ensure proper battery recycling facilities are available and provide oversight of the recycling process 	<ul style="list-style-type: none"> Evaluation of waste management plans implementation, bi-annually Test of nearby water quality bi-annually to ensure no contamination from coolants
USAID	Conflicts over land uses or natural resources	Energy - Solar panels	Minimize adverse aesthetic and view impacts of solar energy systems , with attention to siting and design	<ul style="list-style-type: none"> Conduct stakeholder and community surveys prior to, and throughout, project implementation Provide for improved system integration with buildings 	Bi-annual or quarterly community consultations
USAID	Degradation of surface or groundwater quantity and/or quality	WASH - solar panels	When drilling a well for solar water pumping don't disrupt natural groundwater flow, supply, and quality.	<ul style="list-style-type: none"> Cement seals can be used to separate and protect surrounding rock, soil, and groundwater New wells should be a safe distance from already existing wells to avoid changes in pressure gradients that could affect existing wells 	
USAID	Waste accumulation	Energy - waste management	Minimize environmental impacts related to production and end-of-life management of photovoltaic systems	<ul style="list-style-type: none"> When possible and cost efficient, vendor solicitations and awards should provide source/origin provisions that demonstrate due diligence in mining and processing of the metals and raw materials used in the manufacture of PV systems Proper mitigation measures include procurement provisions requiring recycling used chemicals, taking appropriate precautions during manufacturing (wearing personal protective equipment, etc.), and proper project siting and design To minimize environmental impacts related to production, thinner cell layers and safer and more efficient production materials should be explored 	<ul style="list-style-type: none"> Source/origin self-certification. Apply spot auditing where feasible Review of occupational health and safety actions - annually Number of on-site injuries and accidents
USAID	Erosion of biodiversity (wildlife and/or habitats)	Energy - Biodiversity conservation	Avoid or reduce avian risk and biodiversity risks induced by small-scale wind turbines	<ul style="list-style-type: none"> Conduct a predevelopment and/or an ESV assessment to ensure that biologically sensitive areas are avoided Avoid projects in areas with endangered bird and/or bat species when possible When project siting may affect endangered or threatened species, operation of wind turbines may be limited to prevent substantial impact (e.g. a study of bat behavior has shown they are more active during periods of lower wind speed) 	<ul style="list-style-type: none"> Tracking instances of injury to avian or bat species.
USAID	Erosion of biodiversity (wildlife and/or habitats)	Energy - Habitats conservation	When building or using small scale wind turbines , ensure that valuable ecosystem services and sensitive habitats are unharmed	<ul style="list-style-type: none"> Where applicable, use the site of the wind turbine installation for alternative uses such as agricultural production or grazing for livestock, to minimize disruption on utilized land Conduct a predevelopment assessment and/or an ESV to ensure that construction avoids biologically sensitive areas as well as areas critical to providing valuable ecosystem services Establish a protocol and budget for the removal of turbines at the end of useful life Engage the community with regards to project siting, design, and management prior to project implementation. 	<ul style="list-style-type: none"> Interviews of community members prior to project implementation to ensure that land use is compatible with wind development

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
USAID	Noise	Energy - Noise	Ensure that the project including wind turbines is compatible with the needs of the local community	<ul style="list-style-type: none"> Involve community (and/or household) members during project siting and design, seeking input to ensure siting and selection of technology is in line with community needs and that adverse impacts on aesthetics and areas of cultural or historical value are avoided or minimized During planning, assure the siting of the wind system minimizes noise impacts on the local community 	<ul style="list-style-type: none"> Stakeholder and community surveys during concept preparation Periodic interviews with community members to gauge community satisfaction with the installation and efforts to minimize or avoid adverse impacts on aesthetics or on sensitive cultural or historic areas Number of community complaints about noise
USAID	Degradation of surface or groundwater quantity and/or quality	Energy - water pumps	Avoid standing water from spillage around wind-driven water pumps	<ul style="list-style-type: none"> Establish fee-based wind pump/water use committees and train community members on proper maintenance of wind-powered water pump systems and how to identify and address equipment problems Provide training and implement awareness campaigns to alert project beneficiaries to potential health risks Conduct a predevelopment assessment to ensure that construction and land use will avoid risks to water supply and quality Ensure grazing activities at the site of the water pump are minimized or eliminated entirely Utilize an automatic shut-off mechanism to avoid spillage around water pumps 	<ul style="list-style-type: none"> Weekly checks from water committee on equipment function Number of community members trained Number of community members reached via awareness campaigns Monthly records of the number of water-borne illnesses
USAID	Soil degradation	Energy - Battery	Prevent and control pollution from the battery use of wind turbines systems	<ul style="list-style-type: none"> Develop and assess waste management and disposal plans with vendors and end users at the concept and design stage Ensure old batteries are separated from other solid wastes and disposed of with other hazardous waste materials, e.g., paints and toxic chemicals. The waste management plan should account for all such potentially hazardous waste in full Select batteries based on storage location, considering factors such as ventilation and temperature Secure batteries such that they cannot be stolen to be sold for scrap metal or used for alternate purposes 	<ul style="list-style-type: none"> Evaluation of implementation of waste management plans - bi-annually Incidents of stolen materials Number of accidents resulting from battery use or exposure
USAID	Degradation of surface or groundwater quantity and/or quality	Hydro Energy	Preserve the water supply and quality when using a Run-of-the-River system	<ul style="list-style-type: none"> Assess baseline water use demand and needs in the area through consultation with local water users Conduct thorough baseline pre-assessments of site conditions, including historical flow rates, seasonal flow rate variations, water temperature, water resource needs, baseline sedimentation levels, and local flora and fauna most likely to be affected. Do so prior to any final determinations of site location and design. Incorporate measures in design to mitigate impacts to ecological goods and services Ensure projects maintain 10% to 15% of the dry season flow as "environmental flow" in the dewatered section of the river year-round as an accepted practice to minimize impact on aquatic flora and fauna Adjust abstraction to account for seasonal flow rate variations so that 1) high flows are not reduced excessively from over-abstraction, and 2) the flow rate never becomes so low as to completely dry out, or substantially reduce, overall water level Design projects exceedance flow at 90% for micro-hydro and 60-70% for small-hydro systems. Exceedance flow refers to the percentage of time the river flow is above the design flow Build weirs to withstand maximum design flood levels, including potential climate change impacts. Flood protection walls need to be adequately designed and constructed to both protect structures at the headworks and confine all maximum expected flood flow within the river channel Site weirs away from areas that pose flood risks to downstream and upstream communities Carry out repairs immediately after flood season to avoid serious damage to weirs and other structures at the headworks such as intakes, gravel traps, and de-silting tanks 	<ul style="list-style-type: none"> Measure and maintain records of high-flow and low-flow rates, and seasonal flow variability Reassess local hydrology annually Biannually summarize the number of instances where thresholds for abstraction during high- or low-flow periods are violated Monitor flood levels and the ability of the weir to withstand flooding and ability of protection walls to contain flood flow
USAID	Soil degradation	Energy	Prevent and minimize the alteration of the local hydrology due to run-of-the-river systems	<ul style="list-style-type: none"> Evaluate soil suitability to support altered hydrology prior to project implementation Minimize flow fluctuations to the extent possible; select project sites that have lesser seasonal variability when feasible Plant native vegetation along shoreline where possible to stabilize river banks Design the tailrace to minimize erosion at re-entry points. 	<ul style="list-style-type: none"> Monitor river bank stability through regular visual inspections and, where helpful, periodic soil analyses; evaluate river bank following all major storms, floods, or otherwise significant disruptive events
USAID	Erosion of biodiversity (wildlife and/or habitats)	Energy - Biodiversity conservation	Minimize loss of biodiversity and alteration to habitats due to run-of-the-river systems	<ul style="list-style-type: none"> Conduct a thorough pre-assessment of the site conditions, including seasonal flow rate valuations, water temperature, water resource needs, baseline sedimentation levels, and potentially affected local flora and fauna prior to any final determinations of site design and location "Ofset" foreseeable and unavoidable impacts on local flora and fauna by replanting vegetation or re-populating fish at designated unaffected locations Pay special attention to assessing presence of endangered species in unique habitats 	<ul style="list-style-type: none"> Establish pre-project baseline for riverine fauna and flora. Select key indicator species for monitoring purposes Conduct a high- and low-flow biotic census - biannually
USAID	Erosion of biodiversity (wildlife and/or habitats)	Energy - Biodiversity conservation	Minimize the impediment of run-of-the-river systems to Fish Migration	<ul style="list-style-type: none"> Design system to provide minimum "ecological flow" required at all times to support aquatic life Install screens at intakes to protect fish during downstream migrations Install "fish ladders" or "fish passes" to allow fish to circumvent weirs and/or turbines, when fish passes are required by local Environmental Impacts Assessment regulations and/or when affected species will most likely benefit (e.g. when salmonids use the waterbody for upstream migration) Where possible, utilize "fish-friendly" turbine technologies 	<ul style="list-style-type: none"> High- and low-flow baseline pre-assessment census of biota, followed by bi-annual census of biota upstream and downstream, including migratory fish species
USAID	Erosion of biodiversity (wildlife and/or habitats)	Energy - Construction	Limit the human footprint created by the Run-of-the-River hydro power in the area associated with construction	<ul style="list-style-type: none"> Conduct a predevelopment assessment and/or an ESV to minimize impacts to valuable ecosystem services Clear only the minimally required amount of vegetation to enable construction; replant removed vegetation in unaffected areas. Many host country governments have laws and regulations regarding replanting of vegetation which are usually tied to approval of environmental permits Conduct awareness campaigns for local communities and individuals new to the area about sensitive ecosystems and species in the project area. 	<ul style="list-style-type: none"> Records on replanted vegetation throughout construction
USAID	GHG emissions	Energy	Prevent and control emissions of GHGs and other gases from geothermal technologies	<ul style="list-style-type: none"> Use closed-loop systems that prevent gaseous emissions or emissions-capturing technologies Use Personal Protective Equipment (PPE) during any drilling activities 	<ul style="list-style-type: none"> Monthly analyses of outdoor and indoor air quality and investigation of human respiratory health impacts, including small proxies by community members and facility workers Periodic measurements of lifecycle GHG emissions during production and processing of geothermal system components, transportation, and the end use of the fuel
USAID	Land use change	Energy	Minimize the tracts of land used for geothermal energy	<ul style="list-style-type: none"> Incorporate predevelopment assessments in solicitations and awards to ensure that biologically and culturally sensitive areas are avoided Establish and follow a protocol for replanting vegetation or repopulating affected species in areas affected by introduction of geothermal facilities Experts should conduct predevelopment assessments to minimize erosion Project managers should consider habitat loss, rainfall and drainage interference when constructing geothermal systems, especially where biodiversity or threatened or endangered species may be affected 	<ul style="list-style-type: none"> Annual/biannual site visits to ensure sensitive area mitigation Monitoring and evaluation of soil conditions annually during the life of the project
USAID	Depletion of resources	Energy - Bioenergy	Effective bioenergy projects must operate within the resource constraints of the project area	<ul style="list-style-type: none"> Conduct a predevelopment assessment and/or an ESV to assess potential impacts to valuable ecosystem services. Attention should be paid to the area resources including, but not limited to, cultivable land, available water resources, water resource needs and uses in the area, land needs and uses in the area, competing food/bioenergy crops grown locally, prospective bioenergy crops, and feedstock storage options Avoid siting projects in areas such that competing agricultural projects extend or relocate into ecologically sensitive, or carbon rich, areas 	<ul style="list-style-type: none"> Monitoring in the area of food availability and price - particularly of subsistence crops - to ensure relative stability upon introduction of the bioenergy project Monitoring of the water table, availability of surface water, and its seasonality and quality Monitoring of emergence or increases in need from competing uses
USAID	Land use change	Energy - Bioenergy	Control the potential risks of land use changes (both direct and indirect) associated with producing bioenergy crops	<ul style="list-style-type: none"> Require under Implementing Partner (IP) awards that baseline assessments guarantee that no biomass fuel crops will be grown on land suitable for food crops Plant bioenergy crops on brownfields, abandoned mining land, or other lower-quality areas to re-vegetate barren land, reclaim waterlogged or salinated soils, stabilize erosion-prone areas, provide habitat, and increase biodiversity Conduct a predevelopment assessment and/or ESV to ensure that land use changes minimize impacts on valuable ecosystem services 	<ul style="list-style-type: none"> Independent site visit during design and annually thereafter to confirm that no land that could support food crops, degrade wetlands or natural habitats is utilized
USAID	Degradation of surface or groundwater quantity and/or quality	Energy - Bioenergy	Control and reduce use of Water Resources at Point of Energy Production	<ul style="list-style-type: none"> Conduct a predevelopment assessment of water uses and water needs for the local community and local flora and fauna Develop a water management plan, in coordination with the local community, during project conception and design 	<ul style="list-style-type: none"> Monitor the water table, availability of surface water, and its seasonality and quality Monitor emergence or increases in need from competing uses
USAID	Air pollution	Energy - Bioenergy	Avoid or reduce chemical inputs and runoff associated with bioenergy feedstock production and maintenance	<ul style="list-style-type: none"> Recycle used chemicals when safe and appropriate; take precautions during manufacturing to minimize use, or waste, of hazardous materials as able; and ensure proper project siting and design prior to implementation Develop and assess waste management and disposal plans with vendors and end users at the concept and design stage. 	<ul style="list-style-type: none"> Analyses of soil, surface water, and groundwater (e.g. biannual)
USAID	Waste accumulation	Bioenergy - waste	Properly manage the energy production process for bioenergy to avoid potentially harmful waste	<ul style="list-style-type: none"> Develop and assess waste management and disposal plans with vendors and end users at the concept and design stage 	<ul style="list-style-type: none"> Quarterly reviews of efficacy of the waste management plan to ensure waste is reaching designated disposal sites and all appropriate handling precautions are being followed

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
USAID	Land use change	Energy - Bioenergy	Control and minimize land-use changes resulting from converting agricultural land for bioenergy production	<ul style="list-style-type: none"> Evaluate the site suitability of proposed crop production site prior to project implementation Avoid outdoor and indoor pollution from waste combustion and pollution from bioenergy cycle Conduct a predevelopment assessment and/or ESV to ensure that land use changes minimize impacts to valuable ecosystem services. 	<ul style="list-style-type: none"> Regular analyses of outdoor and indoor air quality and investigate human respiratory health impacts Measurements of lifecycle GHG emissions during production and processing of bioenergy feedstock, transportation, and the end use of the fuel
USAID	GHG emissions	Deforestation - Bioenergy	When produced responsibly, biomass can provide energy that decreases carbon emissions by displacing fossil fuels	<ul style="list-style-type: none"> Conduct a predevelopment assessment and/or ecosystem services valuation (ESV) to ensure that land-use changes minimize impacts to valuable ecosystem services provided by local forests Use agriculture waste products of bioenergy crops as feedstock instead of natural forest Use efficient stoves that can maximize the efficiency of solid biomass feedstock so that less fuel is needed Utilize biogas and biofuel technology when possible to avoid the use of solid biomass as fuel 	<ul style="list-style-type: none"> Analyze full fuel-cycle carbon emissions, both above and below ground for the entire biomass supply system Measure annual harvest of wood resources
USAID	GHG emissions	Energy - Biomass	Prevent and control the amount of emissions produced by clean cookstove technology	<ul style="list-style-type: none"> Use high-energy efficiency stoves to minimize emissions; advanced-fan stoves that improve the efficiency of biomass burning reduce the net warming impact by 60%. Gasifier stoves reduced net warming by 40% Harvest solid biomass sustainably, for up to a 95% reduction in overall warming 	<ul style="list-style-type: none"> Analyses of outdoor and indoor air quality and investigation of human respiratory health impacts should be taken regularly Measurements of lifecycle GHG emissions during the lifecycle of the fuel
USAID	Adverse health and/or safety effects	Energy - Clean cookstoves	Clean cookstoves to reduce indoor air pollution that results in adverse human health impacts	Use high energy efficiency stoves to minimize emissions and ensure cooking in well ventilated locations	<ul style="list-style-type: none"> Conduct regular analyses of outdoor and indoor air quality and investigate human respiratory health impacts
USAID	Global ecosystem degradation (air, soil, water and biodiversity)	Energy - Biogas	Properly managed animal manure to avoid air and water pollution	<ul style="list-style-type: none"> Use proper planning and surveillance to mitigate the adverse effects of these problems on climate change Use high-quality biodigesters to avoid methane gas leakages from gas collection chambers and pipings. Recycle water by separating solids from slurry 	<ul style="list-style-type: none"> Collect measurements of lifecycle GHG emissions during the lifecycle of the fuel
USAID	Degradation of surface or groundwater quantity and/or quality	Energy - biofuel	Limit competition for Water Resources associated with the refining process for biofuels	<ul style="list-style-type: none"> Ensure the availability of water resources, both to support feedstock production and for necessary refining for selected feedstock, without adversely impacting local agricultural needs at macro- and smallholder levels Select feedstock that best minimizes overall demand on water resources through the production cycle while maintaining effectiveness at the selected site 	<ul style="list-style-type: none"> Establish a baseline of available water resources in the area Conduct community surveys to determine the extent of water shortages relative to community needs
USAID	Air pollution	Energy - coal	Prevent and control smog, acid rain and toxic air pollution associated with coal burning	<ul style="list-style-type: none"> When possible, use clean, high efficiency boilers, stoves, and lamps that use renewable energy Conduct a predevelopment assessment and/or ESV to ensure that coal burning -- or the best energy alternative -- minimizes impacts to air and water quality 	<ul style="list-style-type: none"> Daily logs of outdoor and indoor air quality Meter outdoor and indoor air quality continuously at selected locations. Biannual assessments of human respiratory health impacts
USAID	Waste accumulation	Waste - Energy - coal	Manage residues of coal combustion	Develop and implement protocols for containment and disposal of residues from combustion	<ul style="list-style-type: none"> Regularly monitor the waste management process to ensure proper containment and disposal of combustion residues
USAID	Air pollution	Energy - clean cookstoves	Prevent and control smoke resulting from heating and cooking	<ul style="list-style-type: none"> When unable to use clean technology for heating and cooking, build kitchens with porous materials and proper ventilation to improve indoor air quality Provide local workers PPE, especially masks, to avoid inhalation of dust and smoke during mining 	<ul style="list-style-type: none"> Conduct regular analyses of outdoor and indoor air quality, and investigate human respiratory health impacts Visit worksites bi-annually to ensure PPE and safety practices are used
USAID	Global ecosystem degradation (air, soil, water and biodiversity)	Energy - diesel/fuel	Avoid spillage and vapor releases at diesel/fuel pumps, as well as leakage from underground tanks	<ul style="list-style-type: none"> Conduct predevelopment assessment and/or Ecosystem Services Valuation to ensure that development changes minimize impacts to valuable ecosystem services -- in this case soil and water quality Use well-designed concrete pads to capture contaminants in the case of seepage or spills Use leak-preventing nozzles at pumps Inspect above and below ground tanks for rusting and poor welds. Develop and establish protocols for educating workers on appropriate operations and safety Establish contractual requirements for decommissioning tanks at the end of their design lives. 	<ul style="list-style-type: none"> Fuel and O&M logs. Visit worksites bi-annually to check logs and ensure pads and nozzles are preventing and capturing any releases, seepages, or spills At decommissioning of tanks, ensure containment of all residual liquid fuel
USAID	Air pollution	Energy - diesel/fuel	Reduce emissions of pollutants from diesel engines	<ul style="list-style-type: none"> Use reduced sulfur and aromatics content in fuel, and consider using gas, in heavy-duty applications Utilize air pollution control technologies, and hybrid engines and fuel cells Use exhaust trap retrofits and smoke inspections 	<ul style="list-style-type: none"> Daily logs of outdoor and indoor air quality Meter outdoor and indoor air quality continuously at selected locations. Conduct biannual assessments of human respiratory health impacts
USAID	GHG emissions	Energy - diesel/fuel	Reduce GHG emissions produced at fossil-fueled generators	<ul style="list-style-type: none"> Use alternatives to diesel generators, including biofuel ready systems and fuel cells. Utilize emission controlling technology Conduct predevelopment assessment and/or ESV to ensure that development changes minimize impacts to valuable ecosystem services -- in this case air quality and carbon sequestration 	<ul style="list-style-type: none"> Calculated estimates of lifecycle GHG emissions
USAID	Global ecosystem degradation (air, soil, water and biodiversity)	Energy - Liquid Petroleum Gas	Avoid spillage and evaporative emissions during LPG refueling	<ul style="list-style-type: none"> Conduct predevelopment assessment and/or Ecosystem Services Valuation to ensure that development changes minimize impacts to valuable ecosystem services -- in this case water and soil quality Use sealed tanks and special refueling valves to eliminate evaporative emissions and spillage Develop and implement protocols for safe handling of LPG during refueling 	<ul style="list-style-type: none"> Proper handling instructions are received Regular analyses of soil/water conditions.
USAID	Air pollution	Energy - Liquid Petroleum Gas	Reduce GHG emissions produced by LPG use	<ul style="list-style-type: none"> Use emission- controlling technology and consider alternative fuel options Conduct predevelopment assessment and/or ESV to ensure that development changes minimize impacts to valuable ecosystem services -- in this case air quality and carbon sequestration 	
USAID	Waste accumulation	Healthcare waste - Procurement	Properly manage procurement activities that may generate healthcare waste	<ul style="list-style-type: none"> Conduct quantification analysis to determine supply needs and develop a supply plan. Coordinate forecasting and supply planning activities with quantification team (e.g., host country officials and/or program staff) to meet current needs and minimize the risk of stock-outs or surplus of health commodities. Procure health commodities that consider ratio of commodities to target population, existing supply of commodities, and supply of commodities from non-USAID funds Manage inventory of stock to minimize potential for diversion in commodity distribution. Procure health commodities that comply with host country and international regulatory, shipping, and packaging requirements to ensure that only appropriate products enter the supply system. Negotiate manufacturer take-back clauses and sustainability criteria including minimal, recyclable packaging and environmentally preferred transportation in health commodity procurements, if possible. Develop and implement an inspection and quality assurance process for assessing and monitoring product quality. Maintain copies of procurement records (e.g., manufacturing records, chain of custody manifests, Certificate of Analysis, test data, and/or regulatory certificates) and copies of quality documentation on file. 	<ul style="list-style-type: none"> Supply plan Supply forecast Inventory control system Product specifications Procurement records Disposal records Site visits (announced and unannounced) to verify mitigation measures are being implemented correctly and are effective
USAID	Waste accumulation	Healthcare waste - Storage	Manage storage of healthcare waste / storage activities that may generate healthcare waste	<ul style="list-style-type: none"> Develop and implement a Standard Operating Procedure (SOP) for the safe and effective storage of healthcare commodities to reduce damage or early expiration. Develop and implement a Waste Management Plan (WMP) or comparable SOP for the safe storage of HCW to reduce the potential for disease transmission and physical injury. Provide training to workers on the WMP/SOP developed for the safe and effective storage of healthcare commodities and Healthcare waste. Conduct site inspections to determine that WMP/SOP and training programs are implemented and effective. 	<ul style="list-style-type: none"> WMPs/SOPs, including waste collection and storage plans Training program records Photographs Records/ manifests of generation/ transport Site visits (announced and unannounced) to verify mitigation measures are being implemented correctly and are effective
USAID	Waste accumulation	Healthcare waste - Distribution	Properly manage commodity distribution and implementation activities that may generate healthcare waste	<ul style="list-style-type: none"> Develop and implement SOPs, including those in the WMP, for the safe distribution and use of health commodities. Provide training to workers and drivers on distribution and implementation of health commodities, including inventory and cold chain management during transport. Include supplies for clean-up in the event of an accident during distribution. Conduct site visits to verify that workers and drivers are trained and following the WMP/SOPs. Where possible encourage energy efficient modes for commodity distribution /transportation. Monitor worker welfare to ensure adequate protections are in place and inequalities are addressed. 	<ul style="list-style-type: none"> WMPs/SOPs, including commodity distribution plans Clean-up supplies Training program records Photographs Site visits (announced and unannounced) to verify mitigation measures are being implemented correctly and are effective Worker welfare monitoring can be carried out via qualitative interviews, anonymous reporting, grievance mechanism, and independent audits

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USAID	Waste accumulation	Healthcare waste - disposal	Ensure treatment and disposal of healthcare waste	<ul style="list-style-type: none"> Develop and implement a WMP/SOP for disposing of HCWs. Management considerations include waste minimization procedures, proper handling of wastes, storage of wastes (including PPE), containers and labeling, safe treatment and disposal practices and procedures (including fire safety), inspection protocols and frequency, and documentation requirements (including waste manifests). Provide training to workers on the WMP/SOP developed for properly handling, segregating, storing, and treating/disposing of HCW. Conduct site visits to document that workers are trained on and following the WMP/SOP. Ensure waste disposal contractors have SOPs established for properly transporting, treating, and disposing of HCW off-site in conformance with host country requirements and international best practices. Conduct site visits to verify that waste disposal contractor is following SOPs and that appropriate documents and records are being collected/maintained. Encourage the use of environmentally preferred technologies, if possible. Cover HCW in landfills/pits/dump sites with earthen material (U.S. EPA recommends 6 inches) on a daily basis to control disease transmission, pests, odors, scavengers, or other impacts. Install access controls (e.g., fences and/or warning signs) to HCW activity locations (e.g., incinerators or landfills/pits) to limit improper access to such areas, especially if contamination exists. Monitor worker welfare to ensure adequate protections are in place and inequalities are addressed. Screen visual/odor/noise impacts of HCW treatment/disposal activities through tree plantings, solid fencing/walls, or other screening methods. Incorporate community art and/or architectural features where possible. Develop and implement a waste collection plan designed to minimize traffic impacts associated with off-site HCW transportation, including appropriate timing of vehicle movements, efficient routine, and appropriate vehicle selection. 	<ul style="list-style-type: none"> Site visits (announced and unannounced) to verify mitigation measures are being implemented correctly and are effective Worker welfare monitoring can be carried out via qualitative interviews, anonymous reporting, grievance mechanism, and independent audits Systematic M&E efforts showing documented improvements relating to human rights protection Traffic monitoring – via direct observation surveys, GPS tracking, and complaints monitoring – and review of waste collection plan
USAID	GHG emissions	Livestock	Adapt grazing livestock and dairy production to climate change to reduce GHG emissions	<ul style="list-style-type: none"> Better animal nutrition (more concentrate feed and nutritional supplements) and genetics. Switch from ruminant species to monogastrics (e.g. chickens, pigs). Avoid anaerobic manure decomposition by applying manure directly as fertilizer. Biogas digesters to reduce CH4 emissions and produce usable fuel for cooking and lighting Proper storage and application of manure to fields. Promote agriculture intensification instead of clearing new land or deforestation. Conservation agriculture practices to promote soil carbon sequestration. Build sustainable value chains at regional, national, or sub-national levels 	
USAID	Erosion of biodiversity (wildlife and/or habitats)	Livestock	Prevent and control pasture degradation	<ul style="list-style-type: none"> Better grazing practices, such as rotational grazing and optimization of livestock numbers. 	
USAID	Land use change	Livestock	Adapt agriculture production to climate change to reduce land use changes and deforestation	<ul style="list-style-type: none"> Promote agriculture intensification instead of clearing new land or deforestation. Conservation agriculture practices such as no till, strip-till, and use of cover crops promotes soil carbon sequestration. Use organic fertilizer if possible. Optimal application of inorganic fertilizer. Use efficient, appropriate, and well maintained equipment. 	
USAID	Erosion of biodiversity (wildlife and/or habitats)	Livestock - Conservation of biodiversity	Ensure introduction of a new grazing livestock production or mixed farming doesn't damage habitat or large areas by overgrazing, imbalanced foraging and/or soil compaction	<ul style="list-style-type: none"> Ensure that pastoralists and livestock managers/farmers have secure tenure rights. Develop decision-makers' awareness of the long-term economic importance of maintaining balanced ecosystems and resilience, including maintenance of biodiversity and wildlife. Provide similar knowledge to pastoralists and livestock managers/farmers. Guarantee managers and pastoralists sufficient mobility and flexibility to manage grazing areas sustainably, use water and biomass efficiently, destock rapidly in times of drought and restock when rains return and provide access to timely climate information to help them make those decisions. Consider expected climate impacts and ensure land will be able to support new livestock population Choose species/breeds that are well suited to the local ecology and current and future climate. Choose species that produce less GHG emissions. For mixed farming systems, determine farmer/livestock manager's ability to match livestock requirements to available rangeland and fodder crops for long-term sustainability. Strengthen capabilities through education and incentives where needed. Ensure a balanced mix of foraging and grazing species, including wildlife where appropriate. Determine fodder preferences of domestic and wildlife species. To ensure balanced use of fodder and water, determine baseline carrying capacity for livestock and wildlife (where appropriate). Establish quota systems for domestic species and wildlife to ensure that carrying capacity is not exceeded. Change domestic species and breeds to minimize overlap between their preferred fodder and that of local wildlife, and/or ensure a sufficient supply of fodder for domestic species and wildlife. Establish historical baselines for climate and precipitation, taking into account seasonal and geographic variations. Establish historical baselines for soils, water quality and quantity, flora and fauna, and select indicators to measure deviation from baseline. Monitor indicators to gauge whether long-term resilience of range and mixed farming systems is being maintained. Train herders, pastoralists and farmers as resource monitors. Assure pastoralists' access to seasonal grazing and water. Strengthen systems for wildlife management and for control of problem animals to 	<ul style="list-style-type: none"> Monitoring of implementation of tenure policy Monitoring of management of the quota system.
USAID	Conflicts over land uses or natural resources	Livestock	Minimize the risks of conflicts between livestock managers and other groups , such as farmers	<p>To prevent conflict between livestock managers, farmers, pastoralists and other groups:</p> <ul style="list-style-type: none"> Ensure that the customary or legal rights and responsibilities of all parties are harmonized and accepted. Agreements should cover how each resource will be used, who will use it, when it is to be used, utilization rates and quotas, management costs, and monitoring responsibilities. If such rights and responsibilities are not yet established, work with policymakers to create a respected legal framework. Provide timely, access to climate information so that groups can optimally manage the resource. 	
USAID	Soil degradation	Livestock	Prevent and control the risks of erosion and sedimentation associated with the introduction of a new grazing livestock production or of mixed farming in highland areas or marginal lands	<ul style="list-style-type: none"> Avoid overgrazing through the use of quota systems matched to carrying capacity. Construct side hill ditches or similar diversion structures—Very typically separating higher, non-arable land from cultivated land below. Construct terraces—radical conversion of sloped land into a series of graded steps approximating flat conditions. Plant living barriers—planted along the contour to trap or filter run-off and retain soil, such as contour hedgerows or grass strips. In some circumstances, fencing is necessary to keep animals and waste out of riparian areas. Ensure that terracing and paths are well constructed, and Reduce soil compaction by providing incentives to avoid wet season grazing. Protect stream and riverbanks from browsing or grazing through fencing or herding techniques. 	
USAID	Soil degradation	Livestock	Ensure a proper management and/or treatment of manure	<ul style="list-style-type: none"> Preferably, apply manure to crop fields. Use an anaerobic digester If the expense of transport makes this uneconomical, treat the manure. Options for treating animal manure are like those for treating human waste. These include construction of artificial wetlands, detention ponds, composting, and biogas generation. Site these treatment systems with care to minimize adverse impacts on water bodies and communities. 	
USAID	Erosion of biodiversity (wildlife and/or habitats)	Livestock	Prevent and control the impacts of the introduction of new livestock and breeds on the land degradation, reduction of biodiversity and habitat	<ul style="list-style-type: none"> Thoroughly research new species of livestock. Determine their grazing/browsing preferences and compare them to those of current livestock species/breeds and wildlife to minimize overlap and prevent unbalanced feeding. Pilot-test new breeds and species before introducing them in a broad program If local breeds can meet specified needs, strongly consider their use. Even if a local breed is a relatively low producer, weigh this drawback against the breed's disease resistance and hardiness in the local environment. Consider whether the breed will be well-suited to expected climate changes. Introduce entirely new species or breeds to a region with great care. Evaluate the risks of introducing new diseases that might be transferred to wildlife. If breeds or species from other parts of the country, region, or world are to be introduced, wash and comb their hooves and coats to remove plant seeds. Feed livestock on grain or other crop feed in transit to minimize the risk of accidentally introducing new plant species. 	<ul style="list-style-type: none"> Monitoring of new breeds and species introduction over time

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USAID	Erosion of biodiversity (wildlife and/or habitats)	Livestock - deforestation	Avoid conversion of forest and other ecosystems to grazing land	<ul style="list-style-type: none"> Avoid conversion of existing forests or other ecosystems when possible Generate clean energy from biogas from by-products including manure and residues Employ sustainable feed management practices to reduce methane emissions from livestock 	
USAID	Degradation of surface or groundwater quantity and/or quality	Livestock	Installation of adapted new/improved water supply	<ul style="list-style-type: none"> When installing new water supplies, consider how access to water will affect geographical and seasonal grazing patterns. In some cases, such as in a semi-arid climate, it may be best not to construct water supply improvements for livestock, since these will almost certainly lead to environmental degradation. Ensure adequate water supply for livestock as well as other local uses (human and ecosystem). Consider recent as well as expected future climatic conditions. If the improvements are essential, ensure that a mechanism for regulating water use is in place to prevent exhaustion of the water resources and to help restrict the number of livestock dependent on these sources. Water supply improvements should also be designed so that they minimize the risks of water supply contamination by animals and humans. 	<ul style="list-style-type: none"> Monitoring of water supply quantity and quality
USAID	Adverse effects on human populations	Human rights	Ensure that fundamental human rights are respected, protected, and observed in all activities	<ul style="list-style-type: none"> Uphold human rights principles of accountability and rule of law, participation and inclusion, and equality and non-discrimination in all activities Zero tolerance for sexual exploitation and abuse (SEA) committed by an employee or any other personnel Ensure that programmes are implemented in a safe and dignified manner with respect for people's needs, rights and capacities. Safeguard the personal data of beneficiaries during processing the information needed for activities Prevent the use of child labour and forced labour in all operations and activities; prevent the inappropriate participation of children in all operations and activities Conduct due diligence on partners, contractors, and - where possible - primary suppliers to identify and minimize risks of human rights violations, including risks of sexual exploitation and abuse, forced labour, and child labour. Strengthen the inclusion and meaningful participation of the most marginalized and vulnerable, such as people with disabilities in programmes Recognize and foster full respect for indigenous peoples and their rights, dignity, cultural uniqueness, autonomy, identity, and aspirations, consistent with rights and responsibilities set forth in the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) and other international instruments relating to indigenous peoples. Avoid involuntary resettlement through any land or resource acquisition or restrictions on land or resource use that would lead to physical and/or economic displacement, and where avoidance is not possible, minimize adverse impacts. Improve or restore livelihoods and living standards of all such displaced persons through full and just compensation for lost assets and provision of adequate housing, security of tenure, and access to services and facilities. Protect cultural heritage from damage, alteration, or removal and support its preservation 	
USAID	GHG emissions	Health - Energy	Ensure clinic power requirements with environmentally responsible measures and strategies	<ul style="list-style-type: none"> Install electric lighting in treatment rooms and maternity. Use solar panel/battery systems to supply electricity in rural areas. Install backup power sources for clinics that rely on municipal power supply or generation from sources that may be impacted by climate change. Consider installation of an inverter which can manage inputs from the power grid, a generator, and alternative energy sources as local availability and priorities dictate. Use compression-type refrigerators and ice pack freezers for cold-chain programs. Provide electricity for radios as an amenity for clinic staff (photovoltaic or hand crank devices may be appropriate for rural areas). Use clinic electricity as an income generating activity (charging batteries, cell phones, etc) 	
USAID	Adverse health and/or safety effects	Health facility - Nutrition	Ensure capacities of health facilities to provide food to their patients while reducing environmental impacts	<ul style="list-style-type: none"> Locate kitchen in an area not visited by patients, away from the latrines, close to the well Construct windows for ventilation and lighting, and screen windows to reduce flies and other insects Design entries to prevent entry by insects, rats and mice Remove all kitchen waste from the facility daily and dispose of waste in an area separate from the storage location for hazardous wastes Use energy efficient stoves to reduce fuel consumption and improve indoor air quality Plant a windbreak around clinic of plant species that produce good fuel for cookstoves Consult with local community about preferred plant species 	
USAID	Waste accumulation	Health facility - Waste management	Ensure proper waste disposal at health facility level	<ul style="list-style-type: none"> Site waste storage and disposal areas away from main clinic buildings Establish a system of source separation: provide clearly labeled buckets for sharps, non-hazardous waste, disposable hazardous waste (dressings, tissue), and non-disposable hazardous materials (sheets, towels). Incinerate non-recyclable hazardous waste, sharps, and expired pharmaceuticals. Do not use incinerators and burn pits for storage of hazardous materials Avoid storage of hazardous material on the floor by storing hazardous waste on shelves or in elevated drums in a location well-protected from the elements. Store hazardous waste in a dedicated, concrete-lined area that is surrounded by a berm to prevent spills from escaping. Screen burn pits to reduce disease transmission by insects, birds and mammals. Cover burn residue in pit with soil after each burn. Fence the area around burn pits to prevent access by animals, children and others. Also design fence to serve as a wind barrier to prevent unburned or partially burned materials from blowing out of the pit. 	
USAID	Waste accumulation	Waste management - Asbestos	Safe and proper management of asbestos	<ul style="list-style-type: none"> Label and leave undamaged materials alone. To the extent possible, prevent them from being damaged, disturbed, or touched. Periodically inspect for damage or deterioration. Check with local appropriate officials to find out about proper handling and disposal procedures, and availability of secured disposal sites. Seal asbestos materials in place by covering with a layer of primer and paint, or a layer of PVC adhesive. If asbestos material must be removed, determine availability of local expertise in asbestos removal and disposal and request on-site assistance. Thoroughly soak material with water containing a few drops of detergent before removing or disturbing asbestos materials. Never break removed material into small pieces. This could release fibers into the air. After removal, clean the area well with wet mops, wet rags, sponges, or HEPA (high efficiency particulate air) vacuum cleaners. Wetting helps reduce the chance of spreading asbestos fibers in the air. All asbestos materials, disposable equipment, and clothing used in the job must be placed in sealed, leakproof, and labeled plastic bags. Dispose of all asbestos materials in sealed, lined bins or a leak-proof container. 	
USAID	Erosion of biodiversity (wildlife and/or habitats)	Forestry - Resources conservation	Ensure sustainable forest management	<ul style="list-style-type: none"> Examine micro- and macro-economics of sustainable forest management to ensure proper incentives for investments Routinely revise forest management plans and review monitoring records Conduct research and development on growth, yield, and impact (economic, social, environmental) of sustainable forest management on natural forests Consider and plan for climate impacts Conduct more careful research and understanding of local/traditional knowledge Develop and adhere to a sound sustainable management plan Ensure that results of monitoring are factored into revisions of the management and annual operational plans Enhance training in reduced-impact logging for forest management staff Train and field additional paratechnicians from farmer community to advise peers Enhance record-keeping on the causes and effects of the stand's response to interventions Develop forest fire prevention/ management program Avoid silvicultural practices that result in increased fragmentation of forest habitat 	<ul style="list-style-type: none"> Harvesting records or physical condition of the residual stand Changes in the availability of forest-supplied basic needs such as fuelwood or medicinal plants Damage to remaining trees Erosion along skid trails and logging roads Trees cut but not removed from forest Poor regeneration of key species for wood or non-wood products Continued occurrence of forest fires Reduced community access to forest resources Conflicts between local inhabitants and forest workers Hardship and social disintegration within the local communities dependent on adjacent forests

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USAID	Erosion of biodiversity (wildlife and/or habitats)	Forestry - Biodiversity conservation	Decrease threats to endangered species or biodiversity assets while implementing forestry programmes	<ul style="list-style-type: none"> Review the basic forest management plan, ensure that proper prescriptions are in place Increase training in the local community about conservation rights and responsibilities Consider and plan for climate impacts Conduct additional participant training and field-based inspections by supervisory staff Control forest access Develop forest fire monitoring, prevention, and control systems Heightened monitoring of endangered species and increased conservation measures as needed 	<ul style="list-style-type: none"> Logging or forest disturbance in protected areas or on sections set aside to preserve biodiversity values in productive forests Changes observed in composition of flora and fauna
USAID	GHG emissions	Forestry	Avoid forestry management harmful for the environment and increasing GHG emissions	<ul style="list-style-type: none"> Information and technical assistance to support sustainable forest management Restoration of degraded forests Mixed plantation forests for carbon sequestration Land use planning and enforcement resulting in protection of forests and other carbon-rich ecosystems Inclusion of climate models for broader forest management planning and improved measures of environmental variables in forest management activities Improved fire management Higher-efficiency cook stoves or lower-emissions alternatives to household firewood use Alignment of programs with national REDD+ strategies and national emission reductions goals 	<ul style="list-style-type: none"> Stored carbon Soil erosion Occurrence of natural disasters Forest diseases Availability of resources needed by the local community
USAID	Food insecurity	Forestry	Avoid competition of agroforestry with crops for water, shade, and soil nutrients	<ul style="list-style-type: none"> Choose species that can adapt and grow in the specific environment Ensure proper spacing between trees and crops Plant trees with reduced water needs and limited shade Land use planning Plant deep-rooted trees and shallow-rooted crops 	<ul style="list-style-type: none"> Growth of crops Yields Nutrient in the soil
USAID	Erosion of biodiversity (wildlife and/or habitats)	Forestry	In agroforestry programmes, minimize or avoid exotic species invasion	<ul style="list-style-type: none"> Review the basic forest management plan and ensure that proper prescriptions are in place to control exotics Increase training on species selection Balance species selection Select native, multipurpose species 	<ul style="list-style-type: none"> Native species decrease/increase in abundance
USAID	Erosion of biodiversity (wildlife and/or habitats)	Forestry - Reforestation	Through reforestation programmes, avoid loss of forest ecosystem ability to deliver associated ecosystem goods and services	<ul style="list-style-type: none"> Developing a reforestation master plan or program strategy Understanding the micro- and macro-economics of sustainable forest management Enhancing national government's capacity for land-use planning Considering and planning for climate impacts Educating stakeholders and making climate information available so that their forestry activities and land use planning take climate change into account Increased awareness of cost issues, timing, periodicity Improved integrated program planning, resource assessments and site stratification Clear criteria for selection of suitable sites Valuation of additional marketable forest products or ecosystem services Testing and development of native species as integral part of reforestation programs Incorporating climate information in land use planning and project planning, including selection of target species 	<ul style="list-style-type: none"> Tree diversity (e.g., plantations) Use of native plantation species Decrease/Increase in the supply of essential products and the services provided by the naturally forested areas Changes in wildlife, including bird populations and compositions
USAID	Global ecosystem degradation (air, soil, water and biodiversity)	Forestry - Reforestation	In seedling nurseries , avoid point- or non-point pollution as a result of misuse or unauthorized use of agrochemicals	<ul style="list-style-type: none"> Development of national agrochemical use guidelines that include forest nurseries Greater reliance on IPM solutions for pest problems Improving training packages and pesticide handling guidelines Training and fielding paratechnicians from within farmer community to advise peers Educating stakeholders and making climate information available so that agrochemicals are used optimally 	<ul style="list-style-type: none"> Program records and physical evidence Poisoning or pollution accidents (number, type,...)
USAID	Land use change	Forestry - Reforestation	When implementing reforestation programmes, avoid unintended changes in land use or shifting of use pressures to other areas	<ul style="list-style-type: none"> Enhance national government's capabilities for land-use planning Considering and planning for climate impacts Improve integrated program planning, resource assessments, and site stratification Including climate information in land use planning and project planning Coordinating with government-led REDD+ strategy and low emissions development strategy (LEDS) work 	<ul style="list-style-type: none"> Current users of degraded lands displaced by reforestation programs
USAID	GHG emissions	Forestry - Reforestation	Enhance carbon storage through reforestation programmes	<ul style="list-style-type: none"> Information and technical assistance to support sustainable forest management Restoration of degraded forests Mixed plantation forests for carbon sequestration Realism of behavioral shifts over time and considerable costs Land use planning and enforcement resulting in protection of forests and other carbon-rich ecosystems Improved fire management Higher-efficiency cook stoves or lower-emissions alternatives to household firewood use Inclusion of climate models and improved measures of environmental variables in forest management activities Alignment of programs with national REDD+ strategies and national emission reduction goals 	<ul style="list-style-type: none"> Stored carbon Soil erosion Occurrence of natural disasters Forest diseases and pests Availability of resources necessary for livelihood of communities
USAID	GHG emissions	Fishery	Reduce the impacts of fuel consumption associated with wild caught fisheries	<ul style="list-style-type: none"> Develop fuel efficiency standards Cap the number of boats allowed in a geographical area Control illegal fishing Implement climate change mitigation measures, such as emissions reductions, carbon sequestration, and policy actions for mitigation 	<ul style="list-style-type: none"> Fuel intensity per gear type Number of fishing vessels with motors Average number of hours that vessel engines are used per week
USAID	Erosion of biodiversity (wildlife and/or habitats)	Fishery - Biodiversity protection	Prevent and control the impacts of wild caught fisheries on the capture of endangered, threatened and protected (ETP) species and the destruction of habitats	<ul style="list-style-type: none"> Use bycatch reduction devices to allow large animals and ETP species to escape from nets Ban small mesh nets and other gears that are prone to catching ETP species Implement information, education, and communications campaigns to raise awareness of the importance of ETP species Use appropriate gear type for the different habitats and species to avoid harming the environment and its productivity Promote the prohibition of destructive practices Use mesh sizes that allow small and juvenile fish to escape Use a square mesh or a mesh with square windows instead of a diamond-shaped mesh (diamond-shaped meshes constrict during towing) Educate fishers about the long-term environmental and economic damage to ecosystems from using cyanide or dynamite Implement bans on destructive gear and species that are in danger of commercial extirpation or with very low abundance Engage with the private sector to develop fisheries improvement and certification initiatives. 	<ul style="list-style-type: none"> Number of vessels using turtle-excluding devices Number of ETP species caught as bycatch Population sizes of ETP species Number of vessels/fishers using destructive gear Number of policies/regulations/management actions implemented to reduce destructive practices Illegal, unregulated, or unreported landings Enforcement capability Governance responsiveness Management jurisdiction
USAID	Erosion of biodiversity (wildlife and/or habitats)	Livelihoods - Aquaculture - Biodiversity	Avoid habitat loss and degradation associated with aquaculture programmes	<ul style="list-style-type: none"> Avoid siting ponds in mangrove forests. If mangroves are cut, promote the restoration of mangrove forests. Use already cleared land whenever possible; reuse existing ponds before creating new ones to minimize disturbance of soil and vegetation Site ponds on the landward side of mangrove forests; leave the seaward side undisturbed and ensure adequate flow of freshwater for the mangroves. Consider floating and submerged cages rather than earthen ponds. Use off-bottom culture techniques for seaweed Build smaller ponds that are easier to manage and may have fewer environmental impacts Build ponds on soils with adequate clay content Space ponds well apart Support the establishment or strengthening of policies and management that promote the proper siting of aquaculture ponds, the appropriate selection of species, and proper water management to reduce cumulative impacts on the environment. 	<ul style="list-style-type: none"> Environmental performance index Status of critical habitats (coral reefs, mangroves, submerged aquatic vegetation, etc.) Proportion of critical habitats under protection Hectares of healthy mangrove forest/wetland/coral reef area Number of policies/regulations/management actions implemented for proper siting

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
USAID	Degradation of surface or groundwater quantity and/or quality	Livelihoods - Aquaculture - Water conservation	Control effluent discharge associated with aquaculture operations	<ul style="list-style-type: none"> Implement measures to control site drainage, surface runoff, and sewage discharge during construction and operation Promote closed culture systems and the establishment of policies that prohibit cage or net culture in open water Build ponds on soils with adequate clay content to avoid seepage into groundwater and surface water Use settling ponds or other control structures Maintain vegetated buffer zones Do not discharge nutrient-enriched water into freshwater bodies Use polyculture (e.g., raising several species, including at least one herbivorous species) to consume excess nutrients. Implement integrated multitrophic aquaculture to recuperate carbon, nitrogen, and phosphorous supplied to the system and to diminish the environmental impacts caused by the effluents Promote the culture of filter feeders—organisms that strain their food out of the water—to reduce waste and improve water quality by consuming plankton and preventing eutrophication Consider growing mollusks, macro algae, and microalgae by themselves or in conjunction with other species to reduce nutrient loading and eutrophication 	<ul style="list-style-type: none"> Sediment discharge Water quality
USAID	Soil degradation	Livelihoods - Aquaculture - Soil conservation	Prevent and control impacts on the aquaculture pond and immediate area	<ul style="list-style-type: none"> Implement sustainable aquaculture technologies that limit the salinization and acidification of soils, allowing aquaculture operations to remain productive over time. Use off-bottom systems such as rafts and lines for mollusk culture Use settling ponds or other control structures Plan for seasonal weather patterns and other constraints that influence erosion. Pre-determine shutdown criteria for bad weather conditions. Maintain a vegetated buffer zone 	<ul style="list-style-type: none"> Degree of soil salinity/acidity
USAID	Erosion of biodiversity (wildlife and/or habitats)	Livelihoods - Aquaculture - Biodiversity protection	Avoid introduction of non-endemic and invasive species along with pathogens , predators, parasites, and diseases into the ecosystem, with adverse effects on fisheries	<ul style="list-style-type: none"> Select native rather than exotic species Consider using some species (e.g., tilapia) that are cultivated worldwide and may be appropriate even though they are not native to a place. Gather information about the biology and ecology of the organism to be farmed (life cycle, nutritional requirements, tolerance to environmental change, etc.) to ensure that the species will survive in the planned aquaculture environment. Use lower stocking densities Vaccinate fish Apply integrated pest management Filter or ozonate the effluent from pond and recirculating tank systems Promptly remove diseased and dying fish During disease outbreaks, retain aquaculture effluent to prevent disease from spreading to wild populations Consider treating the influent water supply (for example, with chlorine) to eliminate pathogens and associated use of chemicals Set up multiple safeguards to reduce escapes 	<ul style="list-style-type: none"> Prevalence of non-endemic and invasive species Prevalence of pathogens Prevalence of predators Prevalence of parasites Prevalence of disease Proportion of sick animals; number of diseased animals/total animals/incidences of disease outbreaks
USAID	Food insecurity	Livelihoods - Aquaculture - Nutrition	Avoid decrease in fish available locally for protein , i.e. - Disruption to livelihoods - Increase in the demand and price of fish - Over exploitation (from processing wild-caught fish for fish meal)	<ul style="list-style-type: none"> Promote the establishment of policies and regulations that reduce and eliminate the use of wild-caught fish for fish meal Promote policies that favor processing facilities that serve export markets rather than creating fish meal Promote the use of innovative meals made from terrestrial animal byproducts, insects, plant oilseeds, and grain legumes (from yeast or from cereal byproducts) Consider culturing herbivorous fish and filter-feeders that do not require feed inputs Promote investment in less intensive and domestically oriented aquaculture of affordable and nutritious species Farm species lower in the food chain to reduce dependence on wild-caught fish meal (Golden et al. 2014) Allocate land and water resource rights to small-scale aquaculture 	<ul style="list-style-type: none"> Prevalence of processed capture fish in fish meal/feed Number of nutrition-sensitive fishing and processing policies, regulations, and actions that ensure availability of fish for local consumption
USAID	Soil degradation	Agriculture - Soil conservation	Avoid soil fertility loss through improving soil nutrient holding capacity and plant nutrient uptake	<ul style="list-style-type: none"> Composting and manuring (e.g., corraling). Integrated fertility management (organic combined with inorganic). Micro-fertilization. Green manuring. Crop rotations using N-fixing legumes. Improved fallows with leguminous trees and bushes. Enrichment planting of grazing land, rotational grazing Conservation agriculture methods. Increase soil organic content. Mulching Avoid burning (crop residue management) Use adapted crop varieties 	
USAID	Soil degradation	Agriculture - Soil conservation	Avoid water logging and soil salinization	<ul style="list-style-type: none"> Avoid excessive flooding /over watering on irrigated fields. Design for adequate drainage - including disposal of excess water to evaporation ponds or the sea, especially if nearby wetlands/rivers will be adversely affected by the drainage water. Use alternative irrigation methods (e.g., drip irrigation) and adjust watering schedules. Prepare the land with minimal tillage/CA methods. Ensure fallow periods. Install & maintain sub-surface drainage system. Incorporate soil additives (e.g., gypsum added to water or soil). Plant salt tolerant crops. Reduce rates of evapotranspiration by creating windbreaks, practice agroforestry, and ensure good soil cover. 	
USAID	Degradation of surface or groundwater quantity and/or quality	Agriculture - Water conservation	<ul style="list-style-type: none"> Minimize runoff Maximize rainfall infiltration and storage in the soil Reduce evaporation 	<ul style="list-style-type: none"> Improve soil cover (plant trees and grasses) Increase soil organic content by composting Contour cultivation Conservation agriculture Use vegetation barriers, soil / stone bunds or terracing Agroforestry Promote improved cooking stove designs as a way of combating deforestation Rain water harvesting Intercropping, mulching, windbreaks, agroforestry 	
USAID	Degradation of surface or groundwater quantity and/or quality	Agriculture - Water conservation	<ul style="list-style-type: none"> Minimize water losses from irrigation system Improve water application efficiency Recharge aquifer / groundwater Harvest water to enable off-season irrigation 	<ul style="list-style-type: none"> Line canals Make canals deep and narrow instead of shallow and broad. Improve maintenance (check regularly for leakages). Use drip irrigation, micro sprinklers, low pressure irrigation system, improved furrow irrigation, supplemental irrigation, deficit irrigation, etc. Reduce runoff and improve underground water infiltration with afforestation. Establish small dams, subsurface tanks, percolation dams and tanks, diversion and recharging structures, etc. 	
USAID	Adverse health and/or safety effects	Agriculture - Health	Prevent and control incidence of water related , vector borne, communicable and other diseases	<ul style="list-style-type: none"> Educate about causes of water-borne and water-washed diseases. Improve local health facilities. Ensure good soil drainage on irrigation schemes; avoid night storage reservoirs. Make sure borrow pits are not filled with stagnant water; Line canals and keep them clear of vegetation growth; Educate for pesticide, herbicide, inorganic fertilizer and sewage contamination dangers. Educate for biodiversity conservation. Use alternative ways to improve/maintain soil fertility, control weeds and pests (e.g., adopting integrated disease and pest control and non-polluting weed management. Allow sufficient time and money for public participation to ensure that plans are optimal, that all sections of affected society are considered. Design projects to ensure women, migrant laborers, and the poorest community members are not compromised by reduced access to resources. Consider markets, financial services and agricultural extension in conjunction with proposed irrigation and drainage changes. Ensure that agricultural intensification does not preclude other economic or subsistence activity, such as household vegetables, fodder or growing trees for firewood. Provide short-term support and/or skills for an alternative livelihood if irrigation removes existing livelihood. Establish and support women's groups; promote alternative income-generating activities for women; empower women by providing management and organizational skills training. 	<ul style="list-style-type: none"> Monitoring of irrigation water quality

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
USAID	Adverse health and/or safety effects	Construction - health risks	<ul style="list-style-type: none"> Protect community public health Avoid disturbing communities or creating health and safety risks to community by understanding local dynamics and any resources related to subsistence or public use that may be impacted 	<ul style="list-style-type: none"> Identify risks and hazards to community health and safety and define procedures to avoid or manage them If security personnel will be hired, develop a security plan based on a risk assessment, ensure correct screening and training processes as well as use-of-force procedures, and produce memorandum of understanding with national police forces as required Identify potential short-term disturbances to community (such as noise, dust, traffic, circulation of workers) and define measures to minimize them (scheduling, trainings, maintenance, or use of alternatives and communications) Communicate necessary information regarding community health and safety to community and to workers Train workers regarding community interactions and health and safety procedures Train relevant staff and service providers in emergency response Train and monitor security personnel Implement community health and safety procedures Implement disturbance minimization procedures Continue trainings and communications Carry out emergency drills with relevant parties Monitor health and safety concerns and occurrences and respond when necessary Monitor security personnel 	<ul style="list-style-type: none"> Documentation of understanding of local community dynamics and affected resources Health and safety procedures in place Emergency response plan Security plan Security personnel procedures in place Measures to minimize disturbances in place Number and types of communications activities and participants Number and type of trainings, content, and participants Documentation of security plan implementation results Number of grievance issues involving security personnel raised and resolved Documentation of implementation of procedures Number and types of complaints received from community regarding avoidable disturbances. Resolution of complaints Number and types of trainings, content, and participants Number and types of communications activities and participants Number of emergency drills Number of monitoring activities to verify disturbance in the communities Number and types of health and safety occurrences documented and resolved Number of security personnel monitoring activities
USAID	Adverse health and/or safety effects	Construction - health - safety	Manage health and safety in construction programmes	<ul style="list-style-type: none"> Identify risks and hazards to worker health and safety and define procedures to avoid or manage these risks Assign responsibility to design risk out to a member of the engineering team For rehabilitation projects, make all reasonable efforts to establish whether there is any asbestos or lead present in an existing structure Review construction schedule to minimize overtime or other worker welfare pressures Use tools to design health and safety risks (e.g., BIM) Do not utilize fragile roofing material through which workers can fall. Avoid features at height on roofs, e.g., generator rooms, which require frequent access for maintenance. Incorporate permanent walkways, platforms, travelling gantries across fragile roofs Reduce maintenance requirements for project, consider removing project needs that require moving parts, and use low maintenance materials Ensure sufficient budget for good health and safety practices during construction Review design with construction worker who has knowledge of the construction methods Hold design review meetings at key stages Identify potential emergency situations and develop emergency response plans Set out basic health and safety obligations in contracts Communicate residual risks to the implementation team/contractors on site Where excavations are necessary designers should highlight on the contract drawings that temporary supports to all excavations must be provided by the contractor as necessary Design the site layout (i.e., the location of structures) to avoid work, and mobile generator or other equipment movement, near overhead electric cables Communicate necessary information regarding health and safety to workers Train workers regarding health and safety procedures Demarcate the area to minimize risks to bystanders Coordinate with relevant local authorities and emergency services providers Request the local utilities to move overhead cables in advance of the main contractor 	<ul style="list-style-type: none"> Hazards risk assessment record Laboratory analysis Avoid disturbance of asbestos or lead without proper testing Health and safety procedures in place Emergency response plans Site risk assessment (s) Site health and safety plan/map showing how site is organized and where emergency provisions are located Communications materials utilized Number of communications activities, number of participants, number of different stakeholder groups Number of trainings, number of participants, content Documentation of coordination with relevant local authorities and emergency services providers Maintain incident log (near misses, accidents, incidents including reportable incidents and fatalities) Documentation of implementation of procedures Number of trainings, number of participants, content Communications materials utilized Number of communications activities, number of participants, number of stakeholder groups addressed Documentation of emergency drills Documentation of monitoring Number of health and safety occurrences documented and resolved
USAID	Global ecosystem degradation (air, soil, water and biodiversity)	Energy - waste management	Minimize the risks of battery theft leading to haphazardly disposal of battery fluid	<ul style="list-style-type: none"> Proper installation and positioning (out of easy reach) of solar systems with theft-proof hardware, battery cages with mesh, and secure mounts. Timely/scheduled maintenance of solar systems to deter theft and maintain equipment For community systems (or at hospitals, schools, etc.), community involvement and/or hiring a guard to protect the equipment can be effective Train solar panel operators and maintenance works on theft prevention measures and strategies 	<ul style="list-style-type: none"> Review of theft prevention measures and strategies - annually
USAID	Noise	Energy - noise	Minimize noise generated by large fans, the steam ejector and the turbines of geothermal sites	<ul style="list-style-type: none"> During planning, ensure that the siting of the geothermal system minimizes noise impacts on local communities If necessary, use mufflers and other soundproofing means to mitigate effects Treat discharge of spent geothermal fluids containing boron, fluoride, or arsenic prior to discharge Cool discharge water in ponds or tanks prior to release Re-inject the geothermal wastewater into the source Use well casings to create a barrier between the inside of the well and adjacent land 	<ul style="list-style-type: none"> Stakeholder and community surveys during concept preparation and mock-up noise tests Bi-annual stakeholder and community surveys to evaluate satisfaction with the project, including noise impacts Number of community complaints about noise Visual monitoring of wells during drilling and operation for early detection and management of leaks
USAID	Adverse health and/or safety effects	Energy - Biogas - Health	Prevent and control feces-borne parasites and pathogens can be dangerous for crop cultivation and human ingestion	<ul style="list-style-type: none"> Since effluents from digesters are often used in fertilizers, precautions are needed when human and hog feces are used as feedstock 	<ul style="list-style-type: none"> Regularly investigate human health impacts of biogas digesters
USAID	Adverse health and/or safety effects	Livestock - Health	Prevent and control the risks of human and livestock disease	<ul style="list-style-type: none"> Mechanisms to maintain human and livestock populations at sustainable levels below the upper limits of the ecosystem's carrying capacity, including the provision of health and family planning services and incentives Consider use of permits and quota systems to limit in-migration and population growth in sensitive or threatened rangelands, mixed farming areas, or other areas of special value. Use pollution permits to control pollution from industrial livestock operations Assess the medium- to long-term implications of epidemic diseases on livestock managers, pastoralists and farmers, as well as on provision of technical assistance and support. Institute local health and HIV/AIDs education programs in conjunction with technical assistance and training in livestock management 	<ul style="list-style-type: none"> Monitoring of growth in population against a historical baseline.
USAID	Degradation of surface or groundwater quantity and/or quality	Livelihoods - Aquaculture - Chemicals	Reduce adverse impacts from the use of chemicals and prevent spreading disease through water contamination associated with aquaculture operations	<ul style="list-style-type: none"> Use IPM or polyculture to control weeds. Construct deeper ponds. Consider use of less-toxic alternatives to hazardous products Designate areas for storage and refueling. Apply chemicals with proper containment away from watercourses or wetlands Prepare an Emergency Spill Response Plan Contain spills and treat contaminated soil and water as required Filter or ozonate the effluent from pond and recirculating tank systems Promptly remove diseased and dying fish During disease outbreaks, retain aquaculture effluent to prevent disease from spreading to wild populations Promote the establishment of policies and regulations that prohibit fish cages to prevent the buildup of fish wastes and sediment Avoid frequent draining of shrimp ponds in order to allow microbial processes and deposition to remove nutrients and organic matter from within, which will also conserve fresh water 	<ul style="list-style-type: none"> Pollution shocks and accidents Level of chronic pollution Pollutant concentrations in the environment and inside ponds: loadings of nitrogen, phosphorus, organic matter, suspended solids, and 5-day biochemical oxygen demand
USAID	Degradation of surface or groundwater quantity and/or quality	Agriculture - Water efficiency	Increase water-use efficiency / improve rainwater management	<ul style="list-style-type: none"> Rain water harvesting: micro-catchments, macro-catchments, earth dams, sand dams, ponds, or roof catchments (storage tanks). Reducing soil water losses from evaporation through mulching. Managing excess water runoff: afforestation, agroforestry, terraces, contour farming, cross-slope barriers. Water-use efficiency at the conveyance and distribution level for irrigation projects: create well maintained, lined canals and piping systems; check regularly for leakages and fix these timeously. Efficient water application on irrigated fields: micro-irrigation e.g., drip irrigation (provision of small volumes of water at frequent intervals close to the roots); low pressure sprinkler irrigation during the night or early morning; avoid irrigation on windy days; avoid deep seepage of water beyond rooting level; practice supplementary irrigation by only irrigating rain-fed cropland during periods of water deficits or at water-stress sensitivity stages in plant growth 	

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
USAID	Soil degradation	Agriculture - Soil conservation	Enhance soil fertility and nutrient cycling and improve water infiltration	<ul style="list-style-type: none"> Reduce de-vegetation, deforestation, overgrazing, excessive tillage and other actions that cause nutrient leaching, soil structure changes and erosion. Use organic fertilizers: mulches, manure, compost and crop residues to build-up SOM. Allow fallow periods and plant leguminous (nitrogen fixing) indigenous plants (intercropped or planted in rotation). Use of trees (preferably indigenous species) in agroforestry as nutrient 'pumps' i.e. to absorb nutrients from the subsoil and return them to the topsoil and rooting depth of annual crops in the form of leaf fall and mulch. Apply inorganic fertilizers cautiously (in micro-doses and used with organic fertilizers as in Integrated Soil Fertility Management as Precision Conservation Agriculture). Minimal soil disturbance (e.g., conservation agriculture). 	
USAID	Soil degradation	Agriculture - Soil conservation	Improve plant material (crops/pastures) without damaging the environment	<ul style="list-style-type: none"> Increase plant productivity and diversity through 'new' green revolution approaches that support selection and experimentation with local/indigenous crop varieties. Encourage seed exchange and adoption of indigenous knowledge. Avoid dependency on improved plant varieties that demand high inorganic fertilizer, pesticides, and herbicide inputs. Practice integrated pest management (IPM) and labor-intensive weed management. Optimize planting dates. Use locally sourced organic fertilizers i.e. manure, compost, crop residues. Practice intercropping, relay planting, crop rotation to maintain soil health 	
USAID	Soil degradation	Agriculture - Soil conservation	Ensure more favorable micro-climates	Reduce soil and atmospheric moisture losses/mechanical damage from high winds and excessive heat; plant trees as wind-breaks, shelter-belts, agroforestry, multi-story cropping and organic mulching.	
USAID	Soil degradation	Agriculture - Soil conservation	Improve access to machinery, seeds, fertilizers, markets and knowledge.		
USAID	Global ecosystem degradation (air, soil, water and biodiversity)	Agriculture - climate change	Encourage innovation and local adaptation to climate change	The local manufacture of fuel-efficient wood burning stoves that reduce rates of deforestation.	
USAID	Soil degradation	Agriculture - Soil conservation	Prevent, mitigate and rehabilitate land degradation	<ul style="list-style-type: none"> Implement measures that improve soil cover, enhance soil organic content, fertility and structural integrity e.g., mulching, manure use and conservation tillage. Encourage afforestation, planting live fences, trees, shrubs, grasses and perennial herbaceous strips. Use terraces, bunds, dams, pans, ditches. Select management measures that help mitigate/rehabilitate damaged land. 	
USAID	Erosion of biodiversity (wildlife and/or habitats)	Agriculture - Biodiversity conservation	Maintain/improve biodiversity	<ul style="list-style-type: none"> Practice integrated pest and ectoparasite management (IPM). Avoid unnecessary and excess use of herbicides and other agrochemicals. Promote the genetic diversity of crops and livestock. 	
USAID	Global ecosystem degradation (air, soil, water and biodiversity)	Environmental impact assessment	USAID requires that the potential adverse impacts of USAID-funded and managed activities be assessed prior to implementation via the Environmental Impact Assessment		
WFP	Global ecosystem degradation (air, soil, water and biodiversity)	Resources conservation	Promote the sustainable use and management of natural resources by not exploiting them beyond their regenerative capacity	<ul style="list-style-type: none"> Integrate conservation needs in practices to promote sustainable natural resource management Prioritise the use of renewable resources rather than non-renewable energy and materials, where technologically and financially feasible Promote the sustainable management of living natural resources and support small-holder farmers to produce and harvest sustainably. Avoid, and where not possible, minimize soil erosion/removal and other adverse impacts on soils, their organic content, structure and water-retention capacity, and productivity. Promote the conservation and sustainable management of forests and avoid the depletion of fuel wood. Apply an integrated water resources management approach that encompasses up- and down-stream considerations of increased water demand, ensuring no significant adverse impacts on water quality and supply for other users, or adverse hydrological changes. Where possible, procure food from primary suppliers who can demonstrate that they are not contributing to significant conversion or degradation of natural or critical habitats 	
WFP	Erosion of biodiversity (wildlife and/or habitats)	Biodiversity conservation	<ul style="list-style-type: none"> Protect and conserve ecosystems and biodiversity Maintain the benefits from ecosystem services 	<ul style="list-style-type: none"> Avoid significant reduction or loss of biodiversity, the degradation of natural ecosystems and/or the diminishment of ecosystem services. Avoid significant conversion or degradation of critical or natural habitats. Identify and assess direct and indirect impacts on habitats and biodiversity and apply a precautionary approach to natural resource use and management. Minimize clearing of land to minimize soil erosion, adverse hydrological changes and habitat degradation. Avoid impact on endangered species by protecting their breeding grounds, migration corridors or other habitats, and preventing habitat fragmentation and their hunting. Avoid erosion of local genetic resources, varieties/species; implement measures to avoid introduction/use of invasive alien species for forestry, livestock, crops, or aquaculture. Respect the position of individual nation states regarding the distribution in-country or national transit of genetically modified organisms and GMO-derived products. Site activities far from critical habitats, protected areas or areas of ecological significance Protect/encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements. Avoid the extraction of natural resources from protected areas, natural or critical habitats Ensure activities are consistent with the protected area's designation and/or management plans. 	
WFP	Future natural hazards	Climate-related risks	Ensure that interventions take climate-related risks into account and that climate risk information is included in design stage	<ul style="list-style-type: none"> Conduct climate risk assessments and integrate recommendations during the design of country strategies and programmes Consider the impact of climate-related hazards and stresses on activities and outcomes Implement targeted DRR and climate risk management activities in climate risk hot spots, including in response to climate-related disasters 	
WFP	Adverse effects on human populations	Resilience	Prepare beneficiaries for impacts of climate change by including targeted activities which increase resilience and reduce vulnerability	<ul style="list-style-type: none"> Focus on increasing resilience and reducing vulnerability of beneficiaries when designing activities 	
WFP	GHG emissions	GHG emissions - Greener offices and activities	Reduce greenhouse gas (GHG) emissions from activities and create or enhance carbon sinks where feasible	<ul style="list-style-type: none"> Adopt technically feasible and financially cost-effective options to reduce GHG emissions wherever possible; offset unavoidable emissions falling within the UN common boundary Track and report GHG emissions that fall within the UN common boundary. Seek to track other known significant sources where practical 	
WFP	GHG emissions	Energy - Efficiency	More efficient use of energy, water, raw materials and their derivatives or products through their sustainable procurement, right-sizing, and re-use	<ul style="list-style-type: none"> Promote the efficient use of energy, water, and other resources and materials throughout their lifecycle Adopt measures, to the extent technically and financially feasible, that avoid or minimize water usage 	
WFP	Waste accumulation	Waste management - Disposal	Better management and disposal of waste , with a focus on reuse, recycling and recovery	<ul style="list-style-type: none"> Actively minimize the generation of waste by-products by avoiding unnecessary resource use, seeking to prolong their useful life, re-using, recycling and/or recovering materials. Seek to treat and dispose of unrecoverable waste in an environmentally-sound manner, with control of emissions and residues; utilize reputable and/or certified contractors where these can be identified and licensed disposal sites where these are available; obtain chain of custody for third party disposal where possible. 	

DONOR	Main potential environmental and social impact	Key words	Recommendations	Mitigation measures	Indicators / means of verification
WFP	Global ecosystem degradation (air, soil, water and biodiversity)	Waste management - Hazardous waste - Pollution	Minimize discharges to air, land or water stemming from activities, with particular care taken to avoid discharging hazardous substances to the environment	<ul style="list-style-type: none"> • Avoid generation of hazardous waste to the extent possible, promote safe recovery and reuse of waste streams generated, assess health risks regarding any use of hazardous materials. • Respect national and international laws governing transboundary movement of wastes, especially hazardous wastes (as may be applicable). • Avoid, and if not possible, minimize and control release of pollutants to air, land and water due to routine, non-routine and accidental circumstances. • Apply pollution prevention and control principles tailored to specific hazards and consistent with internationally recognized approaches and standards. • Avoid the procurement, transportation and use of chemicals and hazardous materials subject to international bans, such as those under Annex III of the Rotterdam Convention. • Progressively phase out ozone-depleting substances, in line with the Montreal Protocol. • Minimize the use of agrochemicals and reduce reliance on synthetic chemical pesticides, herbicides or fertilizers through application of Integrated Pest Management/Integrated Vector Management or other natural measures. Use least toxic pesticides known to be effective and that have minimal effects on non target species and the environment. • Do not use WHO Class 1a (extremely hazardous) or 1b (highly hazardous) pesticides; use Class II pesticides only if well-regulated and handled by trained personnel. Comply with the International Code of Conduct on Pesticide Management for the handling, storage, application, and disposal of pesticides. • No procurement or use of pesticides, herbicides, or other chemicals specified as persistent organic pollutants, or of products derived from these substances in line with the Stockholm Convention. • No distribution of foodstuffs whose contamination with persistent organic pollutants exceeds limits set by the FAO/WHO Expert Committee on Food Additives. • No discharge of untreated wastewater and sewage to local waterways, aquifers, land or sea 	
WFP	Adverse effects on human populations	Gender equality - Women's empowerment	Avoid gender-based discrimination and integrate gender equality and women's empowerment into all activities	<ul style="list-style-type: none"> • Promote gender equality, equal opportunities, and fair treatment of women and men (and girls and boys) in all phases of the programme cycle. • Ensure the particular food security and nutrition needs of women, men, girls and boys are met, including by adapting food assistance and ensuring equitable participation and decision-making by women, men, girls and boys. • Ensure supported activities do not discriminate against women, men, girls and/or boys, or reinforce gender-based inequalities and exclusion. • Conduct participatory and inclusive gender and age analyses to promote the design and implementation of gender equitable, and as feasible transformative, programmes and operations. • Systematically collect, analyse and use sex- and age-disaggregated data and gender indicators to track progress on gender equality results. • Strengthen women's and girls' participation in programme/activity decision-making and promote, in a context specific manner, the involvement of men and boys. • Utilize technologies, services and infrastructure that help to reduce women's (and girls') unpaid care and domestic work. • Include specific lines for gender-related costs in all budgets • Adhere to the IASC minimum standards for prevention and mitigation of GRV 	
WFP	Adverse effects on human populations	Accountability to affected populations	<ul style="list-style-type: none"> • Taking account: Promote meaningful and effective participation of affected groups and individuals • Giving account: Provide affected people accurate, timely and accessible information • Being held to account: Ensure affected people have access to effective community feedback mechanisms 	<ul style="list-style-type: none"> • Demonstrate that programme activity design, implementation, monitoring, and evaluation processes and decisions are informed by and reflect the views of affected people and are informed by a protection analysis. • Identify affected stakeholder groups, in particular those who may be disadvantaged, marginalised or at risk and may require specific forms of engagement. Plan how affected groups and individuals will be engaged throughout the programme/activity. • Ensure consultations include all relevant stakeholders • Ensure consultations are inclusive and also respond to the needs and interests of marginalised and disadvantaged groups • Provide accurate, timely, accessible and understandable information to stakeholders on key aspects of the programme/activity, including on the purpose, nature, scale, and duration; potential social and environmental risks and impacts; proposed stakeholder engagement process; community feedback mechanisms; and how to obtain further information on the programme/activity. • Ensure appropriate measures taken to protect private information of beneficiaries • Ensure affected people have access to Community Feedback Mechanisms (CFM) • CFM systems must address concerns promptly and effectively in a transparent manner that is culturally appropriate 	
WFP	Adverse health and/or safety effects	Health - Safety	Anticipate and avoid adverse impacts on the health and safety of all stakeholders during all phases of programmes, operations, and supply chains	<ul style="list-style-type: none"> • Evaluate health and safety risks due to construction and operation of supported infrastructure and adopt appropriate avoidance, minimization, and mitigation measures. • Design, construct, operate, and decommission structural elements in accordance with national requirements and good international practice. • Structural elements and services will be designed and constructed by competent professionals and approved by appropriate authorities or professionals. Ensure effective control of site access, use of appropriate personal protective equipment, safely designed work platforms, appropriate engineering and administrative controls and safety barriers • Structural elements will take into account reasonably expected impacts of climate change and consider incremental risks of potential exposure of the public to operational accidents or natural hazards. • Avoid or minimize potential community exposure to hazardous materials and substances that may be utilized in or released by supported activities. • Identify and implement measures to address emergency events and ensure that emergency preparations and response plans are in place, resourced, reviewed, updated, and publicized. • Avoid or minimize potential community exposure to diseases that could result from programmes/activities, including water-related and vector-borne diseases, and communicable and non-communicable diseases. Give due consideration to potential differentiated exposure and higher sensitivity of health impacts on vulnerable groups. • Avoid or minimize risks and impacts on health and safety associated with the influx of labour to programme/activity areas, including threats of sexual violence and harassment and transmission of sexually-transmitted and other communicable diseases 	
WFP	Conflicts over land uses or natural resources	Conflicts - Security	Anticipate and avoid adverse impacts on the security of all stakeholders during all phases of programmes, operations, and supply chains	<ul style="list-style-type: none"> • Conduct a conflict analysis to understand key causes and drivers of conflict, and the positions of different actors / groups. • Identify conflict sensitivity risks and opportunities, dilemmas and trade-offs, and other unintended consequences on peace/conflict; develop and implement mitigation measures; document risks in a risk register • Establish monitoring mechanisms to track whether the programme and support operations are inadvertently worsening conflict or instability - with mechanisms to monitor both known and unknown risks • Ensure potential risks posed by programme/activity-related security arrangements are assessed, security personnel are appropriately vetted and trained, and that security arrangements are monitored and reported 	

**POUR L'ALIMENTATION.
POUR L'EAU.
POUR LA SANTÉ.
POUR LA NUTRITION.
POUR LE SAVOIR.
POUR LES ENFANTS.
POUR LES COMMUNAUTÉS.
POUR TOUS.
POUR TOUJOURS.
POUR L'ACTION.
CONTRE LA FAIM.**



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